



Survival Strategies in the Economic Recession at Firm Level: The Case of Large Scale Construction Companies in Sri Lanka

Chandana Jayalath ^{a*}

^a *Department of Quantity Surveying, University of Vocational Technology, Sri Lanka.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

Article Information

DOI: 10.9734/JEMT/2023/v29i101143

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/105665>

Original Research Article

Received: 29/06/2023

Accepted: 31/08/2023

Published: 13/09/2023

ABSTRACT

As a form of business, construction contracting is heavily sensitive to recessions in the economy. As in many other countries, the Sri Lankan construction industry has also suffered a high proportion of business failures due to the current economic recession. Hence, the aim of this research is to delineate the commercial strategies adopted by construction companies in Sri Lanka to endure short term survival in the recession. A comprehensive literature survey was carried out to reveal these strategies in different contexts. A questionnaire survey was subsequently administered among the large scale contractors to gauge their responses using the Mean Item Score (MIS) and the Relative Importance Index (RII). The study concludes that Cut non-essentials and dispense the indispensable, De-scaling/De-scoping, Minimizing wastage, Getting clear on basic costs and adjust the profit margin with a sense and Slowing down the progress are among the first five strategies found to have been prioritized at contracting firms. Along with 43 strategies, the study recommends that there is a need for firms to network and collaborate to share resources, in order to survive in business during the fierce conditions of the economy.

*Corresponding author: E-mail: jayalathchandana@gmail.com, chandana@univotec.ac.lk;

Keywords: Construction contracting; economic recession; survival strategies.

1. INTRODUCTION

Any economic crisis impinges upon the cash flow of any business and construction has no exception. History is full of similar lessons. These include Korea, Hong Kong and Southeast Asia in 1997-1998, United States of America (USA) in 1974-1975, double-dip recession in 1949 and 1980- 1982, Japan in 1993-1994, Thailand in 1997-1998, Australia in 1931-1932, and Venezuela double-dip in 2015-2016 (Chossudorsky, 2010). "Similarly, in the UK, there were 2,785 construction company failures in 2008, which increased in the subsequent years" [1]. Ireland witnessed a severe recession during the period 2007 to 2013 which resulted in a sizeable number of claims and disputes [2]. This is true for many other countries facing economic crisis including Sri Lanka. In 2022, the construction sector contributed only 12 billion to the Sri Lankan economy, losing more than 2 million jobs [3]. "Sri Lanka's construction sector has crashed with 90 per cent of their work countrywide coming to standstill, right now. This has resulted in a possible loss of 75 per cent of the workforce" [4]. Currently, the entire supply chain has been plagued by severe shortages of materials and labour, increasing costs of materials and fuel. The construction sector has experienced nearly 90 percent of work stoppage and there could be a possible loss of 75 percent of the workforce [3]. A general malaise is experiencing in the wider economy for the last three years.

In the crisis, the question of survival has been topical among all those involved in the construction industry including construction firms. Turnaround strategies are pursued when the industry, in which an organization operates, experiences an economic downturn [5]. If the organizations do not take steps in the direction of a turnaround strategy, they possibly even cease to exist [5]. Turnaround strategies are a set of actions aiming to reverse a declining business in a recession. These include asset reduction, cost cutbacks and revenue generating, to name a few. Though there has been a series of collaborative discussions via webinar platforms for the last two years, only a handful of researches have been conducted to investigate the strategies for survival of construction contracting as a form of business. One such recent local research is Namarathna, C.P. and Gunarathna, [6] who investigated "the effect of

Covid-19 on the small-scale construction companies in Sri Lanka. Their findings highlighted a few key financial issues faced by the small-scale construction companies due to the pandemic. These included delays in client payments, supply chain management issues, frequent price escalation of construction materials and inability to repay loans. The suggestions were to create partnerships with financially strong companies, reduce unwanted expenses, modify supply chain channels and agreements, and ensure business continuity plans as the strategies to be used to overcome the financial burden that occurred due to the pandemic". Despite of many concerted efforts, the question of survival remains virtually untamed. As such, it is appropriate to ask: 'What kind of commercial strategies the construction companies can adopt at the firm level amidst the current economic crisis?' In this study, it is aimed to reveal the commercial strategies that are instigated by construction firms operating in Sri Lanka to cope with the ongoing economic crisis. Hence, the research fills a gap in the entrepreneurship literature by investigating the operations of construction firms in a turbulent market with a special focus on unravelling site and office level approaches taken to survive in the business of construction contracting.

