

# Survival Strategies for Construction Companies in Sarawak, Malaysia amidst Challenging Economic Climate

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## ABSTRACT

The emergence of Covid-19 pandemic had caused a major economic downturn worldwide especially in early 2020. During that period of time, many construction companies were forced to deal with the impacts by adopting various strategies to ensure their existence and further development. Although the Covid-19 health emergency was declared ended in 2023, there are still many challenges ahead the road to economic recovery. In Malaysia, the economic outlook in 2024 is still uncertain due to global economic uncertainty driven by Russia-Ukraine conflicts and Middle East conflicts, skilled labour shortage, and supply chain disruptions in other countries. In this uncertain environment, the construction industry should pre-plan strategies to cope with future challenging economic climate. Through literature review, it was discovered that there is a lack of studies in Sarawak, Malaysia on how the construction companies should respond to the negative economic impacts. Therefore, this paper aims to study the survival strategies of construction companies in Sarawak amidst challenging economic climate. A quantitative research approach was adopted in order to achieve the aim. Structured questionnaires were distributed to Grade 7 construction companies in Sarawak for them to rate the importance of 53 survival strategies based on a 5-point Likert scale. The received 130 valid responses were analyzed using descriptive statistics and RII methods. The findings show that the most important survival strategies are “implementing stricter site management to reduce material & time wastage in order to achieve lowest construction cost”, “carefully considering the payment terms and the client ability to make payment”, and “implementing stricter financial management on company cash flow” while the least important strategies are “diversifying into non-construction related businesses”, “increasing staff working hours”, and “converting permanent staff into temporary placements”. The findings of the present research could serve as a guideline to the construction companies in Sarawak to address the challenges posed by the economic crisis. Besides, the present research is also useful to researchers or academicians who intend to conduct more research on this topic.

**Keywords:** Survival Strategies, Construction Companies, Challenging Economy

## INTRODUCTION

In early 2020, Covid-19 pandemic had negatively disrupted all countries and had caused a major economic downturn (Norhaidin & Tan, 2023; Toh et al. 2023). The pandemic is unprecedented. Its impacts on economy is the greatest since the Great Recession in 2008. The challenging economy had affected many sectors including the construction industry (Lagat et al., 2023; Mohamed & Kamaruding, 2023). In Malaysia, Q1 2020 to Q4 2021 had been highlighted by the Department of Statistics Malaysia (DOSM) as a recession period (DOSM, 2020, 2021). During the challenging period, the Malaysian construction companies faced numerous impacts, including material shortage, cost escalation, labour shortage, decrease in revenue, limited projects and demands, suspension of projects, and financial difficulties (Esa et al.,

2020; Gamil & Alhagar, 2020; Norhaidin & Tan, 2023; Tan, 2021; Toh, 2020; Zamani et al., 2021).

The Malaysian economy started to recover since year 2022. However, the economy will not grow forever uninterrupted. Based on the economic/business cycle theory, when the economy reach the peak, it will undergo a downturn (Figure 1).

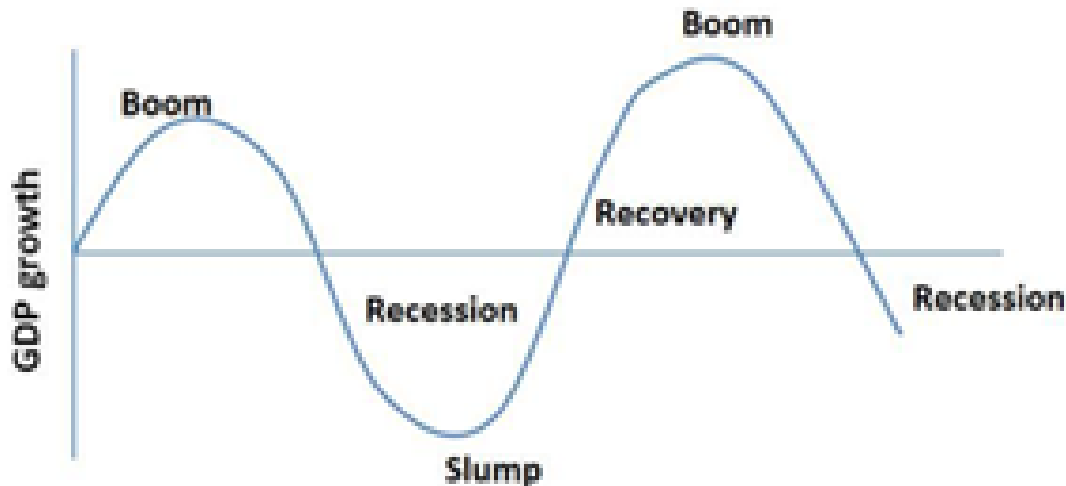


Figure 1: Business cycle theory (Ezeanyejí et al., 2019)

Besides, the economic outlook of Malaysia in 2024 is still uncertain due to some challenges, such as global economic uncertainty driven by Russia-Ukraine conflicts and Middle East conflicts, skilled labour shortage and supply chain disruptions in other countries (Liew, 2024). Therefore, the construction industry should still pre-plan strategies to cope with future challenging economic climate. According to Mohamed and Kamaruding (2023), the construction companies should manage their survival strategies for their long term business run and to avoid problematic situations. Besides, Toh et al. (2023) also opined that if there is no strategies in place, construction companies may face “uphill battle to remain viable” during the post Covid-19 environment. Similarly, Abubakar et al. (2022) stated that strategic planning is essential for construction companies to survive in volatile environment.

