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## ASSESSMENT OF SURVIVAL STRATEGIES OF QUANTITY SURVEYING FIRMS DURING ECONOMIC TURBULENCE

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### ABSTRACT

Financial crises occasioned by economic turbulence and stiff competition in the construction sector have forced Quantity Surveying firms (QSFs) and construction firms into finding innovative ways of surviving and staying above completion in most developing nations. The decline in the Nigerian oil and gas production and export has made it difficult for the government who is the largest client of the construction sector to limit its spending, especially in infrastructure and development projects. QSFs now scramble for effective and efficient strategies to survive the dwindling economic construction. This study assessed the survival strategies of quantity surveying firms (QSFs) during economic turbulence in Port Harcourt, Nigeria. The well-structured Quantitative Questionnaire administered using snowball sampling techniques in the study area were adopted in gathering data from the target respondents. With a sample size of 86, the gathered data were analysed using frequency, percentage, and mean item score (MIS). It was found that the most critical Survival strategy adopted by QSFs during economic turbulence are; improved networking systems to increase reach, effective management of knowledge, retaining experienced staff in the company, reduction of service charges, and improved service delivery. This study concludes that the assessed survival strategies have a high level of importance and plays a critical role in ensuring that Quantity Surveying firms survive the economic downturn and the stiff competitive market of the construction sector. It is recommended that the managers of QSFs should focus on those major strategies that will keep them above the competition, in continuous business, sustainable growth, and survival during economic turbulence.



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### I. INTRODUCTION

After the great depression of 1929, the financial crisis that stroke the world in 2007 is adjudged the most shocking and devastating economic event [1]. Economic recession or turbulence could be caused by internal or external forces. Countries boundaries have continued to remain open as a result of globalization. Liquidation or bankruptcy has hit many businesses as a result of economic shocks from external forces occasioned by globalisation [2]. As a result of this, companies globally were compelled to restructure and are quickened to reduce costs, debts

and number of employees; especially during the period of economic and market volatility [3]. Survival became the order of the day for most industries as they scrambles for effective ways and strategies to survive.

The construction sector is not immune to the economic downturn as construction organisations continue to devise new ways and techniques to remain afloat [2]. In Ireland, four out of the major ten construction firms failed to survive a recession. It was posited that the number of companies that failed recession increased from 120 in 2007 to 740 in 2011 [4]. 2,785 construction firms failed in the UK in 2008 and the number increased in 2009

[3]. In Nigeria, construction companies are facing the same challenges, as the economy is monolithic and solely dependent on oil production and export [5-6]. With the economic downturn and the decline in oil production and price volatility in oil price and unpredictability in output [7-8], coupled with the energy independence target of the US and China that are the major buyers of crude oil, The Nigerian economy is further destabilised [5]. In addition to declining oil production and exportation, [9] identified other causes of economic turbulence or recession as; inflation, loss of consumer confidence, excess supply over demand, excess demand oversupply, and global economic-financial crisis. This situation has continued to impact the construction industry and organisations and their competitiveness. According to [10], new projects are hardly commissioned as a result of the recession. Furthermore, new projects are rarely occupied, construction sites are abandoned and equipment and machines are left ideal throughout the country.

While there are existences of studies on survival strategies in the construction industry, a lot of them have focused on construction organisations generally [11-15, 5, 2-3, 16-19]. However, the Quantity Surveying firms which are one of the critical organisations in the delivery of construction projects, especially in areas of cost management of the built environment assets of the construction industry have been under explored. [20] posits that Quantity surveying firms occupy an appreciable proportion of construction organisations in the built environment; thus, their survival is critical to their continuous contribution to the nation's infrastructure development, and the essential influence of the construction industry on national development. Flowing from this knowledge, this study assesses the survival strategies of quantity surveying firms during economic turbulence in Port Harcourt, Nigeria.

