Survival Strategies and Challenges Faced by Subcontractors in Malaysian Construction Industry

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***Abstract*— The construction industry is as one of the biggest sectors in Malaysia's economic productivity. Due to the declining GDP Growth rate in Malaysia in the past five years, the construction industry is then gaining through a slow growth of development, and it also arises problem to the contractors especially to the subcontractors. Hence, how are the subcontractors experience to survive in the economic downturn where the market conditions available only for limited projects and what are their strategies undertaken for business survival to sustain themselves in the competitive environment. The purpose of this paper is to identify the survival strategies and common challenges that subcontractors faced in the construction industry. The findings identified the common challenges and the survival strategy actions that could be considered by the subcontractors as referencing when facing in their business survival and preparing themselves before the economic downturn. A detail literature review is conducted to sort out the common survival strategies and challenges that have been discussed in previous researches. Questionnaires are designed and distributed accordingly to the target local contractors which are registered under CIDB located in Klang Valley as respondents of this study. The collected data is analysed by using the Relative Importance Index (RII) for ranking to determine the common adoption discussed by the respondents during the downturn period. The findings discovered that majority contractors are aware of the type of survival strategies can be take in action during prolonged downturn.**

Keywords*— *Construction industry, subcontractors, economic downturn, survival strategies, challenges.

I. INTRODUCTION

In Malaysia, the construction industry is the third-biggest sector in terms of productivity following manufacturing and agriculture according to Construction Industry Development Board of Malaysia (CIDB). The construction industry has a strong influence on growth because of its extensive backward and forward linkages with the rest of economy. However, despite construction sector being known as one of the most productive sectors to the country's economy, development support to the industry and to contractors remains minimal.

According to the statistics provided by Department of Statistics Malaysia, it shown that the Gross Domestic Product (GDP) Growth of Malaysia has been a sharp plunge in the past five years, from rate of 6.0 per cent in year 2014 to rate of 4.2 per cent in year 2018. As the sluggish Malaysian economic environment, the Construction Sector also experienced a decline in growth, in the past five years, from Construction GDP rate of 11.7 per cent in year 2014 dropped to 4.2 per cent in year 2018.

Construction organizations need a contingency of survival perspective in relation to uncertainties in the environment. What will keep them alive is innovation and change that is faster than those by the toughest competitors and of the external environment [1]. Financial consultant, John Gillespie described survival strategy is a state of being familiar to most start-ups that have weathered the recession and to entrepreneurs who kept their companies afloat by postponing spending, hiring and long-term goal-making to focus on staying alive another day [2].

Even in the best of times, subcontractor firms struggle to expand. For such companies, if the economic sluggish occur rarely and unpredictably, and they are difficult to sustain. So in the worst of times, the contractors may face more unexpected challenges and problems and affect to their business survival. However, if the contractor firms are prepared with the strategies such as have the broader access to capital, and

heightened bargaining power that enable them to pursue growth strategies despite economic downturns. Hence, it is important for the players in construction sector, to implement suitable survival strategies for their business survive and thrive.

This study is focusing on the subcontractor's perspective on how they survival their business in the recession period such as types of business strategy adopted to standing out from the competitive environment. In particular, there is a lack of research into the adaption of subcontractors in the comparatively market in Malaysia. In addition, subcontractors are who often specialize in one specific of construction work and who work for the project from contractors, do they are their survival strategy be different from to the main contractors.

II. Research Objectives

This study is expected to achieve the objectives as followings:

i. To identify the prevalent challenges faced by subcontractors in the industry

ii. To determine the common survival strategies adopted by subcontractors in response to survive in the construction industry

III. Literature Review

3.1 Types of Challenges Faced in the Constructin Industry

3.1.1 Labour Shortages

The Malaysian construction industry has been experiencing a critical shortage of workforce. Nowadays the local workers unable to fulfil then demand of construction market from time being. This reason caused the contractor willing to import foreign workers from outside to meet the needs and requirement labour market in construction sector. According to Kwan Foh Kwai the President of MBAM (Master Builder Association of Malaysia) mentioned that, shortage of skilled construction workers is very crucial issues in construction industry [3]. Besides that, MBAM also stated that, the acute shortage of skilled workers in the construction industry will give negative impact towards the projects under Malaysian Plan (10MP) and Economic Transformation Programmed.