Several research (Adegbebo et al., 2020; Aghimien et al., 2018; Buys & Rooyen, 2014; Lagat et al., 2024; Lim et al., 2010; Ruddock et al., 2014; Scott, 2011; Zuo et al., 2015)) have been conducted worldwide to study the survival strategies that the construction industry had adopted during the economic downturn. However, there is a lack of research which focus on the Malaysian context. To the best of the authors’ knowledge, there is only three research being conducted in Malaysia namely, by Bakar et al. (2011) who studied the survival strategies applied by Grade 7 construction companies in West Malaysia during the two periods of recession in the 1980s and 1990s, by Norhaidin and Tan (2023) who studied the survival strategies applied by eighteen Grade 4 to Grade 7 construction companies in Malaysia, and by Toh et al. (2023) who studied the strategies for small and medium construction companies in Klang Valley. Although Norhaidin and Tan (2023) had covered a wider scope of study, the sample size for the study is small (only 18 questionnaires were analyzed). To date, a comprehensive research which specifically focuses on Sarawak, Malaysia has yet to be conducted. Therefore, this paper aims to study the survival strategies of construction companies in Sarawak, Malaysia amidst challenging economic climate. In order to meet the aim, two objectives have been set: (i) to identify survival strategies for Grade 7 construction companies in Sarawak amidst challenging economic climate and (ii) to prioritize survival strategies for Grade 7 construction companies in Sarawak amidst challenging economic climate. Grade 7 construction companies were targeted because they are of the highest grade registered under CIDB and therefore hold a decisive position in the Sarawak construction industry in determining the performance and growth of the industry. The research process and findings are explained in this paper.

## LITERATURE REVIEW

### Impacts of Challenging Economic Climate to the Construction Companies

Literature shows that economic impacts can be interrelated. The disruption of material transportation can cause material shortages and also an increase in material costs (Esa et al., 2020; Gamil & Alhagar, 2020; Lagat et al., 2023; Mohamed & Kamaruding, 2023; Zamani et al., 2021). As a result, the total construction cost would increase, thus increasing the construction companies' financial pressure (Jayalath, 2023). Unexpected closure and projects suspension cause progress delays, creating inflation risks and additional financial charges to the construction companies (Al-Keim, 2017; Lagat et al., 2023). Due to the lack of projects initiated in the industry, the intense market competition increases the difficulties in winning jobs and correspondingly decrease the company's revenue and business turnover (Aghimien et al., 2018; Ogbu, 2017; Olowa et al., 2018). The above impacts create financial burden which is the main impact to the construction company. Without effective strategies to improve the company's financial capabilities and ensure proper cash flow, the company's survival would be threatened (Tansey et al., 2013). Kam et al. (2022) and Lagat et al. (2023) opined that construction practitioners should consider survival measures to "remain afloat" or "alive". Thus, it is necessary to study the survival strategies that could be adopted by the construction companies in a challenging economic environment.

### Survival Strategies Adopted by Construction Companies in a Challenging Economy

Survival strategies refer to the tactics adopted to weather the storms of economic and deal with the impacts effectively during the turbulent economic situation (Aghimien et al., 2018; Tansey et al., 2013; Ye et al., 2010). Based on extensive literature review, 53 survival strategies were identified and subsequently categorized into six main categories, as shown in Table 1. The six categories are strategies related to human resources management, financial management, project bidding, diversification, networking, and business model and management.

Table 1: Survival Strategies Adopted by construction companies amidst challenging economy climate

Source Survival Strategy		Abubakar et al. (2022)	Adeyuyi & Otali (2017)	Aghimien et al. (2018)	Al-Tobi & Manchiryal (2020)	Bakar et al. (2011)	Bhagatkar et al. (2015)	Buys & Rooyen (2014)	Jayalath (2023)	Lim et al. (2010)	Norhaidin & Tan (2023)	Olowa et al. (2018)	Ruddock et al. (2014)	Scott (2011)	Tansey et al. (2013)	Toh et al. (2023)	Zuo et al. (2015)
		<i>Strategies related to Human Resources Management</i>															
SH RM 1	Staff layoff/downsizing	√	√	√			√	√	√	√		√		√	√	√	√
SH RM 2	Reducing or freezing staff recruitment				√					√				√	√		√
SH RM 3	Reducing or freezing staff salaries/increment/allowance/bonuses	√			√				√	√		√		√	√		√
SH RM 4	Employing more experienced staff members								√								√
SH RM 5	Employing staff/foreign professionals on a project by project/contract basis								√	√				√	√		√
SH RM 6	Employing cost claim consultants in order to increase revenue														√		

Source  Survival Strategy		Abubakar et al. (2022)	Adeyuyi & Oтали (2017)	Aghimien et al. (2018)	Al-Tobi & Manchiryal (2020)	Bakar et al. (2011)	Bhagatkar et al. (2015)	Buys & Rooyen (2014)	Jayalath (2023)	Lim et al. (2010)	Norhaidin & Tan (2023)	Olowa et al. (2018)	Ruddock et al. (2014)	Scott (2011)	Tansey et al. (2013)	Toh et al. (2023)	Zuo et al. (2015)
		SH RM 7	Converting permanent employees into temporary placements									√				√	
SH RM 8	Staff training, upskill and multi-tasking			√		√							√		√	√	√
SH RM 9	Flexible working arrangements								√								√
SH RM 10	Increasing staff working hours														√		
SH RM 11	Practicing effective communication with staff and management	√	√														
<b>B</b>	<b>Strategies related to Financial Management</b>																
SF M1	Implementing stricter financial management on company cash flow	√		√	√					√	√		√	√	√	√	
SF M2	Implementing stricter site management to reduce material & time wastage in order to achieve lowest construction cost				√				√	√	√		√	√			
SF M3	Cutting cost e.g., operational/administrative cost, supplier cost, R&D budget								√		√	√				√	
SF M4	Reducing cost incurred on contract dispute through contract management			√													
SF M5	Creating contingency funds from company reserves									√	√			√			
SF M6	Negotiating for alternative loan services with the financial institutes								√	√	√					√	
SF M7	Entering into security agreements with project owners and financial institutes									√							
SF M8	New financing arrangements with clients															√	
SF M9	Rescheduling or eliminating debt		√									√					
SF M10	Utilizing surplus funds in financial investment		√			√				√							
SF M11	Investing into R&D to further explore business opportunities									√					√		
<b>C</b>	<b>Strategies related to Project Bidding</b>																
SPB 1	Bidding for more projects that are within the firm resources and capabilities	√			√					√				√			
SPB 2	Bidding for projects with lower or zero profit margin	√			√			√		√				√	√	√	√
SPB 3	Quoting reasonable and affordable fees and prices in bids		√						√								√
SPB 4	Undertaking short-term, fast track as well as smaller contract/project	√			√					√		√		√	√		
SPB 5	Setting limits on project size so that any failure of one project would not endanger the firm's operation				√					√				√			

