

# STRATEGIC PLANNING PRACTICES FOR COVID-19 PANDEMIC: A STUDY ON MALAYSIAN QUANTITY SURVEYING FIRMS

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## ABSTRACT

*The COVID-19 pandemic is considered the most crucial global health distress of the century that has affected the economy and our daily lives. It has mainly caused a challenge to the construction industry, including the Quantity Surveying (QS) consultancy firms. One of the QS firms' challenges is the competitiveness between firms and the sustainability of their business during the pandemic. Hence, planning the proper strategic management is essential to the QS firms. This research aims to study Malaysian QS firm's strategic management practices during the COVID-19 pandemic. The research method for this study is by using a Quantitative approach where questionnaires were sent out to 393 QS firms in Malaysia, and the response rate is 32.21%. As a result, ten strategies and six benefits were confirmed and listed. Also, analysis of Friedman's Test was used for this research as an alternative for ANOVA test to determine the relationship between QS firm's Strategic Planning and the Benefits of Implementing them. The research contribution of this study is to give knowledge about strategic planning to future quantity surveyors and influence more QS firms to practice strategic management.*

**Keywords:** Construction Industry; Quantity Surveying Firms; Strategic Planning; COVID-19; Malaysia.

## INTRODUCTION

Apart from affecting our health, COVID-19 has posed economic, environmental, and social challenges to society (Chakraborty & Maity, 2020). Most of the research nowadays has taken COVID-19 as one of the main topics covered in numerous literary publications. The publications have mainly studied the impact of the pandemic on the labour market and people's employment in various nations (Oo & Lim, 2021). Consequently, this disease has caused a slowdown in the economy of well-developed countries like China, India, and the U.S.A. Almost all countries have taken a specific Standard Operation Procedure (SOP) and even do a stay-at-home restriction to control the spread of the disease. When a country announced a lockdown, people are suspended from doing social and economic activities. According to Gavi (2020), the stronger the restrictions from the government, the more significant the threat to the economy. One of the countries that the pandemic COVID-19 has impacted is Malaysia. As the number of cases and deaths has risen among the Malaysians, the Ministry of Health and Government of Malaysia has instructed a Movement Control Order (MCO) as a response on 18 March 2020. It is a preventive procedure that resulted in the shutdown of most private and government businesses. According to the Department of

Statistics Malaysia (2020) report, since the implementation of MCO in March, the Malaysian economy had shrunk up to 8.3% in the first half of 2020, with a fall of 17.1% in the second quarter of 2020. The industries that are affected by this slowdown include tourism, education, sports and many more. One of the industries that the pandemic has primarily influenced is the construction industry. The industry alone had suffered a total damage of RM18.5 billion during the initial period of MCO (Harun & Abdul-Razak, 2020). The construction industry is considered vital to Gross Domestic Product (GDP) contribution in Malaysia since early 1990. In private or government projects, both organizations have stimulated Malaysia's modernization and urbanization process throughout the decades. This industry also helps with the increasing employment rate in Malaysia as it influences most people directly and indirectly. As Khan, Liew and Ghazali (2014) stated, to support Malaysia's vision to become a well-developed country, the government must take a vital step in boosting economic growth, particularly in the construction industry. A downfall of this industry will indeed jeopardize Malaysia's economy.

Quantity surveying (QS) play a significant role in the construction industry. From the feasibility stage of a construction project to the design stage until the hand-over stage of a project, QS was involved in every part of the work programme. RICS (2017) has stated that quantity surveying covers a wide range of sectors such as real estate, infrastructure, and process engineering. According to Teo's research (2019), in Malaysia, the total number of consultant QS firms registered under the Board of Quantity Surveyor (BQSM) in 2018 is 355 firms. By the year 2020, the number of new firms in QS professions must be increasing as well. Other than the local firms, Malaysian QS firms also need to compete with international QS professionals who decided to join Malaysia's venture. This shows the high integrity of competitiveness between QS firms in Malaysia as a challenge to commence a new project in the construction industry.