2. LITERATURE REVIEW

"The essence of any profit-generating organization's survival is based on its ability to understand the environment in which it operates" (Johnson, Scholes & Whittington, 2008). "Companies react by downsizing, halting expansion, introducing competitive pricing to ensure stability and survival. Organizations used the pandemic as an opportunity to restructure and invest in new technology in order to remain competitive" [7]. From the Delphi study, Manideep Tummalapudi et al. [8] confirmed "40 strategies as highly or moderately effective methods across six categories (1) organizational and project management, (2) direct-cost, (3) overhead, (4) financial, (5) preconstruction and marketing, and (6) efficiency strategies". Ali Mohammed Alashwal & Husam Saleh Alduais [9] contended that "a greater focus on balance sheet matters. Based on the regression analysis, the results showed that localization influences contractors' performance during boom periods. Joint venture with home-country contractors may have a positive impact during boom and

recession periods, both. Product diversification has a positive influence during one recession period". Utilizing an extensive literature review and a series of interviews, Ng et al. (2009) investigated "the construction industry development of advanced economies (Australia, Japan, Singapore, South Korea, UK) that encountered financial recessions. They summarised the strategies and policies adopted by the studied nations using a long-term framework which included five key attributes: government policies and strategies supporting construction business; industry led better practice and culture; financial resources and skill training; research and development for construction; and exploring alternative markets. In relation to government initiatives, they concluded that if a recession lasts for a long period of time, then it would be difficult for government to increase expenditure on public projects".

All large construction companies have been forced into disposal of assets, whilst a large proportion had to raise funds through rights issues to reduce borrowing. Strategic decisions included greater focus on core business (with a reduction in the range of activities and disposal of marginal businesses) and changes to marketing strategies. Cost control via reducing permanent employment and reducing wage growth based on the impact of the lower workload on required staff levels are also inevitable. [10] also revealed the focus of the companies' strategies to be concerned with the development of new corporate objectives in the recessionary era. Porter, M.E., [11] suggested cost leadership, differentiation of product or service, and focus on narrow segment. Cost leadership strategy entails being the low-cost producer in an industry for a given level of quality. Riggs, F.E., [12] believed in the need to reduce overhead cost in anticipation of tougher times. Nevertheless, Porter, M.E., [11] reminds that each generic strategy has its risk. Lansley, P.R., [13] finds out "the characteristics manifested by large construction companies during the recession in the mid-1970s as a response to the crises. These include flexibility, such that they possess highly innovative and creative problem-solving skills and prudent organization structures, managerial value systems, markets, and technologies". Meanwhile Goold, M. and K. Luchs, [14] agree that "successful diversification depends on building of a portfolio of businesses that fit with management styles of firms".

There are also studies about survival strategies for specific country. Boon, J., [15] conducted a study of how firms survived the major downturn in the late 1980s in New Zealand. Boon believed that there is no one right way to survive rather than an interaction between and a balancing of a number of factors. The 5 key factors are; market orientation, knowledge base, flexibility in cost structure and productivity capacity, efficiency and price competitiveness, and financial resources. For Chinese construction enterprises Cheah, C.Y.J. and D.A.S. Chew [16] found that the strategic fields boil down to four main areas; targeted markets (market segment and geography), project management performance, reputation and branding, and management of human assets. Same study for Chinese construction comes from Karig, J., et al. [17] which offered five types of competitive strategies i.e.; cost leadership, differentiation, market/ product diversification, geographical diversification, and vertical/ functional integration. During top sub-contractors in UK facing downturn, Hewes, M. and R. McMeeken [18] found some strategies that will allow them to weather the storm such as diversification by moving into other sectors and spread the net wider geographically. Those top companies that have been interviewed also believed that innovation is another way to stay profitable, for example, offering post-tensioning instead of traditional concrete because it can save on materials and foundations and is quicker to build. Being strict management of cash flow also can make firms stick on business during downturn. Otherwise Riggs, F.E., [12] did not agree with companies' strategies by diversification new product or services and approaching new market segment. However Riggs quite contradictive by suggesting in expanding in-house expertise to sectors those are outside the firm's specialty. Shaw, E.H. and K. Goodrich, [19] believe that "differentiation is far less forceful and far less expensive than penetration strategy. Especially in marketing, they say, a differentiation strategy could work at virtually any stage of the life cycle, from growth to decline".