Current topical issues relevant to the Malaysia construction industry are the quality of workmanship. According to REHDA (Real Estate Housing Developers' Association Malaysia quality of product including housing and building are related directly to manpower and skilled. It seems that the construction industry is failed to attract workers in skilled and semi-skilled trades. The 3D (Dangers, Dirty, Difficult) perception has discouraged skilled local workers in joining, resulting in a lot of job being executed by the untrained construction workers. The important issue from REHDA stated that, the skilled labour shortage is the one of factor contributing of the increasing property price [4].

3.1.2 Financial Constraints

Financial constraints were a limiting factor to building activity – the joint highest reading in five years. Respondents have often cited financial constraints to be causing difficulties in recent reports, and more specifically access to bank finance and credit, cash flow and liquidity challenges or less favorable cyclical market conditions.

According to a survey conducted by TSheets and Levelset, the proof shows that most of the construction firms are struggles with the cash flow problem due to the delayed payments from clients. The survey reported that most of the construction firms do not received payments on time and leads to cash-flow problems, incomplete work and even liquidation are financial constraints facing emerging contractors.

3.1.3 Technology Adoption

It is necessary for contractors to catch up to the technology. They will need to use more and better cloud-based software, and integrated collaboration tools. The use of building information modelling (BIM), drones and laser scanning, continues to grow in the industry. However, because technology has come later and more sporadically to the construction industry, there is less uniformity and general contractors use a wide variety of software. This can be overwhelming for subcontractors, architects and owners trying to work with general contractors. It is leading to increased costs and delays as subcontractors try to learn each new system.

3.1.4 Competitive Rivalry within the Industry

Economic recessions will cause contractor credit condition to become more tightening and also has difficulty in obtaining credit insurance (University of Craivora, 2010). However, in a downturn economy, there's also a possibility that developers have lesser credit or capital to start for new projects or construction. It will cause lesser demand for same number of contractor firms or larger projects are potentially obtained by other unqualified firms. Thus, competition between contractor firm's increases. Contractor firms may find difficulties in obtain projects in order to sustain their company. Contractor firms are forced to lower their tender price in order to compete and obtain projects.

3.2 Types of Survival Strategies Taken by Constrruction Firms

3.2.1 Contract Marketing

Contracting-related actions are those approaches adopted by contractors in exploring every possible way of obtaining work to maintain their turnover [5]. The study in UK by Tansey and associates found that the importance of bidding or taken on small contracts was able to survive during economic turmoil [6]. The surveyed contractors supported that even smaller contracts were vital part to their business as the practise adopted able to survive and create competitiveness among the peer.

Some of the contracting-related actions were both agreed in the studies by Hillebrandt and associates and Lim and friends, listed that during the economic recession, the contractors much considered carefully the payment conditions before entering a project and also considered on the client's ability to make payment [5] [7]. The action be practiced due to the surveyed contractors faced the problem during the recession period that not able to receive payments even the projects have completed

and assessed months ago. Hence, these contractors considered the payment conditions and client's reputation also financial ability before entering contracts to prevent disputes and problem of cash flow happened [7].

3.2.2 Human Resource Management

A number of studies on the construction industry response in recession have noted changes to employment patterns. Hillebrandt and associates explained this strategy commonly implemented during economic recession for the need of cutting down overhead costs [5]. Lim and associates studied that the contractors surveyed adopted actions of laid off employees for cost control during the recession [7]. Both studies from Hillebrandt and associates and Lim and associates, both studies shown the negative trends action taken by the companies during recession; for example: froze of employees' salary, cutting of bonuses and overtime, decreasing the pay to employees, delaying of employees' salary and etc [5] [7],.

However, another opinion commented from Lim and associates that the surveyed contractors from their study did not apply the actions of laying off the employees instead they remain the employees during recession as the employees was one of the company asset [7]. Another practise action taken in Hillebrandt studied that some of the company taken action on converting their permanent employees into temporary placements, hence, it able to lay off unnecessary workers and achieved for financial control [5].