Strategic planning is the systematic plan that helps the company to identify future opportunities and threat by collecting relevant data and lead to correct decision making (Steiner 2010). In other words, this system helps in directing a firm to achieve its vision and mission and guiding the organisation to foresee any uncertainties or challenges that might happen in the future. Hence, planning the correct strategic management is essential to the survival of an organisation. As the threat of COVID-19 has escalated in the construction industry, QS firms must learn to adapt to this pandemic and start to plan for a new long-run strategic management for their organisation. This research paper aims to study how QS firms in Malaysia plan their strategic management to survive the COVID-19 pandemic and the advantages of implementing these practices.

## LITERATURE REVIEW

### The COVID-19 Outbreak

Generally, according to Sauer (2021), Coronavirus is categorized as one of the common viruses that infected the human's nose, sinuses, or upper throat. Sauer also stated that most Coronaviruses are not dangerous. In December 2019, a new Coronavirus identified as SARS-CoV-2, also known as COVID-19, was found in Wuhan, Hubei province, China. It has caused severe acute respiratory syndrome and even deaths to Coronavirus patients. In March 2020, after the outbreak has transmitted rapidly to other countries outside of China, the World Health Organization (WHO) identified the COVID-19 as a global pandemic. CDC (2021) stated that the Coronavirus has resulted in symptoms like fever, dry cough, fatigue, and shortness of breath, and it is transmitted through human-to-human contact. The infections can range from mild to deadly. However, this pandemic is not considered new as COVID-19 is classified as one of the seven types of Coronaviruses, just like the Middle East

respiratory syndrome (MERS) and sudden acute respiratory syndrome (SARS). Another type of Coronavirus is the one that caused most of the colds during the year, but it is not considered a severe threat to the people (Pathak 2021). Since the first public health emergency was identified and declared a global pandemic by the World Health Organization (WHO) in 2020, the Coronavirus has spread to over 200 nations in 2021 (Worldometers, 2021). The spread of Coronavirus also has affected one of the Southeast Asian countries, Malaysia.

In Malaysia, the current exponential growth in Coronavirus disease (COVID-19) transmission cases has reached a catastrophic stage. It has potentially impacted and overwhelmed the Malaysian health care system and caused a substantial life loss. The mass media reports each day's rise in new COVID-19 cases and deaths, but it can be challenging to bring these figures into context. Given the rapid spread and detected positive cases in Malaysia in March, a national emergency was declared. The first lockdown, also known as Movement Control Order (MCO), was implemented on 18 March 2020 (Tang, 2020). Since then, the number of confirmed COVID-19 cases in Malaysia has increased rapidly (Worldometers, 2021). As of 24 April 2021, over 390,252 confirmed cases and 1,426 deaths had been linked with the COVID-19 pandemic in Malaysia. Not surprisingly, the COVID-19 pandemic was identified as the leading impact on Malaysia's economy and a challenge to productivity.

## **Strategic Planning**

A strategy can be defined as a future-oriented plan that is large in scale to achieve specific goals and objectives when individuals or organisations deal with a competitive environment (Harrison & John, 2013). Typically, the top management of an organisation will come up with the implementation and formulation of these strategies. Generally, strategic planning and strategic management can be implied as to the same thing. Although it is true, as they are both parts of the same process, each term has a slightly different application. There was no specific definition for strategic planning. Nonetheless, according to Bryson (2013), strategic planning is the process of formulating and guiding an organisation's purpose and direction, what it does and why it does it. In pursuit of competitive advantage, strategic planning is also associated with aligning objectives with organisational competencies (Murphy 2012). For the longest time, strategic management has been a remarkable function of strategic management. The dynamic characteristic of strategic planning varies from one organisation to another. Each process is different for each firm to suit its specific goals. The use of strategic planning process models is expected due to the complexity of the process. According to Porter (1980), several developed strategic planning models are already developed for determining organisational objectives and analysing the environment where the firm is operating before choosing the right strategy. Thus, an organisation must ensure that the outcome of the process and the strategic plan is flexible with any possible challenges and competition that the firm might deal with (Grant, 2003). In the Malaysian construction sector, the risk response strategy is still the weakest element of the risk management process (D.M, A.Q, and Ajibike, 2020). Therefore, QS firms must emphasize business risk management in the planning process.