"As traditionally, construction companies tend to neglect strategic planning, and almost expectedly, tremendously suffer during economic slumps or political instability" [20]. There is a need for contingency of survival perspective of the construction organizations, relating with uncertain environments. According to Cheah, C.Y.J. and D.A.S. Chew, [16] an overview of

some unique characteristic of the construction industry, both in general and specific to the nation, is essential for a framework that can help construction enterprises examine the various strategies. P. Ajibola, et al, [21] showed that “small scale construction firms mostly utilize improving relationships with construction clients, changing marketing strategies, and an increase in public relations during a recessive period in the Nigerian economy. These vital survival strategies include continuously improve relationships with construction clients, increase their online presence, and diversify into other construction-related works. The study recommended that small scale construction firms should explore innovative survival strategies that ensure the growth of the firm's post-recession”. In a study carried out in Singapore, Lim Benson [22] showed that “most contractors opted to bid for more projects that are within their firms' resources and capabilities in contracting for jobs. To control cost, all contractors implemented stricter site management on material wastage, stricter financial management on firms' cash flow, stricter and procurement procedures”. E. T. Adu et al (2019) revealed that “the dominant factors affecting the adoption of survival strategies for SMCFs at infancy stage are: availability and access to finance, the poor state of the country's infrastructure, poor managerial/executive capacity of the implementing agencies, characteristics of entrepreneurs and failure to adapt to the changing business environment”.

Cefis and Marsili [23], Ortiz-Villajos and Sotoca [24] and Wojan et al. [25] highlight that “research has focused more on business continuity achieved through innovation and inventions”. “Direct disaster assistance, on the other hand, substantially contributes to surviving a business during a crisis” [26]. Casillas et al. [27] discovered “a link between retrenchment strategies and family involvement in business survival”. “Quite often, flexible HR strategies have been recommended” [28]. Other common survival strategies include increasing product diversification, entering new markets, and learning new things [29]. Governments should help the industry survive by lowering interest rates, easing credit terms, and lowering tax payments [30]. The survival of small businesses heavily depends on technology adoption, especially during the Covid-19 pandemic [28]. “The 5P marketing strategy (containing key marketing elements such as Product, Price, Promotion, Place, and People) and outsourcing would be optimal solutions for survival and

recovery” [31]. “Firms practice defensive as well as offensive HR practices (e.g. increasing economic capital, increasing diffused power and accountability, and increasing social capital) during the pandemic to overcome the crisis situation and then adapt to change in order to develop organizational resilience” [32]. “Second, these practices have to go beyond routine procedures during a crisis like Covid-19 because adaptive strategies are a must in order to survive, recover from negative effects and ultimately build organizational resilience” [33].