[21] state that Quantity Surveying practices explore numerous survival practices that ranges from exploiting new opportunities through diversification, project evaluation, project accounting and auditing, prompt dispute resolution, adoption of technology innovations among other means. Skill development, synergy among professionals and collaborations has been highlighted as a way of producing a health industry that creates a sustainable built environment [22]. The outcome of this study can be leveraged by other countries with similar construction markets as Nigeria to learn strategies on how to stay afloat and remain relevant in times of economic recession and competition. Other proven Survival strategies adopted by other construction organisations in other nations of the world could be applied by construction firms other than QSFs in Nigeria to remain alive, above the competition in periods of economic downturn.

## **II. LITERATURE REVIEW**

### **II.1 ECONOMIC TURBULENCE AND QUANTITY SURVEYING FIRMS (QSFS) IN NIGERIA**

The construction industry plays a significant role in the economic growth and development in both developed and developing countries of the world. The industry drives employment generation, wealth creation, housing and infrastructure provisions, and national income contribution [23-24]. For [14], the construction sector helps to transform various economic resources into finished physical infrastructures that have economic and social impacts. Furthermore, the products of the construction sector are required by other economic sectors. In a challenging economy, construction activities experience a decline, whereas in a healthy and booming economy the reverse is the case [25-26]. [20] submits

that in an unhealthy economy, there is usually low patronage of the construction sector in a turbulent economy. A developing country like Nigeria has always been experiencing several economic turbulences.

In 2016 Nigeria experienced two consecutive quarters of economic contraction according to the National Bureau of Statistics. [27] states that even though Nigeria is technical out of recession, businesses have continued to experience economic difficulty. Ups and downs in the economic situation in the country have both direct and indirect effects on the continuity, sustenance and survival of the construction industry as well as the construction organisations of which QSFs are a part [18, 28]. The government both at the state and federal level are the largest client of the construction industry and their patronage declines in periods of economic recession. The government are compelled to limit the number of projects and other developmental projects that are embarked upon.

Quantity Surveyors (QS) are individuals who are professionally trained, qualified and experienced in handling cost management, financial control, contract administration, procurement management, and other management-related functions of construction projects in the construction industry [29]. Quantity Surveying firms engage these certified quantity surveyors in rendering these services to their clients. Many organisations including QSFs are working hard to ensure that clients, investors, regulators and competitors are satisfied, especially due to the stiff competition of the construction sector [30]. QSFs are dependent on the skills, expertise and knowledge of the QS to meet the numerous needs and demands of clients and other stakeholders [31].

QSFs are service-based organisations that provide expert advice and consultancy services to customers, thus, they cannot do without employees who are mostly QSs. This implies that the recruitment of qualified QSs is central to the survival and success of the QSFs. As businesses move towards achieving sustainable growth, the QSFs need to embrace a new paradigm in order to remain globally competitive [32].

### **II.2 SURVIVAL STRATEGY OF QSFS DURING ECONOMIC TURBULENCE**

One of the ways of measuring business success besides profits, sales growth, return on investment (ROI), corporate reputation, the numerical strength of employees, is the survival and competitive strength [12]. The formulation of a sound strategy is useful to construction-based organisations towards their survival and achievement of sustainable growth and progress, especially when faced with a turbulent and volatile business atmosphere [11]. A review of construction management literature shows that various survival strategies have been adopted by various organisations in different countries and continents to stay afloat during periods of economic downturn.

Differentiation has to do with the activities of the company targeted toward differentiation their products or services offered by creating something Unique [33]. Surviving economic turbulence requires the adoption of differentiation strategies [34]. [35] showed that a stronger relationship with performance can be achieved during excessive competition through differentiation. The Four differentiation strategies that were highlighted are:

- i. Investment in Research and development/new technologies (focus on technology/innovation)
- ii. Enhancing marketing and advertising (i.e. focus on marketing)

- iii. Strengthening stakeholders relationships (i.e. focus on marketing)
- iv. Focus on enhancing products offered or services rendered (focus on technology/innovation)

In a critical review by [3], differentiation strategies were found to be the major survival strategies adopted by construction companies during an economic recession. Similarly, it was drawn from pilot case studies from Irish and UK construction contractors' response strategies to economic recession and concluded that cost leadership aimed at cost reduction and cost minimisation are the major response strategies adopted by Irish and UK contractors. With the generic category, the Irish and UK construction contractors adopt common strategies such as human resource/personnel strategies which include staff retraining/upskilling, bonuses cutting, cutting staff engaged on a project, training staff to cut costs.