## **Strategic Planning Practices in Quantity Surveying (QS) Firms during Pandemic**

Construction industry is a key element of economic development and growth (Edison & Singla, 2020). Now that Malaysia has lifted the total lockdown in the country, the construction industry has begun to start operating after the first MCO in March 2020. Baskin (1995) has highlighted the importance of business adaptability in this fast-growing world

and the constant change of the environment. Organisations must learn from and adapt to the environment, quickly and efficiently, or begin to force to see their business die. QS consulting firms must learn and adjust to the new Standard Operation Procedure (SOP) that the government has established to allow companies to resume their business operations. Recent research Akotia, et al. (2020) has found that one of the most important ways for society to become genuinely vibrant and sustainable is to fulfil its social and economic sustainability demands. When facing any environmental or internal crisis, a firm must begin planning its strategies to avoid COVID-19 transmission between the workers. According to Sood (2020), developing a robust contingency plan and cash flow analysis would allow firms to continue operating, although at a reduced capacity, while also facilitating recovery after the crisis has passed. To boost the effectiveness of QS firms' activities and value-adding point to their business, QS firms can align appropriate demands on their companies. This will significantly increase the competences and skills of their team (Fehan & Aigbogun, 2021). Malaysia has now lifted the total lockdown in the country. The first step that QS consulting firms can take before they start operating at their office is that employers must set safety and health guidelines to avoid getting infected (Ministry of Human Resources Malaysia 2020). COVID-19 is a human problem that needs a human solution to mitigate the risks, so it is crucial for employers to first take care of them. The success of participating firms is influenced by both external variables and perceived satisfaction when it comes to projects (Skitmore, et al., 2020). Hence, it is important for QS firms to take care of the people first. Some of the standard guidelines that the government has established for office workers are encouraging social distancing practices, wear a mask all the time during office hour, and reduce the number of workers operating at the office at the same time. QS firms' employers should encourage their workers to work-from-home (WFH) to minimize contact between colleagues and maintain social distance practice at the office (Occupational Safety and Health Organization, 2020). In addition, the use of virtual meetings has become more popular, especially during the outbreak of COVID-19. Virtual meeting via online communication applications such as Google Meet and Zoom Meeting has helped society utilise climate-friendly conferencing and reduce air travel that can cause disease transmission. According to Diplomacy Edu (2020), individuals may participate in events through online conferencing if they cannot attend in person due to visa problems, travel costs, or other factors such as cross-state restrictions. To put it another way, virtual meeting improves accessibility and inclusion by lowering participation barriers. Especially during the pandemic, where most companies wanted to reduce face-to-face meetings as much as possible.

Lockdown has caused QS companies to stop operating for a while. However, Livesey (2020) has highlighted that it is critical to keep the project going at all times. Hence, after the company began to make changes in the way they conduct business, they must first check out their pending works and cash flow. The QS firms might need to take the time to analyse the financial impacts of the environmental changes and create a cash flow estimation that is influenced by the changes (Brews & Purohit, 2007). Contacting clients immediately after operation has begun is one of the ways to keep track of pending projects. QS firms must call the main clients and confirm if the existing and planned deals are still on track. QS companies can also apply the low-cost strategy to offer a lower price for their services and use good negotiation skills when offering services. They can also reduce their administration costs to help mitigate financial issues. Some companies' partners or directors have also taken pay cuts or redundancies as low-cost strategy implementations (Gangcuangco, 2020).

### **Challenges of Construction Industry During Pandemic**

The most obvious challenge that can be seen in a construction company due to the pandemic is Safety and Health. In a construction company, safety managers oversee coordinating COVID-19 preventive measures at the workplace. According to HSE Network (2020), after safety managers already set out the COVID-19 preventive and safety plan, they find it challenging to implement it between the workers/employees and ensure that it is practical. Due to the nature of construction work that is heavy and requires many workers at one time, social distancing is considered a challenge to them. Social distancing practice is one of the ways to prevent COVID-19 transmission between the workers. A research done by Boadu, Wang, and Sunindijo (2020) has highlighted the importance of enforcement of Occupational Health and Safety in the construction industry. Therefore, while other businesses can encourage most of their workers to work from home, it is not the same with the construction companies. Contractors will have to correctly plan the number of employees at work to practice social distancing while maintaining the project progress (Ministry of Human Resources Malaysia, 2020).