“Technology driven solutions such as Internet of Things (IoT), distant operations run through virtual reality and communication channels with enhanced effectiveness enable social business creation which ultimately reduces operational costs. The current challenging business climate can effectively be assisted by big data and predictive and visual analytics when taking complicated business decisions” (Akpan et al., 2021). “The Covid 19 has caused a decreasing trend in corporate performance, which may be reversed with strategic agility and AI-enabled competencies. Business operations should be redefined with the assistance of artificial intelligence to yield benefits of improved performance offered at the lowest cost due to its ability to deliver accurate data quickly for effective decision making” [34]. “Moreover, the decision-making process has to be integrated with agility in operations and strategies to overcome the negative effects of this particular global pandemic. Redesigning the market approach is one way to recover from a declining business. For their customers, businesses have introduced more discounts and compliments. Another option to resurrect the business is to provide updates on business applications via social media platforms and portals. It is also a good way to make new market strategies for working remotely with an online presence and digital solutions” [35]. Virtual business channels offer a unique chance to re-energize the search for product-market fit and new business models that can survive and thrive in a COVID-19-affected world.

“An existing customer base has to be retained via communicating effectively, enhancing customer relationships and ultimately building trust” [36]. “To deal with adversity, entrepreneurs should establish a positive mindset that includes optimism, perseverance and efficacy. To discover and grab opportunities which arise due to the crisis, growth-oriented SMEs might employ

competitive mindsets such as flexibility, speed, and creativity” [37]. “More informed and decentralized decision-making is enabled in resilient businesses. During and after a crisis, successful firms use Internet and Communication Technology (ICT) to develop trust and ties with employees, stakeholders, and consumers by integrating intranet, social media, and online communication platforms into their everyday business routines” [38]. “Diversification of expertise is also vital during an economic recession” [39]. “Moreover, businesses which diversify into more varieties become less vulnerable to uncertainty”. Mac- Barango (2017) also noted that observers in the industry have attributed the diversification of services to structural changes in the construction sector; technological organizational as well as the dynamics of socio-economic and political factors [40]. Hence, related diversification is an effective strategy that can be practiced by companies engaged in the construction industry to bring down the negative economic impact. Guided by resource-based theory and the relational view, Crick and Crick [41] examined how the concept of cooperation could be utilized to cope with the Covid 19. Retailers exchanging stock information, pharmaceutical companies collaborating to produce a vaccine, technology mega corporations cooperating for the greater good, and charities forging partnerships for a common purpose are just a few examples [42-45].

3. METHODOLOGY

This study used a mixed approach enriching the triangulation of the studied phenomenon (Lund, 2012; Neuman, 2011). A literature survey undertaken to offer an overview on the survival strategies revealed a number of strategies such as downsizing, halting expansion, introducing competitive pricing, product diversification, exploring new markets, exploitation of economies of scale, retrenchment strategies and family involvement, competition etc. A structured questionnaire involving one open-ended query was subsequently disseminated among 100 construction practitioners in Sri Lanka using a stratified sampling method using Google forms and 62 completed questionnaires were received with the rate of response of 62% (refer Table 1 for respondent details). The respondents were required to rank the strategies using a 5-point Likert scale. The degree of perception was taken on the Likert scale of 5 = strongly agree, 4 =

agree, 3 = fairly agree (average), 2 = disagree, 1 = strongly disagree. As a matter of operationalization of qualitative variables (strategies), the paper used two quantitative methods namely Mean Item Square and Relative Importance Index. The index of Mean Item Square (MIS) is the sum of the respondents' actual scores given by all the respondents as a proportion of the sum of all maximum possible scores on the 5-point scale. Weighting was assigned to each responses ranging from one to five for the responses of 'strongly disagree' to 'strongly agree' and 'Extremely unlikely' to 'Extremely likely', when expressed mathematically as given in Equation below.

$$MIS = (1n_1 + 2n_2 + 3n_3 + 4n_4 + 5n_5) / \Sigma N \quad (1)$$

Where; n₁ = Number of respondents for extremely unlikely or strongly disagree; n₂ = Number of respondents for unlikely of disagree; n₃ = Number of respondents for neutral; n₄ = Number of respondents for likely or agree; n₅ = Number of respondents for extremely likely or strongly agree; N = Total number of respondents. After mathematical computations, the criteria are then ranked in descending order of their MIS (from the highest to the lowest).