Source  Survival Strategy		Abubakar et al. (2022)	Adeyuyi & Otali (2017)	Aghmieni et al. (2018)	Al-Tobi & Manchiryal (2020)	Bakar et al. (2011)	Bhagatkar et al. (2015)	Buys & Rooyen (2014)	Jayalath (2023)	Lim et al. (2010)	Norhaidin & Tan (2023)	Olowa et al. (2018)	Ruddock et al. (2014)	Scott (2011)	Tansey et al. (2013)	Toh et al. (2023)	Zuo et al. (2015)
		SPB 6	Carefully considering the payment terms and the client ability to make payment								√				√		
<b>D</b>		<b>Strategies related to Diversification</b>															
SD1	Diversifying into construction related business (e.g. sale or lease of construction materials and equipment)	√	√	√	√			√	√	√	√	√		√			√
SD2	Diversifying into non-construction related businesses (e.g. manufacturing of automobile or household products)			√	√			√		√				√			
SD3	Market Penetration (e.g. into emerging or foreign market)		√		√	√	√	√	√	√	√	√		√	√		√
SD4	Tendering on different type of project e.g., residential, commercial, industrial							√									
<b>E</b>		<b>Strategies related to Networking</b>															
SN1	Focusing on forming and improving relationship with stakeholders, clients, contractors, suppliers	√	√	√			√		√			√	√	√	√	√	√
SN2	Collaborative partnerships with clients, contractors, suppliers, architects			√	√					√			√	√		√	√
SN3	Adopting merger and acquisition with construction companies		√		√		√		√	√	√	√		√	√		√
SN4	Forming Joint Venture with other construction companies	√			√			√	√	√	√			√	√		√
<b>F</b>		<b>Strategies related to Business Models and Management</b>															
SB MM 1	Concentrating on core business that the company familiar with								√			√					√
SB MM 2	Change in geographical location (business & staff)			√												√	√
SB MM 3	Implementing stricter procurement procedures									√			√		√		
SB MM 4	Strategic resources acquisition and realignment such as construction materials and equipment		√	√		√		√	√	√		√			√		
SB MM 5	Increasing and improving delivery quality and standards	√	√	√		√	√						√		√	√	
SB MM 6	Adopting new technologies/innovations	√	√	√		√	√		√			√	√		√		
SB MM 7	Practicing effective marketing strategies	√		√			√					√		√	√		
SB MM 8	Improving organisational culture with practices such as laying emphasis on goals and tasks accomplishment		√	√		√			√							√	
SB MM 9	Improving and adapting organizational structure		√	√		√									√	√	
SB MM	Servicing only a specific group of clients								√						√		

Source  Survival Strategy		Abubakar et al. (2022)	Adewuyi & Otali (2017)	Aghimien et al. (2018)	Al-Tobi & Manchiryal (2020)	Bakar et al. (2011)	Bhagatkar et al. (2015)	Buyts & Rooyen (2014)	Jayalath (2023)	Lim et al. (2010)	Norhaidin & Tan (2023)	Olowa et al. (2018)	Ruddock et al. (2014)	Scott (2011)	Tansey et al. (2013)	Toh et al. (2023)	Zuo et al. (2015)
		10															
SB MM 11	Subcontracting work from other construction companies				√					√		√		√			
SB MM 12	Introducing sustainability initiatives																√
SB MM 13	Maintaining socially responsible practices to create company image												√		√		√
SB MM 14	Reverting to simple efficiency planning														√		
SB MM 15	Reviewing project risks and invest in risk management										√		√			√	
SB MM 16	Reducing turnover rate (Number of business/project)																√
SB MM 17	Reviewing health and safety measures continuously to reduce accidents	√											√				

### Strategies related to Human Resources Management

Human resources management strategies can be adopted to manage the employment costs and enhance the workforce’s and company’s capabilities to create some means of competitive edge over their counterparts (Aghimien *et al.*, 2018).

During an economic downturn, construction demands may decline, thereby causing the workforce exceeds the company’s needs (Olowa *et al.*, 2018). Therefore, the construction companies who participated in previous research suggested to adopt staff layoff/downsizing to get rid of unnecessary workforce and reduce or freeze staff recruitment to avoid the additional employment cost (Adewuyi & Otali, 2017; Aghimien *et al.*, 2018; Al-Tobi & Manchiryal, 2020; Bhagatkar *et al.*, 2015; Lim *et al.*, 2010; Scott, 2011; Buyts & Rooyen, 2014; Olowa *et al.*, 2018; Zuo *et al.*, 2015). Bhagatkar *et al.* (2015) revealed that it is easier to reduce operating costs than to generate additional revenue. If staff layoff strategy is adopted, construction companies tend to increase working hours of the remaining staff to compensate for the reduction in workforce so as to maintain business operations (Tansey *et al.*, 2013).