Supply and demand are some of the issues that the construction company will deal with during the pandemic. The construction industry always deals with transactions in every project. The price of the transaction will always reflect on the economy. According to Baldwin and Di Mauro (2020), most economists and analysts believe that the economic effect is essential. The construction industry must consider these financial mechanisms to fully comprehend whether markets are as high or low (Gruneberg, 1997). When the government decides to shut down any operation or businesses as a preventive measure, it will significantly impact the economy. A recent study made by Inoue and Todo (2020) has found that shutting down companies in Tokyo would result in a production loss in other parts of the economy through supply chain linkages, estimating that after a month, the daily output would be 86% lower than pre-shock. This shutdown means that the economy will only be running at just 14% capacity. According to del Rio-Chanona, Mealy, Pichler, Lafond & Farmer (2020), supply drastic changes (supply shocks) from pandemics are mostly thought of as labour supply shocks. A few studies focused on the direct loss of labour due to sickness or death from pre-COVID-19 by McKibbin and Sidorenko (2006) and Santos, et al. (2013). They highlighted that reduced supply labour is primarily due to mortality and morbidity due to infection, among other shocks. Social distancing has a much more significant impact on the economy than the direct impact of mortality and morbidity. If the preventive measure, social distancing, really works, only a small number of populations will be infected by the disease, which benefits the economy. It is almost impossible for the general workers to work from home like any other businesses in the construction industry. Workers in the construction industry are most likely to have the risk of reduced work hours or losing their jobs altogether.

Other issues and challenges that this pandemic has caused to the construction companies are financial issues. Before the pandemic, according to Das & Emuze (2021), some of the common problems that create delays in the execution of construction projects are project management-related concerns, which involved clients, contractors, designers, and consultants. However, now, the Coronavirus crisis has pushed construction companies to prioritise their workers' health and well-being and thus, dealt with delays and extension of time of projects due to the government restrictions. Other factors of construction work delays are shortage of workforce and materials. When the recession passes, as it will, construction companies' top priority will be to deal with the financial crisis spill over effects (Elbogen, et al. 2020). When a delay occurs in a project, parties from the paying site of the contract, for example, the clients, will find a way to manage claims that can benefit themselves financially. Projects that are delayed will not have a definite completion date beyond the required deadline in the contract due to schedule floats, or the work is ahead of schedule (because of the delay). Hence, sometimes the client will tend to slow-pay the

contractors and consultants or justify never paying any delay damages. It will push the construction company's financial plan to stake (National Law Review, 2020).

### **Benefits of Implementing Strategic Planning Practices**

Implementing strategic planning can be beneficial for a firm when they applied the most suitable strategic management approach to mitigate their organisational challenges. Ong'ondo (2018) has cited that one of the advantages of implementing strategic planning practices in a firm is it gives great behavioural impact to the managers of all levels in an organisation to interact in planning and formulating strategies and make a participative organisational decision (Pearce & Robinson, 2003). This means that the implementation of strategic planning in an organisation can help the managers to monitor and control any possible risks with a correct organisational decision. Studies such as Dauda (2010) and Nmadu (2007) highlighted that the practice of a proper strategic management in a company can make a significant difference to the company. Additionally, it is also has been statistically proven that strategic management has become more critical for most managers of a company in recent years and determining the business's mission and vision has made it easier to drive the company's purpose. Other beneficial features of practising strategic planning are in terms of organisational costs and financial benefits. According to Nmadu (2007), when a company practice strategic planning successfully, they will get the cost-effective benefit of implementing them. Chief executives or shareholders of an organisation can expect greater financial and competitive success feasible if they formulated a current strategic plan in the organisation. This means that the strategic planning must always aligned with the current situation or issues of the company. Additionally, specific advantages have been extracted from the studies done by previous researchers such as Stern (1966), Loasby (1967), Häusler (1968), Walker (1976) and Wilson (1979). The benefits are categorised into two which are the planning process and personnel are committed with the planning.

#### **Process Benefits:**

- Discover and identify potential marketing opportunities.
- An impartial assessment on management issues.
- Create a framework for reviewing plan execution and activity control.
- Reducing conflict situations and changes impacts.
- Promote effective major decision making in achieving objectives.
- Identifying opportunities by allocating time and resources effectively.
- Maintain coordination for plan execution.
- Require lesser time and resources in correcting specific decisions errors.
- Creates a structure for company's internal communication.

