



Prioritizing Strategies for Surviving Economic Turbulence: Case of Quantity Surveying Consultancy Organizations in Nigeria

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Abstract

Economic contraction is inevitable in any business lifetime and often hinders it from achieving the desired objectives. The need to adopt proven survival strategies is essential to survive the adverse effects of economic downturn in most developing countries. Of the construction-related organizations, quantity surveying consultancy organizations often suffer the highest effect of economic turbulence because they are majorly classified as micro-sized or small-sized firms. In developing countries however, firms in these classifications are the livewire of the construction industry. Hence, the need to assess the strategies for surviving economic turbulence with a view to prioritizing the strategies to be adopted for enhancing the continual service delivery of quantity surveying consultancy organizations. To achieve this study's goal, quantitative research approach was adopted and through the questionnaire-survey, data was obtained from top management or principal partners of 99 quantity surveying consultancy organizations in South-western, Nigeria. The data collected were analysed using descriptive and inferential statistics including mean score, standard deviation, Kruskal Wallis test, Mann Whitney test, reliability test, normality test, and factor analysis. Horn parallel analysis was further conducted to determine the appropriate factors from the principal component analysis generated from the factor analysis. Based on the results of the analysis, the prioritized strategies for surviving economic turmoil include 'organizational development and innovation', 'merger and partnership', and 'business and marketing strategies'. The need for embracing innovation in service delivery of quantity surveying firms, engaging competent management head for appropriate decision-making are recommended.

Keywords: construction organizations, economic turbulence, firm survival, Nigeria, quantity surveying, strategies.

1. Introduction

The construction industry contributes substantially to any economy, accounting for more than 15% of the GDP and about 7% of employment globally (Mazhar & Arain, 2015:434). Likewise, Nigeria's construction industry contributes to the economy through the creation of employment, provision of housing and infrastructural development, to mention but a few. Basically, the economy is influenced by construction services offered by professional consultancy organizations (Boussebaa and Faulconbridge, 2019:80) such as quantity surveying firms that use cost expertise to satisfy clients' financial issues (Olanipekun et al., 2014); real estate consultancy organizations providing specialized services for clients on risks and benefits of

property investments (Oyetunji et al., 2018:8); architectural consultancy firms guiding the design process, construction and management practices of project for the client (Oluwatayo & Amole, 2012). These professional service firms are often categorised as small and medium enterprises (SMEs) and they positively impact the economy. Thus, their growth and survival are paramount to the economy through continuous construction and engineering developments (Okereke et al., 2022). However, the variability of the economy from boom to blast and the global crisis occasioned by the Coronavirus pandemic (COVID-19), made these construction organizations and stakeholders more vulnerable to financial and non-financial issues in achieving organization objectives (Olanrewaju et al., 2023:5).

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Among these professional service organizations is the quantity surveying consultancy organization saddled with ensuring financial probity in construction processes for meeting the needs of clients (Antwi-Afari et al., 2018). The survival of quantity surveying firms is often threatened due to the changing and highly competitive business environment (Mohd-Rahim et al., 2013:17). Additionally, the new and young quantity surveying consultancy firms find it difficult to build reputations in the public sector due to their marketing ethics and inexperience which leave them struggling to grow and survive. The response of organizations to the pressure of the market impacts the survival tendency of the firm negatively, leading to either decline or exit during the economic downturn (Smallbone et al., 2012). Besides, majority of quantity surveying organizations perform poorly and struggle to survive stiff competition in the industry (Ogbu, 2015). Furthermore, the poor growth of quantity surveying consultancy organizations is a function of their low participation in engineering projects (Olatunji et al., 2017). Recently, Moyanga et al. (2024) submitted that quite a number of quantity surveying firms are failing as a result of increasing hazard rates from external finances obtained by them during the economic crisis. However, the survival of construction organizations could be attained through the innovation, diversification, partnership, etc; but the stereotyped nature and structure of quantity surveying consultancy firms contributed to the obstacle to adopting innovative practices (Chong et al, 2020; Moyanga et al., 2023:10). Notably, construction organizations require that they set up techniques and make strategic decisions to deal with the challenges facing them as well as survive competition.