Relative index analysis was selected in this study to rank the criteria according to their relative importance. As per Johnson and LeBreton (2004), RII aids in finding the contribution a particular variable makes to the prediction of a criterion variable both by itself and in combination with other predictor variables. The formula adopted was;

$$RII = \frac{\Sigma w}{A * N}$$

Where: RII= Relative Importance Index; w= Weighting given to each factor by the respondents, A= Highest weight and N= Total number of respondents.

4. RESULTS AND DISCUSSION

The majority of the experts (64%) belonging to the contractor organizations whose designations are Construction Manager, Site Manager, Project Manager, General Manager and Consultants. Table 2 shows a collection of survival strategies where the MIS and RII values have been derived for further interpretation.

Table 1. Respondents for the questionnaire survey

Designation of the respondents	Years of Experience							
	10 to 15		15 to 20		20 to 25		More than 25	
	Distributed	Received	Distributed	Received	Distributed	Received	Distributed	Received
Construction Manager	5	4	5	3	5	4	5	3
Site Manager	5	3	5	2	5	2	5	2
Project Manger	5	4	5	4	5	4	5	3
General Manager	5	2	5	2	5	3	5	3
Consultants	5	3	5	4	5	5	5	4
Total Responses	25	16	25	15	25	18	25	15
Rate of Response	64%							

Table 2. Survival strategies currently in practice at firm level

Ref	Survival Strategies	MIS	RII	Rank
1	Cut non-essentials and dispense the indispensable	3.83	0.87	1
2	De-scaling/De-scoping	3.83	0.87	1
3	Minimizing wastage	3.76	0.86	2
4	Getting clear on basic costs and adjust the profit margin with a sense	3.76	0.86	2
5	Slowing down the progress	3.73	0.86	2
6	Setting difficult but realistic targets	3.72	0.77	3
7	Outsourcing	3.70	0.75	4
8	Reducing transaction and abortive costs	3.67	0.73	5
9	Reduction of company overheads	3.64	0.69	6
10	Virtual technology usage	3.57	0.65	7
11	Retaining experienced personnel where possible	3.52	0.64	8
12	Shift work basis	3.43	0.64	8
13	Use of social media platforms	3.25	0.63	9
14	Pursue outstanding payments and down payments	3.10	0.62	10
15	Going after work in new areas	3.09	0.62	10
16	Obtaining concessions on loan and tax	3.08	0.61	11
17	Pursue niche markets	3.08	0.60	12
18	Diversifying into areas of competence	3.07	0.59	13
19	Mergers, acquisitions, and joint ventures	2.96	0.56	14
20	Staff layoff/downsizing	2.91	0.55	15
21	Substitution of materials	2.89	0.54	16
22	Increased multiple use of temporary works	2.87	0.53	17
23	Renegotiating provisions sums	2.86	0.52	18
24	Prioritize activities on slowdown bottleneck	2.80	0.52	19
25	Reduction of service charges	2.78	0.52	20
26	Discounts and compliments for customers	2.76	0.52	21
27	Work from home with reduced timing/salary	2.76	0.52	21
28	Ask employer to supply selected materials	2.58	0.50	22
29	Offering new product assortments or sizes	2.58	0.50	22
30	Promote modular coordination	2.50	0.49	23
31	Pursue new work than relying on backlogs alone	2.47	0.48	24
32	Counter intuitive decisions such as holding on to best employees	2.45	0.47	25
33	Invoice factoring	2.40	0.46	26
34	Liquidity options such as revolving loans, owner infusions, alternative financing and private equity	2.39	0.45	27

Ref	Survival Strategies	MIS	RII	Rank
35	Offer rewards in return for contracted sales volume, or customize offerings in exchange for faster payment terms	2.37	0.44	28
36	Crete cash cushion to meet essential costs, including payroll, inventory and utilities.	2.35	0.43	29
37	Maintain a balance between converting inventory to cash and retaining the ability to fulfill orders.	2.32	0.42	30
38	Appraising assets that might be used as collateral	2.30	0.40	31
39	Loyalty campaigns geared toward recapturing past customers or increasing penetration with current customers	2.28	0.38	32
40	Trade credit options with vendors, Improving business' credit rating	2.28	0.38	32
41	Renegotiating extended payment terms on existing loans.	2.27	0.37	33
42	Purchase order financing	2.25	0.36	34
43	Adding business-to-business (B2B) customers	2.20	0.35	35