#### **Personnel Benefits:**

- Helps in the integration of individual employee behaviour into a larger effort.
- Serves as foundation for individual tasks clarification and motivation.
- Encourages personnel to be progressive as a part of them.
- Encourages a collaborative, integrative, and passionate approach to problem-solving and opportunity exploration.
- Motivates mindset to always favour in changing.
- Gives business function a specific level of discipline and formality among personnel.

Lastly, a company can succeed in a long-term event when they spotted the possible challenges and already decided the strategies beforehand that can be implemented to mitigate the problem when the issues arise. Identifying changes in the business environment, understanding the consequences, and making change accordingly is very important for managers to increase the business performance. Examining the future opportunities and threats is considered an advance plan and is very beneficial to the organisation. Hence, analysing the business environment is so vital for companies (Kamensky, 2008). In conclusion, implementing strategic planning in an organisation, especially the QS firms is very beneficial to the organisational performance and survival.

## RESEARCH METHOD

This research aims to help achieve the study's objective, which is to identify the type of strategic planning being implemented by QS consulting firms in Malaysia during the COVID-19 pandemic. Other than that, this research also aims to examine the effectiveness of strategic planning practices. This study will use the quantitative method to help collect data from QS consulting firms around Malaysia. The quantitative approach will develop a set of questionnaires based on the literature review of strategic planning, and the purpose is to build knowledge and interpreting the strategic planning framework of the QS firm during the COVID-19 pandemic. The quantitative research is conducted to confirm the strategic planning implementation theories by using hypothesis and data collection procedure. The possible outcome was to identify the type of strategic planning used by the QS firms during the pandemic and the benefits of implementing them. The quantitative approach was selected as the most suitable method for this study to achieve the specified objectives. This approach is chosen due to the large number of data that must be obtained to learn the strategies used by the QS companies during the pandemic. By using the questionnaire surveys, extensive numerical data can be collected in a short amount of time. The number of populations targeted for this study is huge as it covers all QS consulting firms around Malaysia. The responses from a large sample will reflect the perceptions of the whole populations.

After the designing of the questionnaire set is done and the sampling size is determined, the questionnaires will be distributed to the targeted respondents via emails. The emails and contacts of the QS companies are obtained from the BQSM website. The design of the questionnaire will be created by using Google Form for easier access for respondents to answer the survey. The survey was attached in the email by using hyperlinks with a formal letter which will be explaining the aim and objectives of this research. The questionnaire will be distributed to all 393 QS consulting companies in Malaysia through their email. Respondents will be given a duration of at least 2 weeks to answer the questionnaires. The sampling size for this study is 198 QS firms calculated by using the Slovin's Formula. This research relied solely on the respondents' willingness to answer each question in the survey hence all answers are all based on their own understanding of the research and not biased.

Next, after 3 months of survey distribution, only 127 respondents answered and returned the questionnaires. The percentage of responses returned is about 32.31% of the total population of QS firms in Malaysia. The response rate is above 30% which is considered as average for this study to continue for data analysis. The data were then analysed by using the Statistical Package for the Social Sciences (SPSS) software. To ensure that each survey questions are reliable and can be understood by all respondents, a reliability test was performed on all respondents' obtained data and the result of the Cronbach's Alpha value is 0.851 which is closed to the value of 1. If the value of Cronbach's Alpha is near to 1 then the data is considered the best and excellent. The alpha coefficient for the 25 items is

0.831, suggesting that the items have relatively high internal consistency. Therefore, based on the reliable test for this study, it can be concluded that the question posed in this research is reliable and can be understood by all respondents.

## RESULTS AND DISCUSSION

### Background of Survey Respondents

Table 1 demonstrates the demographic profile of respondents including current employment, registered QS background, and experience duration.

Parameter	Category	Frequency	Percentage (%)
Current employment (Working at QS firms)	Yes	127	100
	No	0	0
		127	100
Registered Quantity Surveyor	Yes	103	81.1
	No	24	18.9
		127	100
Experience duration	Less than 3 years	37	29.1
	3-5 years	18	14.2
	6-10 years	33	26
	Over 10 years	39	30.7
		127	100

### Background of Survey Respondents' Firm

Table 2 presents the demographic profile of respondents' firm including firm registration, RISM registration, and number of employees.