In the quest to enhance the survival of construction organizations, studies have investigated the survival practices of contractors (Ogbu, 2018) and strategies to manage the financial crisis due to COVID-19 (Jayalath & Gamage, 2021). Besides, Aghimien et al. (2018) assessed the survival strategies of built environment firms (i.e., building, engineering, architectural, estate management, and quantity surveying) before the outbreak of the global pandemic. Although this study shows insignificant differences in the opinions of five groups of respondents in most of the variables, there is a need to further investigate the survival strategies that can be adopted by the individual professional firms (firm-based opinion), especially quantity surveying firms. This is essential because most firms delivering quantity surveying services are small or micro-sized, and could be more susceptible to economic turbulence than other construction firms. Specifically, some past studies have assessed strategies for quantity surveying firms to survive the economic crisis in Nigeria (Okereke et al., 2022), and Kenya (Gachuma & Karugu, 2018). However, descriptive statistics were mainly used to explore the awareness level and usage

of survival strategies in the studies, and data were obtained from a city, which makes the scope of the respondents limited. Hence, there is a need to further investigate the survival strategies of quantity surveying firms in economic turmoil within a larger scope and obtain possible divergent opinions considering some variables such as firm size, year of establishing firm, etc. which have not been established by past studies. The premise that quantity surveying consultancy organizations are slightly growing in size when compared to their year of establishment and the adoption of survival strategies depends on characteristics of firms. It is also essential to group the variables of survival strategies into manageable sizes to enhance the decision-making of quantity surveying firms or other professional-allied firms. This current study is crucial to quantity surveying consultancy organizations in developing countries where economic recession is constantly experienced (Aghimien et al., 2018). In addition, the study also created a path of knowledge and strategic action practices for construction enterprises in Nigeria and other developing countries.

2. Review of Literature

Firm survival is largely attributed to organizational strategies (Supangkat and Widiana, 2022), which is a long-term plan from the evaluation of both internal and external environment to achieve the organization's goal and vision (Alharafsheh & Ezmigna, 2023). Strategy is majorly defined based on perspectives of the circumstances under study. For instance, David (2011) defined strategy as a course of action requiring top management decisions and resources for achieving the organization's long-term goals. Monday and Aladeraji (2015) viewed strategy as the business plans or approaches used by the management of firms to achieve organizational goals. However, the quest to survive any business environment is driven by certain strategies which organization owners uphold for their establishments. Survival strategy is referred to as some distinctive efforts, both psychological and behavioural, that are created by individuals or organizations to endure and minimize stressful or frustrating periods (Stroe et al., 2018). The generic view of survival strategies connotes a highly volatile business environment; therefore, adopting a single strategy could affect the competitiveness of an organization. Additionally, the choice of strategies has an influence on the survival of any organization (Adebisi and Bakare, 2019), success and competitiveness in the business environment. It is argued that the adoption of survival strategy is a function of the firm characteristics such as size, age, finance, structure, industry-type, etc, (Supangkat & Widiana, 2022; Handoyo et al., 2023). Micro and small organizations depend on agility and are not accessible to funds that can be used to make strategic decision in mitigating their challenges. On the other hand however, larger firm are equipped with more

financial resources to implement survival strategies. Therefore, the need to explore organizational survival strategies becomes imperative to make practical recommendations for construction-related firms.

Strategic alliance is one aspect of business planning used to expand a firm's capabilities to acquire competitive advantage and adapt to market conditions (Kinderis & Jucevicius, 2013). A strategic alliance is an arrangement between two or more independent organizations to cooperate in the production and sale of products/services. Strategic alliance is sometimes referred to as "partnership", which means to join organizations for mutual benefits (Lichtarski, 2022). This often enhances the development of new products or services, streamlining market penetration, innovation, sharing research and development experiences and overcoming ambiguity for firm survival (Hernández et al., 2020). On the other hand, a merger is another survival strategy that companies use to increase their capital to enhance business growth and survival (Osundina et al., 2016). It is an external growth strategy in which two or more organizations combine into a bigger entity (Ejoor et al., 2018; Irayanti, 2019). Organizations may also adopt restructuring during a financial crisis. This involves making changes to the financial and management structure due to the demands of the environment (Umar, 2023).

The innovation level of organizations also plays a key role in a chance to survive a turbulent economy. Therefore, firms and enterprises invest in innovation to meet customer expectations or competitiveness. Innovation is regarded as an incredible strategy to sustain a competitive advantage and survive an economic crisis. Therefore, organizations must invest in research and development to identify innovative means of delivering services or improving products (Ugur et al., 2016). Meanwhile, research and development has been affirmed as an important strategy for the survival of firms during recession (Jung & Kwak, 2018). Through research and development, an organization may decide to diversify its areas of expertise. Diversification is a strategic tool for improving performance and survival in a harsh economy (Oladimeji & Udosen, 2019). As a result of diversification, organizations can utilise available resources and spread risks across businesses to enhance survival and gain competitive advantage (Ojiru, 2023). In addition, organizations with multiple assets can strategically allocate the assets of the firm to other investments to yield more return.