3.2.3 Diversification of Work

Hillebrandt and associates mentioned that diversification can include backward integration (diversification into business with inputs into the main operations), forward integration (expansion into the business activities of those firms who would typically purchase the outputs of the main operation) and horizontal integration (integration into other markets not linked with the existing business) [5].

Differentiation is to change the appearance of what the firm is providing to create a point of difference from its competitors [8]. In the construction industry this could involve offering innovative services, such as design and build packages or capitalizing on niche markets such as sustainable buildings [5].

3.2.4 Financial Management and Investment

Correct Financial Management is an important contributor to the success of any company. Arditi and friends were studying into the reasons for company failures in the construction industry budgetary problems including insufficient profits, heavy operating expenses, insufficient capital & institutional debt accounted for over 40% of all failures [9]. These budgetary issues are noted as internally controlled by the companies [9]. Mutti and Hughes research noted main causes of insolvency in construction, inadequate management is the most common reason followed by a lack of financial control [10].

Other studies have noted the importance of reducing operating costs for survival. Hillebrandt and associates study found that reducing both employment costs and head office costs is another strategy adopted by majority of firms to survive [5]. Meanwhile, Lim and associates paper shows that as well as reducing employment costs, 100% of firms attempted to control costs by implementing stricter site management, reducing material wastage and implementing stricter procurement procedures [7]. The lack of cash flow management and budgetary control is a major cause of business failure within the construction industry [10]. Information on cash flow modelling and forecasting is relatively easy to find, and being such a major cause for company failure, it seems construction firms simply need to take the concept more seriously. Furthermore, Lim and associates research recorded that the firms chosen to implement stricter financial management on company cash flow during recession [7].

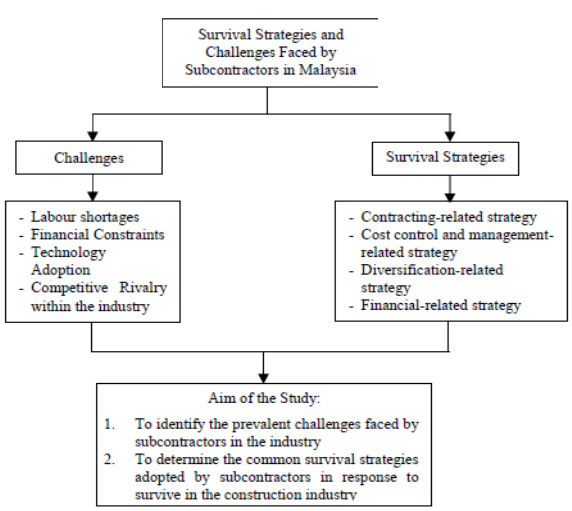
IV. RESEARCH METHODOLOGY

Questionnaire survey was adapted and conducted for the research to obtain data from the targeted population. A five-point Likert scale be implemented into questionnaire survey.

The questionnaire was distributed by using email google form survey due to its effectiveness and it offers anonymity for the respondents. Whereas a follow up call to each respondent after the emails have been sent out to ensure better respond rate.

The scope of the study is limited to the contractor firms which mainly specialized in building works who registered under Construction Industry Development Board (CIDB) Malaysia; ranged from Grade 1 to 7; geographical location focus on Klang Valley, Malaysia, only for reason to understand the impacts towards the subcontractors who try to survive in Malaysia most crowded city.

Descriptive analysis was used in analyzing the data of this study by using mean analysis. Relative important index was then used to arrange the variables for discussion.



V. RESEARCH FRAMEWORK

Fig. 1. Research Framework

VI. Discussion & Findings

6.1 Respondent's Background

Figure below shows the location of the contractor firm where the respondent located. Based on the data collection, majority of respondents' firm is located in Selangor with a total number of 44 (70.97%) whereas respondents' firm from Kuala Lumpur has a total number of 18 (29.03%).