It shows that higher the value of RII, more important was the sustainable criteria and vice versa. Accordingly, cutting down non-essential items and dispensing the indispensables has become the rank 1 out of 42 strategies encountered in the questionnaire survey. In the need to reduce overhead cost in anticipation of tougher times, Riggs, F.E., [12] and many others believed this is the easiest way of achieving survival, an in-house action complemented by work from home with reduced timing/salary and minimizing wastage at all times. Minimizing wastage and adjustment of the profit margin with a sense has taken a mean score value of 3.76.

All the respondents were of the view that prioritizing activities on slowdown bottleneck and adjusting the profit margin with a sense may well be having a commercial significance for large scale companies. One of the crucial findings in the survey is the rational target making for its employees as a matter of survival. Setting difficult but realistic targets is a tenet of goal setting theory. The basis of goal-setting theory is that specific, difficult goals engender higher performance than does merely urging individuals to do their best [42]. Outsourcing is identified as a commercial strategy for survival in long run which will help reduce permanent employment as many researchers have contended already. Reducing transaction and abortive costs leading to overall reduction in company overheads is also one of the commercial strategies quite prevalent in large scale construction firms.

Virtual technology usage has a 3.57 RII value found to be compatible with the findings of Akpan et.al. (2021) and Al-Fadly, [35]. Virtual business

channels offer a unique chance to re-energize the search for product–market fit and new business models that can survive the business of construction contracting. It means that firms using business networks and dynamic capabilities using virtual technologies tend to operate efficiently and remain resilient in turbulent times. Managing for well experienced employee retention has been found to be next in line with 0.64 of RII value. This is considered to be a purposeful step to get the maximum benefit out of the experienced employees by encouraging them to continue with the firm and contribute fully to its success. Employee turnover rate and related costs can be minimized by having a successful employee retention program, so that critical personnel would stay for long with the organization. However, staff layoff/downsizing has taken the 15th rank in the list. Downsizing is a form of reaction has been identified by many researchers such as Oliver Rhodes et al. [7], Manideep Tummalapudi et al. [8], Ali Mohammed Alashwal & Husam Saleh Alduais [9] who have categorically contended that a greater focus on downsizing is visible in many businesses.

5. CONCLUSION

The research revealed a couple of technical approaches these companies have been taken at site level to survive in recession. Substitution of materials without compromising quality, increased multiple use of temporary works than envisaged, renegotiating provisions sums, slowing down the progress, de-scaling and de-scoping, asking the employer to supply selected materials, offering new product assortments or