In any organization, strategic procurement management practices are essential to keep the business running smoothly. Procurement management is geared towards achieving the strategic goal of the organization through the management of external resources (Alasfar, 2022). The efficient management of operations and resources in procurement can contribute to the survival

of an organization (Karanja & Kiarie, 2015). On the other hand, strategic human resource management can address business problems and directly contribute to long-term business objectives. Although micro and small enterprises may have limited funds and recognition to easily attract top talent, effective human resource management can make them succeed and survive like medium or large firms (Sparrow et al., 2017).

In the management of the organization during a financial crisis, managers may decide to adopt a retrenchment strategy. This strategy is the process of reducing the organization's workforce by terminating some employees' appointments to reduce costs. It leads to reduced resources for the day-to-day running of organization activities (Ung et al., 2018). The management of cash for a firm's liquidity is critically important during the economic downturn (Dzingirai & Ndava, 2022). Therefore, organizations must be structured to effectively manage financial resources during an economic boom. Organizational structure does not only provide a framework with which managers and non-managerial employees perform assigned jobs, it is a starting point for successful management of tangible and intangible assets of a firm. Organizational culture which helps to inculcate a set of values in employees is a vital business strategy for the survival of firms (Atuahene & Baiden, 2018).

Service quality is a global judgment for evaluations (Koozehchian et al., 2011). Practitioners are keen on service quality because of the resultant effects on customer satisfaction, organizational reputation, firm's financial status and operational performance. It is an essential strategy for the success and survival of firms in a global competitive environment (Poor et al., 2013). Besides, developing unique marketing strategies for the competitiveness of any business can also be advantageous. Marketing is essential for understanding the needs of customers, attracting new customers, educating them and ensuring continuous business with a firm (Gamage, 2022). This is seen in the way firms compete to position their products and services in a specific sector (Thiel, 2017). In this case, the survival of a firm depends on its ability to discover its competitive position while managing other factors to achieve the overall goals (Basco et al., 2019). The choice of survival strategies adopted in organizations may differ based on the level of experience of top management officers, the sector, the type of market, firm size, age, to mention but a few. However, understanding and adopting survival strategies is essential for all categories of establishments to survive economic turbulence (Bhagatkar et al., 2015).

3. Research Methods

The aim of this study is achieved by adopting a survey research design. Through the survey research, data was

collected quantitatively via a questionnaire from quantity surveying consultancy organizations in Nigeria. Top management executives or principal partners of the organizations were purposively sampled because they are ultimately responsible for developing and deciding on the appropriate strategies for implementation in the establishments (Monday & Aladeraji, 2015). The South-west, Nigeria was also purposively selected as the study area because two-thirds of quantity surveying consultancy organizations in Nigeria, and approximately 130 f organizations are located in this region (NIQS, 2021). The firms in each States in South-west is presented thus; Ekiti (10), Lagos (55), Ondo (15), Ogun (15), Osun (10), and Oyo (25). The questionnaire was used to request for background information of firm such as the year of establishing the firm and the number of employees, as well as the organizations' perspectives on survival strategies. The survival strategies sourced from extant literature were asked on a 5-point Likert scale ranging from 1 representing 'strongly disagree' to 5 which represented 'strongly agree'. 99 questionnaires, representing a 76.2% response rate, were retrieved out of the 130 copies distributed. This number is considered suitable for both descriptive and inferential analyses.

The analyses conducted in this study include mean score, standard deviation, factor analysis, reliability test, normality test, Kruskal-Wallis H-test, post hoc test and Horn parallel analysis. To rank the opinions of the respondents on survival strategies, a mean score was used while the standard deviation was used to determine the appropriate ranking of two variables with the same value as the mean score. Variable having a lesser standard deviation is highly ranked because of its closeness to the mean value (Oladinrin et al., 2023). Shapiro Wilk test was used to check the normality of the responses obtained on the survival strategies (Mishra et al., 2019). Having established the normality of the distribution based on the significance level ($p \leq 0.05$) of the variables, the Kruskal Wallis H test was computed to compare the differences in opinions of

was conducted to identify where the differences occurred by conducting a pairwise comparison. In addition, the Mann-Whitney test was computed to identify potential significant differences between the two groups (micro and small sized firms) in the study. The firm size in this study was operationalized based on the number of employees and the classification of firms in Nigeria submitted by Small and Medium Enterprises Development Agency of Nigeria (SMEDAN)(2012) and the National Bureau of Statistics (NBS) (2015) that micro-enterprise employs between one to nine people; small enterprise employs between 10 and 49 employees and while medium employs from 50 to 199 employees. Finally, the survival strategies were categorised into manageable sizes using factor analysis, while the reliability of the factor generated (in terms of internal consistency) was checked using Cronbach Alpha (Hair et al., 2010). Horn's parallel analysis was adopted to identify the factors that are important to be retained for discussion and the firm's managerial decision. Lim and Jahng (2019) opined that parallel analysis is one of the best procedures for ascertaining the number of factors to use. For this current study, the decision for the number of components was centred on the comparison of eigenvalues of the factors from both analyzes.