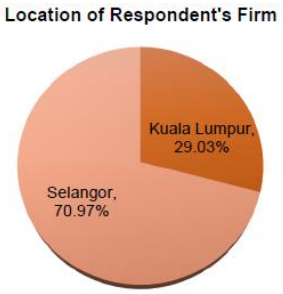


Fig. 2. Location of Respondent's Firms

Figure 3 illustrates the number of respondents on their firm's Contractor Registration Grade under CIDB Malaysia. Based on the graph analysis, the highest firm grade is the respondents from Grade 6 with a percentage of 27.4% and following by Grade 5, with a percentage of 25.8%. Surprisingly the response of Grade 7 achieved a slightly low target returned compare to responses from Grade 6 and Grade 5, which it only consists a total of 14.5%. Then, the responses with at a percentage of 11.3% is returned both from Grade 3 and Grade 4. The lowest return rate for this survey is from Grade 1 (3.2%) and Grade 2 (6.5%).

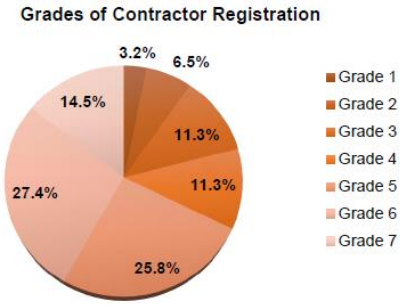


Fig. 3. Respondents' Contractor Grades

6.2 Challenges faced by Subcontractors in the Industry

Table 1 shows the 15 common problems facing in the construction that organized from four challenges categories: Labour Shortages, Financial Constraints, Technology Adoption and Competitive Rivalry within the Industry.

The top challenges facing in the industry by respondents is low demand for construction projects due to the economic downturn (RII 0.835). Due to the low demand for projects in the industry, it then derivative another challenge to subcontractors that is intense competition for bidding limited projects (RII 0.781). The problems can cause difficulties to the subcontractors in bidding projects to sustain their company as they are forced to bid lower tender price and with tiny or zero profits to secure for projects.

The second-rated challenges by respondents are facing a shortage of local workers due to 3D (Dirty, Difficult, Dangerous) factors. Few of the respondents commented that the difficulties in applying for local workers and especially commented in recent years less young generation choose to work in the industry. Shortage of foreign labours is another problem facing the industry. This problem is due to the renewal of foreign worker's permit (RII 0.765) and unattractiveness exchange rate conversion (RII 0.732). With the prolonged downturn and the issues of changes of government, the foreign labours had an issue on a period of invalid of their working's permit that causes the construction industry had issues on recruiting foreign workers to work on-site.

The next challenge that agreed by the majority of respondents is the inflation (RII 0.803), for example, an increase of material price, equipment, machinery as well as wages for labours. The inflation is the cost escalation for the subcontractors that working in a project, and mostly the project is usually tiny or zero profits that bid during the downturn for work secure. The challenge is causing the subcontractors earning less interest and indeed causing to an extra payment for the inflation costs.

The fourth common challenge by subcontractors is that the majority of them had problems with cash flow (RII 0.781). This challenging issue faced by subcontractors is usually insufficient of cash flow due to delays of claim payment and that unable to pay for debts such as purchases and wages. The respondents had commented that their insufficient cash flow problem is caused by the withholding of progress payment by the client (RII 0.735), especially during the downturn period. Some of the respondents facing issue on their client's poor financial management and causing payment delays (RII 0.706) Table 1 shows the 15 common problems facing in the construction that organized from four challenges categories: Labour Shortages, Financial Constraints, Technology Adoption and Competitive Rivalry within the Industry.

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TABLE I. ANALYSIS OF RESPONDENTS ON IDENTIFIED TYPES OF CHALLENGES FACED IN THE INDUSTRY