In the intense competition environment, it is vital to preserve the company’s long-run competitiveness. It was revealed that increasing the workforce’s abilities through staff training and multi-tasking can assist in building a company’s competitive advantage (Aghimien *et al.*, 2018; Lagat *et al.*, 2023; Ruddock *et al.*, 2014; Tansey *et al.*, 2013; Zuo *et al.*, 2015). On the other hand, some construction companies also inclined to recruit foreign professionals and experienced workforce who require lower pay on a contract basis in order to minimize the employment and training costs (Lim *et al.*, 2010; Tansey *et al.*, 2013; Zuo *et al.*, 2015).

Besides, practising effective communication with staff and management gives chances to the team to contribute to the company and discuss measures to address the economic challenges (Adewuyi & Otali,

2017). Scott (2011) mentioned that it is important to let the employees know that their jobs are still secure, although the situation is severe.

### **Strategies related to Financial Management**

Economic downturns may cause insolvency of construction companies due to cash flow issues and financial difficulties (Edmund et al., 2018; Tansey et al., 2013). Therefore, construction companies should focus on financial management in order to survive. Previous research revealed that implementing stricter financial management such as dropping off low/zero profit items from the production line, amending the purchasing rules and conducting project milestone monitoring system are effective in controlling cash flow (Al-Tobi & Manchiryal, 2020; Aghimien et al., 2018; Lim et al., 2010; Ruddock et al., 2014; Ogbu, 2017; Scott, 2011; Tansey et al., 2013). Since the project profit margin is tight during the downturn, the construction companies may seek ways to reduce the construction cost and the impacts of material cost inflation (Al-Keim, 2017; Yuan, 2013). In order to achieve the lowest construction cost, stricter site management can be implemented to reduce material and time wastage, improve project performance and create positive impacts on the company's cash flow (Al-Tobi & Manchiryal, 2020; Lim et al., 2010; Scott, 2011; Ruddock et al., 2014).

Another challenge caused by difficult economic situation is shortage of capital. To cope with this challenge, construction companies may cut supplier costs to switch the limited capital to the more essential areas (Olowa et al., 2018; Tansey et al., 2013). Aside from cost-cutting, Lim et al. (2010) stated that preparing sufficient contingency funds can help minimize the impacts on the company's operations.

In the case of prolonged recession, some construction companies also chose to negotiate for alternative loan services with financial institutions to relief their burden (Adewuyi & Otali, 2017; Lim et al., 2010; Olowa et al., 2018; Tansey et al., 2013). Besides, in order to avoid contract disputes which may cause additional expenses, practising proper contract management, entering into new financing and security agreements with clients and financial institutions can be adopted (Aghimien et al., 2018; Lim et al., 2010; Tansey et al., 2013).

### **Strategies related to Project Bidding**

In a challenging economic environment, construction companies tend to avoid bidding for large-scale projects beyond their capability (Lim et al., 2010). This is because over-trading of work and overstretching of resources and capabilities may trigger self-destruction if the construction companies lose control of the project and correspondingly intensify the economic impacts (Lim et al., 2010; Zuo et al., 2015).

Besides, the main source of profit for construction companies is the profit margin that is added onto the price of contracts at the bidding stage. Thus, Scott (2011) discovered that the construction companies would quote a reasonable and affordable price at the bidding stage to generate revenue. However, clients will generally award the contract to the lowest bid. Therefore, in order to maintain the company cash flow and retain their staff, most of the construction companies were willing to bid for projects with lower or zero profit margin to win more projects although the economic condition is severe (Adewuyi & Otali, 2017; Lim et al., 2010; Zuo et al., 2015). Mitigations such as lowering projects material and operational expenses are needed to reduce the impacts of lower profit margin (Lim et al., 2010).

In addition, construction companies also tend to undertake contracts that can be completed within a short period, such as factory and industrial building projects, to increase their turnover and improve cash flow (Lim et al., 2010; Olowa et al., 2018). Furthermore, before bidding a project and entering into a contract, the construction companies should carefully consider the payment terms and the client's financial capability to avoid payment issues (Ruddock et al., 2014).

### **Strategies related to Diversification**

In a challenging economic environment, the number of projects may reduce. Consequently, the

construction companies' revenue and turnover would be affected significantly, thereby threatening their survival (Aghimien et al., 2018; Ogbu, 2017; Ruddock et al., 2014). Therefore, the construction companies may tender for different types of project and penetrate into emerging or overseas markets which have high construction service demands (Adewuyi & Otali, 2017; Al-Tobi & Manchiryral, 2020; Bakar et al., 2011; Bhagatkar et al., 2015; Lim et al., 2010; Olowa et al., 2018; Scott, 2011; Zuo et al., 2015).

Diversification into construction related business (sales or lease of construction materials and equipment) or non-construction related business (manufacturing automobile and household products) may help reduce the impacts faced by the companies (Adewuyi & Otali, 2017; Aghimien et al., 2018; Al-Tobi & Manchiryral, 2020; Bhagatkar et al., 2015; Buys & Rooyen, 2014; Lim et al., 2010; Olowa et al., 2018; Scott, 2011; Tansey et al., 2013; Zuo et al., 2015). By practising these strategies, the companies can expand their business to create an additional income stream, establish companies' position in the competitive market, enhance the company's capabilities, and enrich the services delivered to the clients (Aghimien et al., 2018; Lim et al., 2010; Olowa et al., 2018).