4. Results

4.1. Background Information of Firms

This study is firm-based and as such only information about quantity surveying firms was collected. The Table 1 revealed that larger numbers of these firms were established about 15 years at the point of investigating them though majority of them have less than 10 employees. This implied that majority of quantity surveying firms in South-western region of Nigeria are micro-sized organizations though owned by partners and established about 15 years ago. This category of organization is susceptible to the negative impact of economic turbulence and is required to put in place strategies to survive.

Table 1: Characteristics of QS Firms

Characteristics	Category	Frequency	Percent
Years of Establishment of Firm	1-5 years	9	9.1
	6-10 years	20	20.2
	11-15 years	18	18.2
	16-20 years	15	15.1
	above 20 years	37	37.4
Number of Employees/Firm Size	1-9 staff	83	83.8
	10-49 staff	16	16.2

firms in various groups (classifications of firm age/years of establishment in this study). Kruskal Wallis test is a non-parametric analysis used for testing independent samples from the same distribution (Ostertagova et al., 2014). Thereafter, a post hoc test

4.2. Rating of Survival Strategies

4.2.1. Mean Score

Table 2 displays the overall mean values of 22 survival strategies identified from extant literature, and the mean score according to the organizational size,

namely micro and small firms. The result of the overall mean values shows that “Improving service quality (S20) ranked highest with a score of 4.32, followed closely by “cash management (S18) with a mean value of 4.20. “Improving procurement management (S22)” and “organizational culture development (S21)” ranked in the third and fourth positions with values of 4.14 and 4.09 respectively. The survival strategy with the least mean value is “retrenchment (S11)”. It is noteworthy that the standard deviations of 13 survival strategies are less than 1.00, while others are approximately 1.00 (see Table 2). This depicts the variability of the dataset in the opinions of the respondents on the variables are very minimal.

Testing the normality of the data, the result from the Shapiro-Wilk in Table 2 shows that the distribution of the variables significantly deviated from normality with significant values less than 0.05 ($p < 0.05$). This implies that the variables on survival strategies based on firms’ responses are not distributed normally and as such non-parametric test such as Mann Whitney U and Kruskal Wallis were conducted to compare the resultant mean of the variables between the respondents in micro and small organizations. Notably, only two survival strategies namely “Improve organization structure (S15)” and “Cost or service charge reduction (S19)” have divergent views in the response of the respondents with significant values of 0.011 and 0.004 respectively.

4.2.2. Kruskal Wallis Test

The mean score values and standard deviations concerning the years of establishment of quantity surveying consultancy firms are revealed in Table 3. The mean values of the survival strategies of firms established 1-5 years range from “retrenchment (S9: M=2.56)” and “improving service quality (S20: M=4.33)”, while the values of “retrenchment (S9: M=2.85)” and “staff development (S6: M=4.30)” were the least and highest mean scores according to the respondents in establishments 6-10 years. Notably, the least scored survival strategies in quantity surveying firms established 16-20 years is also “restructuring (S9: M=3.40)”, while both “improving service quality (S20)” and “improving procurement management (S22) have the highest mean values of 4.20 in the category of firms established 16-20 years. On the other hand, “improving service quality (S20: M=4.67” and M=4.24)” were recorded as the highest mean values among the survival strategies of quantity surveying organizations founded 11-15 years and above 20 years respectively (see Table 3 in Appendix 1). As presented in Table 3, a significant difference occurred only in “globalizing the human resource management (S16)” with a significant value ($p=0.042$). This indicates that the views of the different organizations according to their years of establishment are the same on the remaining twenty-one survival strategies.