Parameter	Category	Frequency	Percentage (%)
Firm Registration	Private Liability Company (Sdn Bhd)	51	40.2
	Limited Liability Partnership (LLP)	12	9.4
	Partnership	18	14.2
	Sole proprietor	46	36.2
		127	100
Registered with RISM	Yes	127	100
	No	0	0
		127	100
Number of Employees	Oct-15	57	44.9
	16-20	6	4.7
	21-25	33	26



	26-30	24	18.9
	31-35	7	5.5
		127	100

## MAIN RESEARCH FINDINGS

Based on the findings of the responded questionnaires, it is found that there are several challenges that QS consulting had faced during the COVID-19 pandemic. A total of 127 out of 127 respondents (100%) agreed that the COVID-19 had impacted their companies. One of the impacts that this study has found is “*delay in work completion*”, which occurs in 89.8% of cases in Malaysian QS companies. Delay in work completion may be due to the implementation of total lockdown to curb the COVID-19 high positive cases in Malaysia. When the government announced a lockdown, it will temporarily pause the operation of most companies and businesses. Other than that, safety and health factor will also cause a delay to the work completion, especially when the staff members are infected with the disease. Next, “*financial issues*” is also one of the top challenges that QS consulting firms had faced, with 81.1% of cases. When a project is delayed, the client will tend to slow-pay the consultants, pushing the consultant companies’ financial plan at stake. The respondents also agreed that they had been “*offered lesser project*” (71.7% of cases) ever since the pandemic. This may be due to the loss of construction productivity on construction sites and the limitation of new projects offered to consult companies, followed by “*low demand in services*” with (66.1% of cases), “*shortage in the workforce*” (29.1% of cases) and “*limited international supply*” with (28.3% of cases).

The respondents also have given an insight into the strategies that their company used to adapt to the new normal. 94.5% agreed that their company had established a proper safety and health guideline to reduce the COVID-19 transmission in the workplace as one of their strategies. This strategy will help them to work in a safer environment at the office. Other strategies that QS companies used are “*The company reduces cost in administration activities*” (85.8% of cases) and “*The company’s directors/partners have taken pay cuts or redundancies*” (33.9% of cases) to help in reducing their company’s financial issues. The QS companies also used good negotiation skills to offer services, contacted previous clients to get a new project and charged a lower price than usual during the pandemic to help to increase the number of projects and the demand for their service. In the next part of the questionnaire survey, 94.5% of the respondents agreed that strategic planning help with the productivity of their company. This shows that the strategies implemented are effective and practical for them. 89.8% of the respondents agreed that they followed strictly in their strategic planning process to adapt to the new normal. Other advantages that strategic planning had on the QS consulting companies are “*helps the company to adapt with the new COVID-19 safety and health protocols*”, “*Strategic management has become top priority activity performed during the pandemic*”, “*helps building up on new projects during the pandemic*” and lastly, “*Strategic management has helped building up on new projects during the pandemic*”. All of the advantages listed proved that strategic planning is essential for QS companies in order to survive in this new COVID-19 era.

### Identified Strategies

The application of strategic planning had been acknowledged as potential methods to help QS companies to adapt with the pandemic in Malaysia. Therefore, this research aims to identify the type of strategies used by QS firms through reviewing previous studies and relating to the suitability of practices in this COVID-19 era. The summary of the identified strategies implemented by the QS firms are listed as below:

1. Established a proper safety and health guideline.
2. Reduces cost in administration activities.
3. Company's directors/partners have taken pay cuts or redundancies.
4. Contacted previous clients to get a new project.
5. Good negotiation skills to offer services.
6. Charged a lower price than usual during the pandemic.
7. Plan for strategic management immediately after the first MCO to ensure productivity.
8. Encourages the use of communication technology instead of face-to-face meetings.
9. Promotes the use of taking-off software during the pandemic.
10. Encourages staff to work-from-home (WFH) to ensure safer environment workplace.