### **Strategies related to Networking**

Practising collaborative partnerships and developing a strong relationship with other construction companies is an important factor to increase a company's competitiveness (Lim et al., 2010; Zuo et al., 2015). Some benefits of these strategies include increased company's reach, increased jobs of different fields, reduced issues and conflicts between parties, and improved productivity and profitability (Adewuyi & Otali, 2017; Aghimien et al., 2018; Lim et al., 2010; Olowa et al., 2018; Ruddock et al., 2014; Scott, 2011; Zuo et al., 2015).

Through merger and acquisition or forming joint ownership, two or more companies can combine their resources and technology to establish a new entity that possesses a greater value (Bhagatkar et al., 2015). It could help achieve growth and expand business through synergies to gain a strategic position in the competitive market. Construction companies could secure large scale projects by relying on the expertise of their partners as well as by sharing profit and risk (Bhagatkar et al., 2015; Lim et al., 2010; Olowa et al., 2018; Tansey et al., 2013; Zuo et al., 2015).

### **Strategies related to Business Models and Management**

Zuo et al. (2015) discovered that in the challenging economic environment, construction companies that do not revise their business models have a higher possibility of suffering from negative impacts. Therefore, business operating models and management need to be reviewed and revised from time to time to cope with the changes in the market and industry.

There is a risk of loss of revenue when entering into an unfamiliar market during a recession (Zuo et al., 2015). Olowa et al. (2018) and Tansey et al. (2013) mentioned that it is more beneficial for construction companies who have insufficient capabilities and resources in managing other businesses to focus on the core business areas to rebuild their strength. Besides, construction companies should continuously review health and safety measures to prevent accidents that may create unpredicted expenses and invest in risk management to identify, analyze, and respond effectively to any possible risk that may arise in a project (Ruddock et al., 2014).

By implementing stricter procurement procedures, the potential team players and supply chain capabilities should be considered during the selection stage to avoid issues and conflict that may create additional expenses and exacerbate the construction company's financial burden (Bhagatkar et al., 2015; Lim et al., 2010; Ruddock et al., 2014; Tansey et al., 2013). In addition, implementing a central procurement system to consolidate and order the materials in bulk quantity can help reduce the purchasing cost and avoid capital and time wastage caused by poor cost estimating (Lim et al., 2010). Apart from that, strategic resources acquisition and realignment enables effective utilization of the current and essential construction



materials and equipment among the projects, thus reducing the impacts of the cost escalation (Aghimien et al., 2018; Bakar et al., 2011; Buys & Rooyen, 2014; Lim et al., 2010).

In order to strengthen market position during challenging times, the service and products provided must be of a valuable and superior quality that the clients desire. Therefore, improving quality and standards by adopting new technologies/innovations and practising effective marketing strategies have been focused to create company's reputation and branding, retain existing clients and attract collaboration with new customers during the challenging period (Adewuyi & Oтали, 2017; Aghimien et al., 2018; Bakar et al., 2011; Bhagatkar et al., 2015; Olowa et al., 2018; Ruddock et al., 2014; Scott, 2011; Tansey et al., 2013).

## RESEARCH METHODOLOGY

This study adopted a quantitative approach in order to reach construction companies that are geographically dispersed and to enhance research generalizability (Creswell & Creswell, 2018). Besides, this method also allowed the authors to gather data within a short duration (Apuke, 2017). In line with the previous similar research conducted by Bakar et al. (2011), the targeted respondents for this study is the Grade 7 construction companies in Sarawak registered under Construction Industry Development Board (CIDB). This was because Grade 7 construction companies are classified the highest grade under CIDB and they play an important role in determining the performance and growth of the industry. They have more chances to involve in large projects and possess more workforces. Thus, the impacts caused by the challenging economic climate would be more significant to them.

A simple random sampling method was adopted to select the research sample. This was due to the need to avoid bias so that every individual in the population has equal chances to be selected and the results will be more reliable to represent the whole population (Fellows & Liu, 2015). Structured self-administered survey questionnaires were distributed to 259 construction companies through email as well as delivered by the authors in person. Each set of questionnaire consisted of Section A (Respondent's General Information) and Section B (Level of Importance of the Survival Strategies). Under Section B, the respondents were invited to rate the survival strategies based on a five-point Likert scale where 1 = Very Unimportant, 2 = Unimportant, 3 = Moderately Important, 4 = Important, and 5 = Very Important.

The data collected were analyzed using SPSS Descriptive statistics to calculate the mean value and standard deviation of each survival strategy. Besides, Relative importance index (RII) method was used to prioritize the survival strategies. RII is considered a statistical method that can be used to determine the ranking of the variables (Hossen et al., 2015).

## FINDINGS AND DISCUSSIONS

In the present study, a total of 86 responses out of 259 questionnaires distributed were received (33.2% response rate). According to Aghimien et al. (2018) and Sekaran and Bougie (2016), the study will be reliable if the response rate achieves at least 20% to 30%.

Table 2: Job designations of respondents

Job Position	Frequency	Percentage (%)
Managing director	16	18.6
Project director	10	11.6
General director	7	8.1
Project/Site engineer	4	4.7
Contract manager	3	3.5
Project/Construction manager	4	4.7
Site superintending/Supervisor	7	8.1
Others	35	40.7

As shown in Table 2, among the 86 respondents who participated in the present study, 33 of them are from the director level, which consists of 16 managing directors (18.6%), 10 project directors (11.6%), and 7 general directors (8.1%). Moreover, 18 of them are management superiors, including 4 project/site engineers (4.7%), 3 contract managers (3.5%), 4 project/construction managers (4.7%), and 7 site superintendents/supervisors (8.1%). The majority of respondents under the “others” category (40.7%) are quantity surveyors.