4.2.3. Post Hoc Test

Table 2: Adoption of Survival Strategies by Firm Size

Code	Survival Strategies	S-W (Sig)	Overall		Micro-sized firms		Small-sized firms		M-W(Sig)
			M	SD	M	SD	M	SD	
S20	Improving service quality	0.000*	4.32	0.74	4.35	0.76	4.19	0.66	0.301
S18	Cash management	0.000*	4.20	0.86	4.16	0.88	4.44	0.73	0.258
S22	Improving procurement management	0.000*	4.14	0.78	4.13	0.81	4.19	0.66	0.979
S21	Organizational culture development	0.000*	4.09	0.83	4.10	0.86	4.06	0.68	0.777
S3	Diversification	0.000*	4.06	1.02	4.04	1.02	4.19	1.05	0.489
S6	staff development	0.000*	3.98	1.02	3.96	1.03	4.06	1.00	0.753
S4	Product and service branding	0.000*	3.96	1.09	3.94	1.07	4.06	1.18	0.528
S17	Contacting past clients	0.000*	3.94	0.97	3.96	0.97	3.81	0.98	0.510
S12	Innovation or technological upgrade	0.000*	3.92	0.85	3.98	0.81	3.63	1.02	0.178
S1	Strategic alliance	0.000*	3.89	0.86	3.86	0.81	4.06	1.06	0.226
S10	Marketing strategies	0.000*	3.88	0.92	3.86	0.94	4.00	0.82	0.687
S15	Improve organization structure	0.000*	3.80	0.99	3.69	1.02	4.38	0.50	0.011*
S13	Prioritizing research and development	0.000*	3.77	1.03	3.77	1.04	3.75	1.00	0.906
S9	Restructuring	0.000*	3.72	0.97	3.66	1.00	4.00	0.73	0.252
S5	Asset allocation	0.000*	3.64	0.93	3.59	0.87	3.88	1.20	0.242
S16	Globalizing human resource management	0.000*	3.63	0.97	3.60	0.99	3.75	0.86	0.662
S19	Cost or Service charge reduction	0.000*	3.63	0.97	3.51	0.94	4.25	0.86	0.004*
S7	Financial Partnership	0.000*	3.55	1.11	3.59	1.12	3.31	1.08	0.370
S8	Leverage partnership	0.000*	3.43	1.02	3.47	0.95	3.25	1.34	0.641
S14	Contract-based employment	0.000*	3.41	1.08	3.33	1.11	3.88	0.81	0.064
S2	Merger	0.000*	3.27	1.15	3.35	1.09	2.88	1.41	0.143
S11	Retrenchment	0.000*	3.06	1.15	3.10	1.13	2.88	1.26	0.563

Note: S-W = Shapiro-Wilk, M = Mean, SD = Standard deviation, M-W = Mann-Whitney

Table 4: Post-Hoc Analysis

	Test statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
Globalizing the Human Resource Management (S16)					
6 - 10 years – 16 - 20 years	-14.083	9.386	-1.500	0.134	1.000
6 - 10 years – Above 20 years	-17.645	7.627	-2.314	0.021	0.207
6 - 10 years – 1 --5 years	22.994	11.030	2.085	0.037	0.371
6 - 10 years – 11 - 15 years	-26.002	8.928	-2.915	0.004	0.036*
16 - 20 years – Above 20 years	-3.561	8.411	-0.423	0.672	1.000
16 – 20 years – 1 – 5 years	8.911	11.587	0.769	0.442	1.000
16 - 20 years – 11 - 15 years	11.939	9.607	1.243	0.214	1.000
Above 20 years – 1 - 5 years	5.350	10.213	0.524	0.600	1.000
Above 20 years – 11 - 15 years	8.378	7.897	1.061	0.289	1.000
1 - 5 years – 11 -15 years	-3.028	11.219	-0.270	0.787	1.000

From the post hoc test, Table 4 showed the results using Bonferroni adjustment for Type 1 errors on the survival strategies of quantity surveying consultancy organizations where there are significant differences from the Kruskal–Wallis H test. This significant difference presented in Table 4 revealed that “globalizing the human resource management (S16)” occurred in quantity surveying organizations that were established between 6-10 years and 11-15 years with a significant value ($p=0.036$). The difference in the opinions of the two groups could be linked to the capital asset of the firms, international affiliation, and the prowess in the use of digital technology for human resource management activities. Quantity surveying firms with over 10 years of experience may have formed ties with other foreign professionals that were

met during international conferences and symposiums. Maintaining relationships with other foreign organization owners could help to source a workforce with global capabilities and also secure foreign jobs.

4.3. Prioritizing Survival Strategies

4.3.1. Factor Analysis

To conduct the factor analysis, the factorability of the 22 survival strategies was first determined. From the results presented in Table 5, the value of Kaiser-Meyer-Olkin (KMO) is 0.770 and Bartlett’s test of specificity is $p=0.000$. The KMO is higher than the recommended minimum value of 0.600 (Shrestha, 2021), and the significant value from Bartlett’s test depicts that the collected data on survival strategies are adequate and suitable for factor analysis.