The list above showed that there are several ways for QS companies to adapt to the new normal. Organizational performance always linked to its environment. According to Segal (1974), organizations are also described as adaptively structured. Hence, QS firms must learn how to adapt to the new Standard of Procedure (SOP) to run a business during a pandemic. Strategic planning will help the QS companies plan their operation correctly and ensure that this global crisis will not heavily impact their workers and functions.

### **Identified Benefits**

A list of advantages of implementing strategic planning were identified from literature review and evaluated based on the suitability of QS firms during the pandemic. This study's objective is to examine the effectiveness of the strategies practised by the QS firms. The researcher aims to find out whether strategic planning really helps in productivity and organisational performance of QS firms in Malaysia during COVID-19 pandemic. The list below shows the overview of all advantages examined and agreed by the respondents:

1. Strategic planning help with the productivity of their company.
2. Followed strictly in their strategic planning process to adapt to the new normal.
3. Strategic management has become top priority activity performed during the pandemic.
4. Helps the company to adapt with the new COVID-19 safety and health protocols.
5. Helps building up on new projects during the pandemic.
6. Helps the company to generate more income during the pandemic.

Since the COVID-19 pandemic has just started in 2020 and considered as a new catastrophic event that impacted the economy globally, the effectiveness of strategic planning is still far more ambiguous to find out in this current time. However, this research had examined several types of benefits by distributing the questionnaire survey. The researcher believes that strategic planning has more benefits that have not yet to be discovered in adapting to the new normal. This research also included a Friedman's test and found that the strategic planning and the benefits were, in fact, statistically significant to each other. In other words, the use of strategic planning significantly impacted the advantages.

### **Friedman's Test Analysis and Discussion**

A normality test had been conducted to the "*Strategic Planning Implemented by the QS Firms*" and the "*Benefits of Implementing them*". The result concluded that both data are

not normally distributed even though the sample size is large ( $>30$ ). Although the violation of normality in large samples did not cause major impact, and the researcher can use the parametric procedures for this study (Pallant, 2014, Elliot & Woodward, 2007); the use of non-parametric tests for non-normal ordinal data can give more clinical interpretation to the importance of the treatment effects (Sheldon, Fillyaw, and Thompson, 1996). Friedman's Test is used for this research as an alternative for ANOVA test to determine the relationship between QS firm's strategic planning and the benefits of implementing them. In Table 3 shows that this study is conducted by using the mean rank of data instead of median. The median for both variables is equal which is 4.00.

	<b>Mean Rank</b>
Strategies	1.59
Benefits	1.41

<b>Test Statistics</b>	
N	127
Chi-Square	7.579
df	1
Asymp. Sig.	.006
a. Friedman Test	

Formulation of Research hypothesis for this Friedman's test are the null hypothesis (H0) is the independent variable, strategic planning, is assumed to have no effect on the dependent variable, benefits of implementing the strategies. Whereas, the alternate hypothesis (H1) is the independent variable, strategic planning, is assumed to have an impact on the dependent variable, benefits of implementing the strategies. The output of the Friedman's Test in Table 4.23 above shows the chi-square statistic is 7.579 and the p-value=0.006 ( $<0.05$ ). Therefore, at a significance level of 0.05, it can be concluded that H0 is rejected and H1 is accepted. The association between the variables is statistically significant. Thus, it can be interpreted that the strategic planning had a significant impact to the benefits.

### **Relative Important Index (RII) Analysis and Discussion**

Numerical scores that were collected from Likert-scale survey responses provide hints about the type of challenges faced, strategic management and its benefits of QS consulting firms in Malaysia during the pandemic. Relative importance index (RII) is used to identify the variable of variance for the possible overall variance.

<b>Challenges</b>	<b>Relative Important Index (RII)</b>	<b>Ranks</b>
The company make lesser profit after the first MCO in March 2020	0.861	1

The company are forced to lay off several employees	0.614	3
The company have difficulty to re-open business after the first MCO	0.791	2
<b>Strategies</b>	<b>Relative Important Index (RII)</b>	<b>Ranks</b>
The company plan for strategic management immediately after the first MCO to ensure productivity	0.876	2
The company promotes the use of taking-off software during the pandemic	0.709	4
The company encourages the use of communication technology instead of face-to-face meetings	0.921	1
The company encourages staff to work-from-home (WFH) to ensure safer environment workplace	0.780	3
<b>Benefits</b>	<b>Relative Important Index (RII)</b>	<b>Ranks</b>
Strategic management has helped the company to adapt with the new COVID-19 Safety and Health protocols	0.882	1
The strategic management has become top priority activity performed during the pandemic	0.854	2
Strategic management has helped building up on new projects during the pandemic	0.759	4
Strategic planning has helped the company to generate more income during the pandemic	0.775	3