Table 3: Respondents’ Experience

Years of Experience	Frequency	Percentage (%)
Less than 5 years	31	36.0
6-10 years	18	20.9
11-15 years	8	9.3
16-20 years	12	14.0
More than 20 years	17	19.8

As shown in Table 3, 36% of the respondents possess less than five years of working experience, followed by 20.9% of them had six to ten years of working experience. Besides, 9.3% had 11 to 15 years of working experience, 14% had 16 to 20 years of experience, and 19.8% of respondents who had more than 20 years of working experience.

Table 4: Geographical location of the respondents

Location	Frequency	Percentage (%)
Kuching	51	59.3
Samarahan	2	2.3
Sri Aman	1	1.2
Sarikei	2	2.3
Sibu	10	11.6
Bintulu	10	11.6
Miri	10	11.6

As shown in Table 4, most responses were collected from Kuching (59.3%). There are 11.6% of responses collected from Sibu, Bintulu, and Miri, respectively.

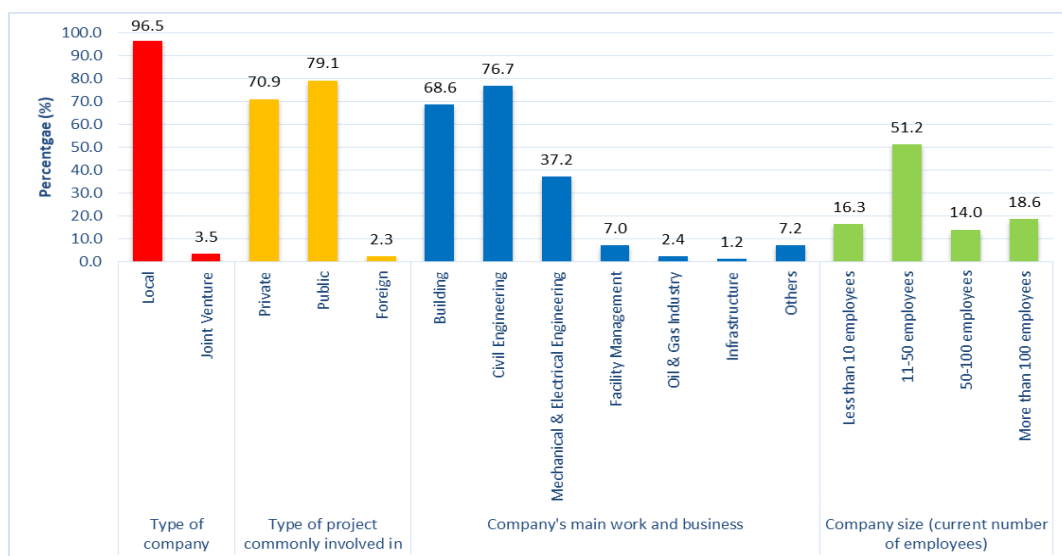


Figure 2: Type of company, type of project commonly involved in, company’s main work and business, and Company size

As shown in Figure 2, 96.5% of the respondents are from local companies while 3.5% are from joint venture companies. In terms of the type of project that the respondent or company is commonly involved in, 79.1% of respondents were commonly involved in public projects whereas 70.9% commonly involved in private projects. There is only 2.3% of the respondents involved in foreign projects.

Besides, regarding the company’s main work and business, most of the respondents took part in civil engineering works (76.7%) and building works (68.6%). In the present study, company size is determined by the current number of employees in the company. Based on the data collected, 51.2% of companies recruited 11-50 employees, 18.6% of Grade 7 construction companies employed more than 100 employees, 16.3% of companies employed less than 10 employees and 14% of them had 50-100 employees.

### Descriptive Statistics and Relative Importance Index of the survival strategies

Based on the results shown in Table 5, there are 33 important survival strategies and 19 moderately important strategies that can be adopted by the companies in the Sarawak construction industry. However, there is one unimportant survival strategy among 53 strategies in the present study.

Table 5: Rankings of survival strategies that can be adopted by construction companies in a challenging economic environment

Category	Variables	Mean	Standard Deviation	RII value	Ranking	Remarks
SFM2	Implementing stricter site management to reduce material & time wastage in order to achieve lowest construction cost	4.2907	0.7494	0.8581	1	Important
SPB6	Carefully considering the payment terms and the client ability to make payment	4.1860	0.8191	0.8372	2	Important
SFM1	Implementing stricter financial management on company cash flow	4.1047	0.7826	0.8209	3	Important
SBMM1	Concentrating on core business that the company familiar with	4.0465	0.7957	0.8093	4	Important
SPB1	Bidding for more projects that are within the company resources and capabilities	4.0233	0.9328	0.8047	5	Important
SBMM5	Increasing and improving project delivery quality and standards	3.9767	0.7967	0.7953	6	Important
SHRM11	Practicing effective communication with staff and management	3.9535	0.9192	0.7907	7	Important
SN1	Focusing on forming and improving relationship with stakeholders, clients, contractors, suppliers etc.	3.9535	0.8528	0.7907	8	Important
SPB3	Quoting reasonable and affordable fees and prices in bids	3.9302	0.7482	0.7860	9	Important
SN2	Collaborative partnerships with clients, contractors, suppliers, architects etc.	3.8372	0.9057	0.7674	10	Important
SBMM9	Improving and adapting organizational structure	3.8140	0.8333	0.7628	11	Important
SBMM4	Strategic resources acquisition and realignment (e.g., leasing rather than buying the less utilized equipment, use resources more efficiently based on the cost-effectiveness)	3.7907	0.8277	0.7581	12	Important