Table 5: Reduced Components of Survival Strategies

Factor	Item	Factor loading	Alpha value
KMO 0.770			
Organization and Innovation Development (OID)	S22- Improving procurement management	0.776	0.854
	S4- Product and service branding	0.721	
	S21- Organizational culture development	0.731	
	S15- Improve organization structure	0.688	
	S20- Improving service quality	0.684	
	S12- Innovation or technological upgrade	0.558	
	S13- Prioritizing research and development	0.568	
Merger and Partnership (MP)	S2- Merger	0.859	0.723
	S7- Financial partnership	0.732	
	S11- Retrenchment	0.529	
	S8- Leverage partnership	0.531	
Business and Marketing Strategies (BMS)	S3- Diversification	0.788	0.807
	S10- Marketing strategies	0.831	
	S9- Restructuring	0.664	
Resource Administration (RA)	S1- Strategic alliance	0.810	0.743
	S6- Staff development	0.620	
	S18 Cash management	0.608	
	S5- Asset allocation	0.528	
Organizational Management (OM)	S16- Globalizing human resource management	0.681	0.440
	S17- Contacting past clients	0.649	
Organizational Regulator (OR)	S19- Cost / Service charge reduction	0.795	0.594
	S14- Contract-based employment	0.724	

The result in Table 5 shows the principal component analysis and the reliability test of the survival strategies. Out of the 22 survival strategies, 6 principal factors were generated with an eigenvalue greater than 1 and were extracted from the rotated matrix using the Varimax rotation method. To test for the reliability of the variables, the 6 principal survival strategies were subjected to Cronbach's alpha test. Also, the rotated component matrix shows that 5 out of the 6 principal factors of the survival strategies have alpha values ranging from 0.594 to 0.854 while one is below the 0.500 minimum acceptable alpha value (Rodriguez Añez et al., 2008). In past studies, there existed diverse benchmarks for Cronbach's Alpha value. Alpha values between 0.7 to 0.9 are often used as an acceptable threshold by some researchers (Olaniyi, 2019), an alpha value of 0.6 is used in some studies (Hair et al., 2010; Shrestha, 2021), while 0.5 could also be considered reliable (Rodriguez Añez et al., 2008). However, the increase in alpha value depends on the sample size (Bujang et al., 2018), and the low alpha coefficient could be based on the heterogeneity of the variables (Kocak et al., 2014). The low alpha value of "organizational management (OM)" is linked to the small dataset and heterogeneity of the variables (Crocker & Algina, 1986). Since categorising the variables is exploratory and the chances that future studies could obtain a high Cronbach Alpha value, the low alpha value for this study is considered acceptable.

In this study, the naming of the principal factors was based on the researcher's judgement since there is no universal pattern of naming reduced factors in factor analysis (Yong & Pearce, 2013). Hence, the names given the principal factor are adjudged to be satisfactory. The factor names for the survival strategies include organizational and innovation development (OID), merger and partnership (MP), business and marketing strategies (BMS), organizational management (OM), resource administration (RA) and organizational regulator (OR).

Comparing the six (6) factors obtained from the principal component analysis (PCA) with the result of Horn's parallel analysis, Table 6 shows the decision for the numbers of the factors to retain considering the eigenvalues and criterion values. The result depicts that

the factors having the lower criterion value from the parallel analysis (PA) compared with the eigenvalues from the PCA were accepted. The result revealed that the three factors to be retained are "organization and innovation", "merger and partnership", and "business and marketing strategies".

4.4. Discussions

The finding of this study from the mean analysis revealed that considering the size (micro and small) and years of establishment of the firm, the survival strategies mostly adopted by quantity surveying consultancy organizations during economic contraction includes improving service quality, cash management, improving contract management, organizational culture development and diversification. Construction organizations, most especially small firms in Nigeria adopts strategies relating to organization and resource management for survival during economic instability (Ogbu, 2018; Adu et al., 2020). In Malaysia, Chong et al. (2020) submitted that quantity surveying consultancy organizations are required to put in place a strategic structure for improved service delivery and profitability to enhance survival.

Based on the size and years of establishment of quantity surveying consultancy organizations, there is no divergent view on the adoption of survival strategies by the different organizations. This supports the assertion that the organizational structure of most quantity surveying consultancy organizations is similar and majority of them are categorised as micro sized organizations (Handoyo et al., 2023; Moyanga et al., 2024). As such, there is consensus in their opinions on the strategies been adopted by them for survival. However, there is divergence in the organizations' view on the adoption of improved organizational structure, service charge reduction and globalizing human resource management as survival strategies.

The study further categorised the survival strategies for service firms so as to enhance better understanding of firm's owner or management personnel on the appropriate strategy to be adopted for survival when the economy contracts. The categorised survival strategies include organizational and innovation development, merger and partnership, business and marketing strategies, resource administration, organizational

Table 6: Comparison of PCA and Horn's Parallel Analysis

Factors	Actual Eigenvalue from PCA	Criterion Value from PA	Decision
Organization and Innovation Development (OID)	6.639	1.964	Accepted
Merger and Partnership (MP)	2.422	1.786	Accepted
Business and Marketing Strategies (BMS)	1.816	1.655	Accepted
Resource Administration (RA)	1.484	1.541	Rejected
Organizational Management (OM)	1.280	1.428	Rejected
Organizational Regulator (OR)	1.185	1.341	Rejected

management and organizational regulator.