Challenges Identified		Likert Scale					Mean	RII	Rank
		1	2	3	4	5			
A13	Low demand of construction projects due to economic downturn	0	2	11	23	26	4.177	0.835	1
A12	Shortage of local workers due to 3D factors (Dirty, Difficult, Dangerous)	0	6	12	16	28	4.065	0.813	2
A6	Inflation (e.g.: increase of material/equipment/wages)	0	6	12	20	25	4.016	0.803	3
A5	Problems of Cash flow (e.g.: delays of claim payment, unable to pay for materials and wages)	2	4	13	22	21	3.903	0.781	4
A14	Intense competition for bidding limited projects	0	7	11	25	19	3.903	0.781	5
A9	Shortage of foreign labours (e.g.: due to renewal of foreign workers' permit)	1	6	13	25	17	3.823	0.765	6
A2	Withholding of progress payment by client	0	5	20	27	10	3.677	0.735	7
A10	Shortage of foreign labours (e.g.: unattractive exchange rate conversion/ low wages)	0	8	11	37	6	3.661	0.732	8
A15	Modernizing of the construction sector (e.g.: using of IBS/technology for fasten the project)	1	3	20	30	8	3.661	0.732	9
A1	Client's poor financial management causing payment delays to contractors	1	11	13	28	9	3.532	0.706	10
A11	Insufficiency of skilled workers	2	2	36	12	10	3.419	0.684	11
A8	Changes of Government Policy/High taxes rate	1	15	14	27	5	3.323	0.665	12
A3	Invalid claim submitted by contractor causing delay of payment received	6	16	20	19	1	2.887	0.577	13
A7	Fluctuation of interest rate	11	8	23	17	3	2.887	0.577	14
A4	Conflict/ Disputes between client and contractor	10	22	10	12	8	2.774	0.555	15

6.3 Types of Survival Strategies adopted by Subcontractors in response to survive in the construction industry

A total of 28 actions taken were organized into four categories as following:

(1) contracting-related strategy;

(2) cost control and management-related strategy;

(3) diversification-related strategy;

(4) financial-related strategy.

The following is a detailed analysis of the research findings. Each category is analyzed and summarized in descending order according to RII value..

TABLE II. CONTRACTING-RELATED STRATEGY ACTIONS

Actions Identified		Likert Scale					Mean	RII	Rank
		1	2	3	4	5			
B12	Considered carefully the payment terms before entering the projects	1	2	13	29	17	3.952	0.790	1
B11	Considered the client's ability to make payment	1	2	17	28	14	3.839	0.768	2
B5	Undertaking smaller contracts	0	3	20	26	13	3.790	0.758	3
B1	Bidding more projects that are within company's resources and ability	2	3	13	41	3	3.645	0.729	4
B4	Undertaking short-term and fast track projects	0	11	17	19	15	3.613	0.723	5
B7	Subcontracting work from other contractors	0	5	20	31	6	3.613	0.723	6
B10	Maintain a good long- term relationship with existing clients and suppliers	0	5	24	24	9	3.597	0.719	7
B9	Bidding a low tender price to secure projects	2	8	16	31	5	3.468	0.694	8
B8	Forming partnership/ contract with clients	1	13	22	20	5	3.246	0.649	9
B2	Entering contracts with suppliers and subcontractors to protect firm's cost escalation	6	6	23	24	3	3.194	0.639	10
B3	Bidding projects with tiny or zero profits	5	15	25	17	0	2.871	0.574	11
B6	Joint venture with other firms to explore business opportunities	10	13	20	15	4	2.839	0.568	12

Table 2 shows the 12 contracting-related actions adopted by contractors. The top contracting-related actions that considered the most (RII 0.758) by the responses are considered the payment terms carefully before entering the projects. This means that the respondents were attention on their interest and make sure they are getting for payments, especially during the economic downturn due to limited capital are available. This top rank action is supporting by the second rank action at RII 0.755, is considered the client's ability to make payment. Due to the economic downturn, the contractor firms are usually in a tight on financial; hence, it is vital for the contractors to considered client's ability to prevent no payment received or late-payment issues happened.

The next action that considered by the respondents during the economic downturn is undertaking on smaller contracts

(RII 0.755) and short-term and fast track projects (RII 0.742). This action is suggested by reference [5] for the companies to bid for more smaller contracts in recession. It also agreed by reference [7] survey, that taking on short-term are less-pressure and importantly that the clients are concerned more on the speed of work and they can pay for the works in a shorter period hence this can improve contractor's cash flow.

Where there are fewer projects available during the economic downturn, the competition in the construction industry then arise. The respondents had taken actions to bid a lower tender price to secure projects (RII 0.32) and bid projects in tiny or zero profits (RII 0.684). The action was to win for bidding projects that enable their companies to maintain cash flow and their business survival in the industry. This action is identified with the findings of reference [5] and reference [11] that the strategy of bid projects at a low tender price with tiny or zero profits is common during a recession. The action can be reduced possibility loss that project priced lower cost by negotiating with suppliers and subcontractors for the lowest prices.