Category	Variables	Mean	Standard Deviation	RII value	Ranking	Remarks
<b>SBMM15</b>	Reviewing project risks and invest in risk management	3.7907	0.8693	0.7581	13	Important
<b>SBMM6</b>	Adopting new technologies/innovations in business to differentiate from other companies	3.7791	0.9629	0.7558	14	Important
<b>SPB5</b>	Setting limits on project size so that any failure of one project would not endanger the firm's operation	3.7674	0.8633	0.7535	15	Important
<b>SFM9</b>	Rescheduling or eliminating debt	3.7558	0.9572	0.7512	16	Important
<b>SBMM3</b>	Implementing stricter procurement procedures in terms of supply chain selection and material purchasing method	3.7558	0.8108	0.7512	17	Important
<b>SBMM8</b>	Improving organizational culture with practices such as laying emphasis on goals and tasks accomplishment	3.7209	0.8765	0.7442	18	Important
<b>SBMM17</b>	Reviewing health and safety measures continuously to reduce accidents	3.7209	0.9286	0.7442	19	Important
<b>SFM5</b>	Creating contingency funds from company reserves	3.7093	0.9186	0.7419	20	Important
<b>SHRM5</b>	Employing staff/foreign professionals on a project by project/contract basis	3.6744	0.9132	0.7349	21	Important
<b>SD4</b>	Tendering on different type of work e.g., residential, commercial, industrial	3.6395	0.9811	0.7279	22	Important
<b>SFM6</b>	Negotiating for alternative loan services with the financial institutes	3.6279	0.9462	0.7256	23	Important
<b>SBMM14</b>	Reverting to simple efficiency planning	3.6163	0.8834	0.7233	24	Important
<b>SFM10</b>	Utilizing surplus funds in financial investment	3.6047	0.9366	0.7209	25	Important
<b>SPB4</b>	Undertaking short-term, fast track as well as smaller contract/project	3.6047	0.9111	0.7209	26	Important
<b>SHRM8</b>	Staff training, upskill and multi-tasking	3.5930	0.9378	0.7186	27	Important
<b>SFM4</b>	Reducing cost incurred on contract dispute through contract management	3.5814	0.9996	0.7163	28	Important
<b>SFM3</b>	Cutting cost e.g., operational/administrative cost, supplier cost, R&D budget	3.5698	0.9272	0.7140	29	Important
<b>SFM8</b>	New financing arrangements with clients	3.5698	1.0005	0.7140	30	Important
<b>SBMM7</b>	Practicing effective marketing strategies (e.g., advertisement hoardings, telemarketing, participation in property expo)	3.5465	0.9781	0.7093	31	Important
<b>SHRM4</b>	Employing more experienced staff members	3.5349	1.1029	0.7070	32	Important
<b>SHRM9</b>	Flexible working arrangements	3.5233	1.0817	0.7047	33	Important
<b>SBMM11</b>	Subcontracting work from other construction companies	3.4884	0.9791	0.6977	34	Moderately Important
<b>SD1</b>	Diversifying into construction related business (e.g., renovation, sale or lease of construction materials and equipment, mechanical & electrical work)	3.4651	1.0023	0.6930	35	Moderately Important

Category	Variables	Mean	Standard Deviation	RII value	Ranking	Remarks
SFM7	Entering into security agreements with project owners and financial institutes	3.4419	0.9531	0.6884	36	Moderately Important
SBMM13	Maintaining socially responsible practices to create company image	3.4070	0.9986	0.6814	37	Moderately Important
SBMM12	Introducing sustainability initiatives (e.g., measurement of energy consumption of project)	3.3488	0.9913	0.6698	38	Moderately Important
SBMM16	Reducing turnover (Number of business/project)	3.3372	0.9531	0.6674	39	Moderately Important
SHRM2	Reducing or freezing staff recruitment	3.3256	0.9755	0.6651	40	Moderately Important
SN3	Adopting merger and acquisition with construction companies	3.2558	0.9602	0.6512	41	Moderately Important
SFM11	Investing into R&D to further explore business opportunities	3.2093	0.8827	0.6419	42	Moderately Important
SN4	Forming joint venture with other construction companies	3.2093	0.9836	0.6419	43	Moderately Important
SHRM1	Staff layoff/downsizing	3.1977	0.9800	0.6395	44	Moderately Important
SBMM10	Servicing only a specific group of clients	3.1628	0.9562	0.6326	45	Moderately Important
SHRM3	Reducing or freezing staff salaries/increment/allowance/bonuses	3.0930	1.0586	0.6186	46	Moderately Important
SPB2	Bidding for projects with lower profit margin	3.0698	0.9304	0.6140	47	Moderately Important
SBMM2	Change in geographical location (business & staff)	3.0698	1.0932	0.6140	48	Moderately Important
SHRM6	Employing cost claim consultants in order to increase revenue	2.9070	1.1128	0.5814	49	Moderately Important
SD3	Market Penetration (e.g., into emerging or foreign market)	2.8605	1.1289	0.5721	50	Moderately Important
SD2	Diversifying into non-construction related businesses (e.g., manufacturing of automobile or household products, operation of the hospitality industry)	2.8256	1.0649	0.5651	51	Moderately Important
SHRM10	Increasing staff working hours	2.6744	0.9993	0.5349	52	Moderately Important
SHRM7	Converting permanent staff into temporary placements	2.4884	0.9042	0.4977	53	Unimportant

(Note for mean value: 1.0-1.49= very unimportant, 1.5-2.49= unimportant, 2.5-3.49= moderately important, 3.5-4.49= important, 4.5-5.0= very important)

### Top three survival strategies

Based on Table 5, “implementing stricter site management to reduce material and time wastage in order to achieve lowest construction cost” is ranked the 1st (RII 0.8581). This finding is consistent with the previous studies done in Malaysia by Norhaidin and Tan (2023), Singapore by Lim et al. (2010), and New Zealand by Scott (2011), where this strategy was ranked as No.1, No. 1, and No. 2, respectively. According, Lim et al. (2010) and Scott (2011), stricter site management is critical and the company recognised the need to be more proactive in site management when the profit margin is tight during economic downturn. Through this strategy, material wastage can be minimized, the usability of the material can be maximized, and the performance of the project will be improved as well as provide a

positive impact on the company’s cash flow (Ajayi et al., 2017; Al-Tobi & Manchiryal, 2020). Besides, construction company’s risk of incurring additional expenses would be lowered by avoiding any prematurely ordered material and ensure proper on-site storage (Al-Hajj & Hamani, 2011; Yuan, 2013). According to Zain et al. (2018), poor site management would lead to project delays.