4.4.1. *Organizational and Innovation Development*

The survival strategies under this category of “organizational and innovation development” comprises improving procurement management, branding of products & services, developing the organizational culture, improving organizational structure, improving service quality, innovation or technology upgrade and prioritizing research and development. It is proven by Aghimien et al. (2018) that construction organizations which adopt innovations have a chance of surviving economic turbulence and remaining competitive simultaneously. For quantity surveying organizations, improving on the approaches in procuring services, rebranding services and delivering quality services are easier strategies for implementation at no additional cost. Also, developing and constantly improving the organization’s structure and culture is a vital approach for services firms to survive economic contraction (Mashrabjonovich, 2022). All these strategies boil down to devising new or improved ways of service delivery which can be significantly influenced by the size of firms. On the other hand, the type of ownership of the firm must be put into consideration in the decision to adopt organization and innovation development in firms to survive economic turmoil and global financial crisis (Jayalath & Gamage, 2021).

4.4.2. *Merger and Partnership*

This survival strategy named “merger and partnership” consists of merger, financial partnership, retrenchment and leverage partnership. In times of economic or financial crisis, mergers and different categories of partnerships are important strategies for the continued operations of quantity surveying consultancy organizations in Nigeria’s construction market. This is largely due to the size of these organizations and the inability to pay employees because of insufficient financial reserves during economic hard times. Thus, smaller organizations must partner with larger firms, especially for jobs or project opportunities to increase their chances of surviving the contraction of the economy (Irayanti, 2019). In financing and managing projects, a firm’s weakness resulting from loan servicing, reduction in employment, low job commissions and death of a firm partner can lead to the extinction of services firms. However, the adoption of a merger or partnership strategy is a panacea for enhancing the firm growth during an economic crisis (Osundina et al., 2016) which in turn helps the firm to stride through to survival. In times of economic turbulence, the area in which a quantity surveying organization is located and the nature of the firm partner/owner influence the decision to merge or partner with other quantity surveying firms for survival.

4.4.3. *Business and Marketing Strategies*

The business and marketing approaches are vital strategies that quantity surveying organizations can

consider and adopt to survive economic contraction. This category of strategy covers diversification, market strategies and restructuring. Diversification is a crucial strategy that service organizations need to adopt to cushion the effect of economic contraction. Therefore, creating and diversifying into other lucrative businesses either in the construction industry or other industries during the economic boom is essential for an unstable economy. On the other hand, intensifying the management of new or secondary business outfits when the primary business is negatively affected by the contraction in the economy is indispensable to enhance survival. In addition, past studies also revealed that adopting new marketing strategies is important to achieve firm goals in terms of growth and survival during economic contraction (Basco et al., 2019; Patel et al., 2021). The marketing strategies can be in the form of improved or alternative ways of procuring and managing the client and projects. However, the location of the firm has a high influence on the decision of the firm’s management on whether to adopt diversification, restructuring and strategic marketing to survive.

4.5. **Practical Implications**

The study revealed the significance of organizational and innovation development as a vital survival strategy. Therefore, it is crucial for quantity surveying consultancy organizations to strategically structure organization employees to manage the services rendered effectively and be innovative. This can be achieved by employing a knowledge manager to undertake research activities to evaluate the existing technologies; services rendered, procurement strategy adopted, etc., and determine ways of improving or upgrading them. On the other hand, quantity surveying firms can collaborate with universities or research institutes to investigate and suggest effective strategies for enhancing innovation for better service delivery. Also, quantity surveying organizations can determine ways of sharing their financial responsibilities with other firms to survive the effects of economic turbulence. Micro-sized firms on the verge of failure can merge with larger firms to sustain their firms through increasing capital base and market share. There is also the need for better ‘business and marketing strategies’ by quantity surveying consultancy organizations as a strategy to survive the contraction of the economy. Therefore, quantity surveying organizations can employ or engage managerial personnel that are capable of developing and implementing suitable marketing approaches for the firm. This manager should possess the expertise and capability to be able to predict the market, adopt appropriate approaches to acquire jobs and market the services of the organization. In addition, the manager should be able to influence the decision of owners of quantity surveying organizations to explore other businesses that can be diversified to stay afloat during economic turmoil.