sizes, harnessing the potential of economies of scale such as modular coordination etc are a couple of actions technical by nature. All of these factors have played a pivotal role in an organization's long-term survival plan and overall performance. The study concludes that Cut non-essentials and dispense the indispensable, De-scaling/De-scoping, Minimizing wastage, Getting clear on basic costs and adjust the profit margin with a sense and Slowing down the progress are good survival practices most companies are aware of and which these firms use for survival. Furthermore, virtual technology usage, improved service delivery, improving organizational structure, and the use of social media platforms are paramount to keep the companies operating. Arguably, all these survival practices have a significant impact on firms and they are not independent. In times of crisis, the companies have had to adjust to varying environments and client behavior as well as identify opportunities. This necessitated a great deal of imagination, invention, and the creation of new business models. However, it is imperative to note that some of these practices have more impact than others.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Tansey P, Meng X, Cleland D. A critical review of response strategies adopted by construction companies during an economic recession, 29th Annual ARCOM Conference, Association of Researchers in Construction Management, Reading. 2013;679-689.
2. Scully P. Below cost tendering. CIF Annual Conference. Dublin; 2012.
3. Chanaka J. Sri Lanka construction sector in deep crisis. govt arrears rise up to Rs150 billion, *Economynext*; 2022.
4. Bandula Sirimanna. SL's construction sector crashes, 90% of work suffers, *Business Times*; 2022.
5. Groenewald D, Le Roux SJ, Rossouw D. Strategic management: An applied South African perspective. Cape Town: New Africa Books; 2007.
6. Namarathna CP, Gunarathna N. Effect of COVID-19 on the small-scale construction companies: The case of Colombo district, Sri Lanka. In: Sandanayake YG, Gunatilake S, Waidyasekara KGAS. (eds). Proceedings of the 10th World Construction Symposium. 2022;24-26: 392-403.
7. Oliver Rhodes, Ali Rostami, Atousa Khodadadyan, Sian Dunne. Response strategies of UK construction contractors to covid-19 in the consideration of new projects. *Buildings*. 2022;12(7).
8. Manideep Tummalapudi, John Killingsworth, Christofer Harper, Mohammed Mehaney. US construction industry managerial strategies for economic recession and recovery: A delphi study. *Journal of Construction Engineering and Management*. 2021;147(11).
9. Ali Mohammed Alashwal, Husam Saleh Alduais. Performance strategies of Malaysian international contractors during boom and recession periods. *International Journal of Construction Management*. 2018;19(5).
10. Hillebrandt PM, Cannon J, Lansley P. The construction company in and out of recession. London: Macmillan; 1995.
11. Porter ME. Competitive strategy techniques for analysing industries and competitors. The Free Press; 1980.
12. Riggs FE. Practical steps to help subcontractors weather economic hard times; 2009.
13. Lansley PR. Corporate strategy and survival in the UK construction industry. *Construction Management and Economics*. 1987;5:141-155.
14. Goold M, Luchs K. Why diversify? Four decades of management thinking. *Academy of Management Executive*. 1993; 7(3):7-25.
15. Boon J. Management quantity surveying practices in charging market. UNITEC Institute of Technology; 1996.
16. Cheah CYJ, Chew DAS. Dynamic of strategic management in the Chinese construction industry. *J. Management Decision*. 2005;43(4):551-567.
17. Karig J, Cheah CYJ, Chew DAS, Liu G. Strategic adaptations to environments inside China: An empirical investigation in the construction industry. *Chinese Management Studies*. 2007;1(1):42-56.