Other actions such as maintain a good long-term relationship with existing clients and suppliers (RII 0.735), so the contractors can enter contracts with suppliers and subcontractors to protect their business from cost escalation (RII 0.706). The results show some of the surveyed respondents do consider forming a partnership with clients (RII 0.732) in order to secure for projects.

TABLE III. COST CONTROL AND MANAGEMENT-RELATED STRATEGY ACTIONS

Actions Identified		Likert Scale					Mean	RII	Rank
		1	2	3	4	5			
C6	Converting permanent employees into temporary placements (e.g.: contract-based)	3	12	18	19	10	3.339	0.668	1
C2	Delaying salary of employees	3	17	16	25	1	3.065	0.613	2
C3	Laying off employees	9	17	16	20	0	2.758	0.552	3
C5	Cutting employees bonuses/overtime	10	18	13	19	2	2.758	0.552	4
C4	Cutting employees' salaries	11	19	20	11	1	2.548	0.510	5
C1	Freezing salaries of employees	23	30	4	5	0	1.855	0.371	6

Table 3 shows the six cost-control and management related actions adopted by respondents. The finding shows the respondents preferable choose to convert permanent employees into temporary placement, for example, a renewable contract basis that usually for two to three years. One of the respondents commented that their company had converted few permanent employees into contract basis that work only for a particular project for a period of three to five years. This contract basis action can fix the company's financial control as the salary is usually an agreed amount in the contract years that without increasing salary.

The next common action by respondents is their company taken on delaying employees' salary (RII 0.613). In contrast, the majority of the respondent's company did not practice for freezing employees' salary (RII 0.371). This means that the majority of the company rather too late pay for their employees but they not practicing for not pay the salary even during the economic downturn. This agrees with reference [12], reference [13] and reference [7] findings on the contractors explain the difficulties and telling the delaying of salary to their employees in the hard times.

The two actions in the findings shared same RII (0.552), the respondent's company taken practice for laying off employees and cutting overtime, including bonuses as a cost saving measure. This action is taken to reduce the company's overheads cost. However, it is crucial to notify the employees before taking this exercise.

TABLE IV. DIVERSIFICATION-RELATED STRATEGY ACTIONS

Actions Identified		Likert Scale					Mean	RII	Rank
		1	2	3	4	5			
D3	Focusing in a particular expertise	2	3	26	26	5	3.468	0.694	1
D1	Diversifying into other construction-relation business (e.g.: renovation works for residential)	4	16	19	21	2	3.016	0.603	2
D2	Diversifying into any non-construction related business	4	21	26	11	0	2.710	0.542	3

Table 4 above shows in diversifying category that majority of contractors agreed on the action of focusing in particular expertise (RII 0.694), for example, painting works, tiling works as the bargaining of entry-level is comparatively low than other expertise. The next action that considered by respondents that had diversified into other construction-related business (RII 0.603), for example, renovation works, property maintenance, road and infrastructure work [7]. The preferences of this action can be in order to obtain turnover and maintain their company during the intense competition in the economic downturn. The least preference action by respondents is diversifying into non-construction related business.

TABLE V. FINANCIAL-RELATED STRATEGY ACTIONS

Actions Identified		Likert Scale					Mean	RII	Rank
		1	2	3	4	5			
E7	Trying new methods and technologies for improved productivity that save money	2	4	20	22	14	3.677	0.735	1
E4	Implementing stricter financial control to ensure positive cash flow	1	11	16	18	16	3.597	0.719	2
E1	Sourcing for alternative loan services (e.g.: long term/ short term bank loan)	2	9	16	31	4	3.419	0.684	3
E5	Sourcing alternative funds by selling assets (e.g.: property/ machine/equipment, etc)	2	6	29	23	2	3.274	0.655	4
E2	Investing machine with high liquidity value	3	20	22	15	2	2.887	0.577	5
E3	Investing surplus funds in financial investment	10	21	18	10	3	2.597	0.519	6

Table 5 shows the top action that agreed by respondents in financial-related strategy is trying new methods and technologies for improved productivity, so that enables to save money (RII 0.735). This means the respondents find the importance of technology adoption in construction works able to improve productivity and mitigate cost wastage.