5. Conclusion

This study investigated the survival strategies of quantity surveying consultancy organizations in the Nigerian construction industry since the implementation of survival strategies depends largely on the types and characteristics of the firm. The quantity surveying consultancy organization was used as the focal organization in the industry and the strategies for surviving the effect of economic crisis or contraction were investigated. In contrast to extant studies on survival strategies, this study classified survival strategies for quantity surveying organizations considering possible convergent/divergent opinions based on their internal factors such as size and years of establishment of the firm. The most crucial of the classified survival strategies include organizational and innovation development, merger and partnership, and business and marketing strategies.

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- Based on the results, the study recommends that quantity surveying organizations should undertake research activities for enhancing their firm's innovativeness; partnership with other firms for shared financial responsibilities; micro-sized firms should consider the adoption of mergers for survival.
- This study classified and suggested survival strategies for quantity surveying consultancy organizations during the economic crisis in Nigeria, further studies can be conducted for quantity surveying organizations in other countries in Sub-Sahara Africa to determine similarities or differences based on the peculiarities of economies in Sub-Sahara Africa.
- ### Data Availability Statement
- The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.
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Appendix 1

Table 3: Adoption of Survival Strategies by Age of Firm

Survival Strategies	1-5years		6-10years		11-15years		16-20years		Above 20years		Overall		Asymp . Sig.
	M	S.D.	M	S.D.	M	S.D.	M	S.D.	M	S.D.	M	S.D.	
S1: Strategic alliance	3.44	1.13	4.00	0.79	4.06	0.54	4.13	0.92	3.76	0.89	3.89	0.86	0.370
S2: Merger	3.67	0.71	3.40	1.10	3.50	1.15	3.60	1.06	2.86	1.23	3.27	1.15	0.080
S3: Diversification	4.00	0.71	4.15	0.99	4.06	0.94	3.80	1.15	4.14	1.11	4.06	1.02	0.734
S4: Product and services branding	3.44	1.13	4.20	1.01	4.17	0.92	3.87	1.06	3.89	1.20	3.96	1.09	0.407
S5: Asset allocation	3.56	1.13	3.65	0.88	3.44	0.98	3.87	0.83	3.65	0.95	3.64	0.93	0.817
S6: staff development	3.89	1.17	4.30	0.92	4.17	0.86	3.80	1.15	3.81	1.05	3.98	1.02	0.423
S7: Financial partnership	3.56	1.01	3.65	0.93	3.78	1.11	3.87	0.99	3.24	1.23	3.55	1.11	0.507
S8: Leverage partnership	3.22	0.83	3.25	0.79	3.61	0.92	3.67	1.11	3.41	1.19	3.43	1.02	0.506
S9: Restructuring	3.78	0.97	3.65	0.99	3.72	0.75	3.80	1.01	3.70	1.08	3.72	0.97	0.998
S10: Marketing strategies	4.00	0.87	3.80	1.15	4.22	0.65	3.93	0.88	3.70	0.91	3.88	0.92	0.395
S11: Retrenchment	2.56	1.24	2.85	1.18	3.39	0.98	3.40	1.06	3.00	1.20	3.06	1.15	0.232
S12: Innovation or technological upgrade	4.22	0.83	3.90	0.72	4.33	0.69	3.93	0.88	3.65	0.92	3.92	0.85	0.075
S13: Prioritizing research and development	3.67	1.00	3.60	1.19	4.22	0.73	3.67	1.11	3.70	1.02	3.77	1.03	0.406
S14: Contract-based employment	3.22	0.83	3.10	1.29	3.28	1.02	3.60	1.18	3.62	0.98	3.41	1.08	0.398
S15: Improve organization structure	3.78	1.30	3.60	0.94	4.22	0.88	3.47	1.19	3.84	0.87	3.80	0.99	0.241
S16: Globalizing the human resource management	3.89	0.78	3.05	0.94	4.00	0.97	3.60	1.12	3.70	0.85	3.63	0.96	0.042*
S17: Contacting past clients	4.22	0.44	3.55	1.05	4.00	0.84	4.07	1.03	4.00	1.03	3.94	0.97	0.351
S18: Cash management	3.89	0.93	4.20	0.95	4.39	0.50	4.13	0.83	4.22	0.95	4.20	0.86	0.768
S19: Cost or service charge reduction	3.33	0.71	3.55	1.19	3.83	0.86	3.60	0.83	3.65	1.01	3.63	0.96	0.691
S20: Improving service quality	4.33	0.50	4.25	0.85	4.67	0.59	4.20	0.86	4.24	0.72	4.32	0.74	0.279
S21: Organizational culture development	4.00	1.00	4.10	0.91	4.39	0.61	4.00	0.93	4.00	0.82	4.09	0.83	0.586
S22: Improving procurement management	4.11	0.78	3.95	0.83	4.50	0.62	4.20	0.77	4.05	0.81	4.14	0.78	0.232

Note: M=Mean, S.D. = Standard deviation, * = significant at 0.05 level