18. Hewes M, McMeeken R. How to Survive the Downturn— Top 250 Consultants; 2008.
19. Shaw EH, Goodrich K. Marketing strategy: From the history of a concept to a conceptual framework. In the proceedings of the 12th Conference for Historical Analysis and Research in Marketing. Association for Historical Research in Marketing. 2005;265-274.
20. Langford D, Lyagba R, Komba DM. Prediction of solvency in construction companies. *Construction Management and Economics*. 1993;11:317-25.
21. Ajibola P, Afolabi AO, Olanrewaju P, Abba T. Survival strategies of small scale construction firms during a recessive economy: Sustainability approach, AIP Conference Proceedings. 2022;2437(1).
22. Lim, Benson Teck Heng, Oo Bee Lan, Ling Florence. The survival strategies of Singapore contractors in prolonged recession, *Engineering. Construction and Architectural Management*. 2010;17(4): 387-403.
23. Cefis E, Marsili O. Good times, bad times: Innovation and survival over the business cycle. *Industrial and Corporate Change*. 2019;28(3):565-587.
24. Ortiz-Villajos JM, Sotoca S. Innovation and business survival: A long-term approach. *Research policy*. 2018;47(8):1418-1436.
25. Wojan TR, Crown D, Rupasingha A. Varieties of innovation and business survival: Does pursuit of incremental or far-ranging innovation make manufacturing establishments more resilient?. *Research Policy*. 2018;47(9):1801-1810.
26. Haynes GW, Danes SM, Schrank HL, Lee Y. Survival and success of family-owned small businesses after hurricane katrina: Impact of disaster assistance and adaptive capacity. *Journal of Contingencies and Crisis Management*. 2019;27(2):130-144
27. Casillas JC, Moreno-Menéndez AM, Barbero JL, Clinton E. Retrenchment Strategies and family involvement: The role of survival risk. *Family Business Review*. 2019;32(1):58-75.
28. Abed SS. A literature review exploring the role of technology in business survival during the Covid-19 lockdowns. *International Journal of Organizational Analysis*. 2021;2:14-25.
29. Alves JC, Lok TC, Luo Y, Hao W. Crisis management for small business during the Covid-19 outbreak: Survival, resilience and renewal strategies of firms in Macau, City University of Macau. Research Square; 2020.
30. Olufemi A. Managing small businesses in nigerian during covid-19 crisis: Impact and survival strategies. *IOSR Journal of Business and Management (IOSR-JBM)*. 2020;22(8):24-3.
31. Aburumman AA. COVID-19 impact and survival strategy in business tourism market: The example of the UAE mice industry. *Humanities and Social Sciences Communications*. 2020;7(1):1-11.
32. Brown NA, Orchiston C, Rovins JE, Feldmann-Jensen S, Johnston D. An integrative framework for investigating disaster resilience within the hotel sector. *Journal of Hospitality and Tourism Management*. 2018;36:67–75.
33. Brown CM, Vostok J, Johnson H, Burns M, Gharpure R, Sami S, Sabo RT, Hall N, Foreman A, Schubert PL, Gallagher GR. Outbreak of SARS-CoV-2 infections, including Covid-19 vaccine breakthrough infections, associated with large public gatherings—Barnstable County, Massachusetts, July 2021. *Morbidity and Mortality Weekly Report*. 2021;70(31):1059.
34. Ehiorobo OA. Strategic agility and AI-Enabled resource capabilities for business survival in post-Covid-19 global economy. *International Journal of Information, Business and Management*. 2020;12(4): 201-213.
35. Al-Fadly A. Impact of Covid-19 on SMEs and employment. *Entrepreneurship and Sustainability Issues*. 2020;8(2):629.
36. Liguori EW, Pittz TG. Strategies for small business: Surviving and thriving in the era of Covid-19. *Journal of the International Council for Small Business*. 2020;1(2):106-110.
37. Purnomo BR, Adiguna R, Widodo W, Suyatna H, Nusantoro BP. Entrepreneurial resilience during the Covid-19 pandemic: Navigating survival, continuity and growth. *Journal of Entrepreneurship In Emerging Economies*. 2021;13(4):497-524.
38. Obrenovic B, Du J, Godinic D, Tsoy D, Khan MAS, Jakhongirov I. Sustaining enterprise operations and productivity during the Covid-19 pandemic. *Enterprise Effectiveness and Sustainability Model. Sustainability*. 2020;12(15):5981.

39. Bakar AHA, Yusof MN, Awang A, Adamy A. Survival strategies of construction companies in Malaysia during two periods of recession. *International Journal of Academic Research*. 2011;3 (4): 481-486.
40. Ogbu CP. Survival practices of indigenous construction firms in Nigeria. *International Journal of Construction Management*. 2018;18(1):78-91.
41. Crick JM, Crick D. Coopetition and COVID-19: Collaborative business-to-business marketing strategies in a pandemic crisis. *Industrial Marketing Management*. 2020;88:206-213.
42. Locke EA, Latham GP. A theory of goal setting & task performance. Prentice-Hall, Inc; 1990.
43. Ajanlekoko JO. National development and challenges of leadership. in conference proceedings of the 20th biennial conference of the Nigerian institute of quantity surveyors. Building the blocks of national development. 2002;16-17.
44. Akpan IJ, Soopramanien D, Kwak DH. Cutting-edge technologies for small business and innovation in the era of Covid-19 global health pandemic. *Journal of Small Business & Entrepreneurship*. 2020;1-11.
45. Adu ET, Lamptey-Puddicombe AD, Opawole A. Consultants' perspectives of survival strategies for small and medium construction firms at infancy stage. *Journal of Construction Business and Management, JCBM*. 2020;4(1):34-47.

© 2023 Jayalath; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/105665>