Based on Table 5, the highest rank for Challenges is “The company make lesser profit after the first MCO in March 2020” with (RII value=0.861), followed by “The company have difficulty to re-open business after the first MCO” (RII value=0.791), and “The company are forced to lay off several employees” (RII value=0.614). Next, the highest rank for Strategies is “The company encourages the use of communication technology instead of face-to-face meetings” with (RII value=0.921), followed by “The company plan for strategic management immediately after the first MCO to ensure productivity” (RII value=0.876), and “The company encourages staff to work-from-home (WFH) to ensure safer environment workplace” (RII value=0.780). The last rank for strategies is “The company promotes the use of taking-off software during the pandemic” with (RII value=0.709). Lastly, the highest rank for Benefits is “Strategic management has helped the company to adapt with the new COVID-19 safety and health protocols” with (RII value=0.882), followed by “The strategic management has become top priority activity performed during the pandemic” (RII value=0.854), and “Strategic planning has helped the company to generate more income during the pandemic” (RII value=0.775). The last rank for benefits is “Strategic management has helped building up on new projects during the pandemic” with (RII value=0.759).

## CONCLUSION

This study has considered and provided a broad aspect of the strategies implemented used by QS firms through reviewing previous studies and relating to the suitability of practices in this COVID-19 era. Findings from the study present that most QS firms already

understood the importance of strategic planning practices during the pandemic. This study also has found several advantages that can be obtained from implementing the strategies. Friedman's test results of this study have shown that the strategy significantly impacted the benefits. The top three most used strategies among the QS firms in Malaysia are: (i) The company encouraged the use of communication technology instead of face-to-face meetings. (ii) The company plan for strategic management immediately after the first MCO to ensure productivity. (iii) The company encouraged their workers to work from home. A few recommendations are proposed for the future research study. The distribution of data is recommended to be expanded using more methods instead of just via emails. Other ways that the future researcher can use for the questionnaire's distribution are through LinkedIn platform, WhatsApp, and formal letters to the targeted companies. Besides that, the extent of this research also can broaden to not only to QS firms and professionals. Instead, it can be distributed to other professionals in the construction industry, such as architects, contractors, and engineers. Different strategies can be proposed for different occupations and businesses.

Other than that, further studies of this research are also recommended to further validate the recommended strategies found in this research. Different research methods that can be used are interviews, focus group discussion, or case studies to validate the strategy. This approach can help confirm whether the proposed strategic planning applies to QS firms in Malaysia. Additionally, the future researcher can conduct interviews to get further elaborations of strategies used by QS firms. Conducting interviews can help filter the identified strategy according to the applicability of Malaysian QS firms and even give additional techniques that are not identified in this research. Other benefits of conducting interviews are that it allows a more relevant list of strategies referred by QS professionals. The proposed strategic planning aims to provide a guideline for QS consulting firms to adapt to the COVID-19 crisis. By referring to the listed strategies and benefits, QS firms in Malaysia can better understand the use of strategic planning as a way for them to operate their business in a pandemic. Besides, QS firms can also choose a relevant strategy according to their firm sizes and resources. QS firms can also establish their strategic planning through this research. The ultimate contribution of this study is to assist QS firms to stay on business and survive during the recession of the economy caused by the COVID-19.

Another contribution of this study is contributing to the bodies of knowledge on how strategic planning helps the inadaptability of the new normal among the QS firms. Other researchers from different countries can further investigate this strategic planning during the pandemic by including other strategies based on the differences in geography, cultures, and practices. In addition, future researchers can establish a different type of strategic planning for various professions in the construction industry by clarifying the proposed strategies in this study. In conclusion, this study has listed the strategies used by QS firms in Malaysia and examined the effectiveness of implementing the practices. Hence, the aim of this research had been achieved.

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