“Carefully considering the payment terms and the client ability to make payment” is ranked the second with a mean value of 4.19 and standard deviation of 0.82. In the research conducted by Ruddock et al. (2014), this strategy had been voted as a top-five action undertaken by the UK construction companies during the economic downturn. This is because the clients may face financial difficulties and therefore not be able to make payment to the construction company. Late payment/non payment may bring negatively impacts to construction companies such as exacerbated financial burden, project suspension, and even insolvency (Akinsiku & Ajayi, 2016). Thus, before bidding or tendering a project, the financial ability of the clients should be carefully considered as this may help protect the construction companies against payment issues caused by the client.

“Implementing stricter financial management on company cash flow” is ranked the third with a mean value of 4.10 and a standard deviation of 0.78. This finding is consistent with the previous studies, as shown in Table 6. All of the researchers revealed that this strategy is essential in ensuring company’s survival during the challenging economy.

Table 6: Comparison of ranking between the previous and the present studies

Source	Abubakar et al. (2022)	Lim et al. (2010)	Norhaidin & Tan (2023)	Ruddock et al. (2014)	Scott (2011)	Toh et al. (2023)	Present study
Ranking	2	1	2	1	2	1	3

Without proper financial management, the company's financial difficulties may be intensified and thereby tightening the business profit margin (Mutti & Hughes, 2002; Naveed, 2020). Thus, “implementing stricter financial management on company cash flow” is perceived to be a key strategy to ensure company survival. It allows for precise spending tracking, enables the decision-maker to make a better financial decision based on the financial data and plans, and helps reduce any needless expenditures during the harsh period.

**Bottom three survival strategies**

“Diversifying into non-construction related business” is “moderately important” and ranked the 51<sup>st</sup> with a mean value of 2.83 a high standard deviation of 1.06. This finding is similar with the research conducted in Singapore by Lim et al. (2010), New Zealand by Scott (2011), and South Africa by Buys and Rooyen (2014). This finding could be due to lack of capital for expansion and lack of knowledge about the nature of non-construction related business. Scott (2010) further emphasized that the company may need to spend additional money to retrain staff and recruit professionals. Lim et al. (2010) also mentioned that construction companies practise this strategy only when the demand for construction projects is limited. If the demand is still high, the construction companies do no need diversify business to other non-construction related areas to increase revenue. In addition, some respondents also commented in the questionnaire form that the construction companies should think positively that the market will be fully revived in the future because there is still a considerable amount of demands for projects in Sarawak. However, a high standard deviation of 1.06 indicates that there are differing opinions between the respondents.

Based on the findings, “increasing staff working hours” is ranked the 52<sup>th</sup> with a mean value of 2.67 and a standard deviation of 0.53. Extensive literature review revealed that this strategy was not commonly

adopted by the construction industry. It was only adopted by the Ireland construction industry during the 2007-2012 recession (Tansey et al., 2013). In Malaysia, as set out in the Employment Act 1955, the maximum working hour per week is 45 hours. If the worker's working hours exceed this limit, the construction company needs to pay overtime wages to his workers. Thus, this strategy does not help to overcome the economic impacts and may exacerbate the company's financial burden. Besides that, stress related to long working hours can lead to depression and hypertension, thus reducing the workplace efficiency (Anandan, 2020).

“Converting permanent staff into temporary placements” is ranked the last (53<sup>th</sup>) in the present study with a mean value of 2.49 and a low standard deviation of 0.50. It is categorized as an “unimportant” strategy. This finding is matched with the previous studies conducted by Lim et al. (2010) and Scott (2011) who revealed that it is ineffective in reducing employments expenditure. The present study also discovered that only 12.8% of the respondents faced labour redundancy, while 72.1% of them have faced labour shortage during the challenging period. This strategy might increase the risk of worker resignation and further intensity the labour shortage issue.

## CONCLUSION

The economic outlook of Malaysia in 2024 is still uncertain due to the presence of some challenges. Therefore, the construction industry should pre-plan strategies to cope with future challenging economic climate. The present study had achieved both research objectives by identifying and prioritizing the survival strategies according to the data collected from the respondents. The present study revealed that “implementing stricter site management to reduce material and time wastage in order to achieve lowest construction cost”, “carefully considering the payment terms and the client ability to make payment”, and “Implementing stricter financial management on company cash flow” are the top three important strategies from Grade 7 construction companies' perspective. This study may serve as a reference to the construction companies in Sarawak so that they would respond effectively and be able to survive when the economic environment becomes challenging.

## FUTURE DIRECTION

Future research can extend the scope of the present study by including Grade 1 to Grade 7 construction companies as well as developers firms, consultants firms and real estate companies who also take part in the construction industry. Besides, similar research can also be extended to other parts of Malaysia to collect more comprehensive data from the construction industry. In addition, other research methods such as qualitative or mixed-methods can be adopted to obtain in-depth information.

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