The second common financial related practice by the contractors is implementing stricter financial control to ensure positive cash flow (RII 0.719). The action is supported by Lim et al. (2010) that adopt stricter financial control is one of the keys to survival during the economic downturn. Other than that, the contractors do take action in sourcing for alternative loan services (RII 0.684); for example, long-term or short-term bank loan, to finance for the capital and debts. The action in agreement with reference [5], reference [14] and reference [15] findings that it is a common strategy that implements to source for finance debts and expenses during the economic recession.

Some respondents had to source alternative funds by selling company' assets (RII 0.655), for example, property and machinery as well as equipment in order to obtain alternative money. One of the respondents mentioned that funds from assets selling which can only support the financing for a short period due to its amount limit and availability of debts.

The two least actions practice by subcontractors are investing machine with high liquidity value (RII 0.577) and investing surplus funds in financial investment (RII 0.519). The low adopted actions may due to limitation of capital, and the contractors may do not want to invest in machinery.

VII. Conclusions

This research has identified the typical challenges faced and the type of survival strategies action taken by local subcontractors. This research findings may not able to represent overall of the subcontractors in the industry, however, it provides a perspective from surveyed respondents towards actions taken to during economic downturn [16]. From the analysis, the findings discovered that majority of the respondents are aware of the type of survival strategies can be take in action during prolonged downturn. The findings RII ranking shown majority of subcontractors' preference adopted in contracting-related actions and financial-related actions as their survival strategies. Despite that the challenges and strategies may differ over the time, this study providing insights on how the subcontractors company respond during the economic downturn and the actions suggested as referencing idea for subcontractors in order to survive in the competitive industry.

VIII. Limitations of Study

There are a few limitations in this study which to be taken into consideration. The first limitation of this study is the low response rate. No doubt that the email survey is one of the efficient data collection methods to collect quantitative data that are sent to target respondents; however, it is acknowledged that the low return of responses and it limits the survey's ability to reach all demographics. Besides, even that the sampling size is widened of all contractors' grade to improve the response of findings, however, only low numbers of contractors are returning the survey, and the survey time-frame is only for three weeks, possibly resulting in the low response rate of survey.

The second limitation carrying out this study, despite able to get the contractor listing from the CIDB registration website, it faces an issue on identifying the identity of contractor firm ranged in Grade 7, whether as a developer, main contractor or subcontractor. Therefore, it takes an extra timing in searching the randomly selected companies has fulfilled as a target respondent.

Further, the study only expected to reserve as a framework idea for the subcontractors on the types of common strategy that can be taken for business survival in the construction industry. It may not be able to draw the best recommend strategy and conclusion; however, it expected as a general guide for the subcontractor company. Also, this study findings may not be applicable for all subcontractors in Malaysia as the study only focused results in Klang Valley, where the other locations might adopt a different type of survival strategies and faced different construction challenges.

Moreover, it is difficult to restrict the position of each respondent in return the survey to achieve the reliability and validity of the findings. The findings of this study may be varying due to the respondents' position in the company and working experience in the industry.

IX. Recommendations

This study can further explore and expanded more in-depth from the limitation findings as below:

1. Expand the research's geographical area instead of limited only in Klang Valley. The different geographical area might result in different on the common challenges faced and the types of survival strategy taken, in related to the location's culture, population and political factors. Hence, it might be useful and interest if an in-depth study can be further carried out.

2. Extend the survey time-frame on data collection for more responses. Due to this research survey's low response rate, it is recommended to lengthen the data collection up from four to eight weeks for a better response rate.

3. Carry out analysis integrated into a structural questionnaire or interview questionnaire to quantify the frequency ranking of challenges and survival strategies adopted among the subcontractors for the validity of results. Besides, the selection of interviewees shall restrict to senior management to remain the reliability of data obtained.

4. Further study also can be considered in a comparative analysis between main contractors and subcontractors in adopting different survival strategies and common challenges faced in the industry.

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