[11] in Malaysia found that construction firms survived two different periods of economic downturns through the adoption of major survival strategies such as management style, market penetration, quality improvement, market development and product development. In a similar but different study in Malaysia, [36] reported that QSFs adopts survival strategies like branding, relationship, marketing, reputation, and innovation, among others. [20] stressed the need for Quantity Surveyors to improve on their skills and the embracing innovative technologies to achieve sustainable growth. Achieving sustainable development will provide quantity surveyors with the avenue to move beyond the traditional cost management functions to providing leadership in other relevant areas of the delivery of construction n projects that have an economic impact.

[2] found that during prolong the economic recession, contractors in Singapore adopts three major survival strategies, and they are; contracting-related actions, cost-control related actions, and financial-related actions. The most ranked survival strategies under the contracting-related actions are; bidding for more projects that are within the firm's resources and capabilities, setting limits on project size so that any failure of one project would not endanger the firm's operation, entering into forwarding contracts with suppliers and subcontractors to protect the firm against cost escalation, bidding for projects with tiny/zero profit margins, diversifying into other construction-related business, undertaking short-term and fast track projects, and undertaking smaller contracts. The most ranked strategies under the cost-control related actions groups are; implementing stricter site management to reduce material wastage, implementing stricter financial management on company cash flow, implementing stricter procurement procedures, freezing salaries of employees, and freezing staff recruitment. The major financial-related strategies are; creating uncommitted financial resources, negotiating for alternative loan services, and investing in machinery that has a high liquidity value. [14] appraised the survival strategies of organisations within the built environment and found that the major cluster of strategies adopted by construction organisations are; Organisation and workforce management strategies, Organisation's innovation strategies, Diversification strategies, financial management strategies, and Organisation's networking strategies. The organisation and workforce management strategies include; training and multi-tasking, staff layoff/redundancy and cutting back on employment, improving problem-solving skills, change in geographical location, and improving organisational culture. The strategies under the organisation's innovation strategies are; adopting new technologies/innovations, improved service delivery

standards, effective marketing, and improving the organisational structure. The Diversification strategies are; diversifying into other construction-related businesses, investing in different businesses that are not construction-related, diversifying into related practices based on the competencies, acquisition of resources. The financial management strategies are reduction in service charges, financial management, and reduced cost incurred on the contract dispute. The organisation's networking strategies include an improved networking system to increase reach and collaborative partnerships.

In a recessionary period, [20] in a study conducted in Lagos, Nigeria, found concluded that the top essential practices for the survival of construction firms are; improved service delivery, improved networking, effective knowledge management and retaining experienced staff in the company. [18] found that the seven critical groups of factors that can ease the survival of construction organisations are; human resource management factor, marketing factor, bid strategy factor, financial management factor, organizational culture factor, smart work methods factor and firm strategy factor. To extend the frontiers of knowledge in the QS profession, [37] suggested 'think tank' strategies to be adopted by the Nigerian Institute of Quantity Surveyors (NIQS) to be driven by the education committee of the institute. The aim is to enrich the curriculum of QS education in Nigeria, provide novel directions and develop other areas of core competencies for advancing knowledge through postgraduate studies.

Marketing is central to the survival and sustenance of companies, individuals; as it provides employment opportunities and impacts the living standards of the people [38-39]. The role of marketing strategies was assessed by [39], and it was found that keeping a pool of strong professionals, crating social bonds with clients, political bids inclusion in bids, effective communication among others were key to ensuring that companies sustain their competitive advantages, growth and survival in the industry they operate.

### III. MATERIALS AND METHODS

This study leveraged a quantitative research approach using a well-structured questionnaire as the primary means of data collection from QSFs in Port Harcourt rivers state, Nigeria. The questionnaire was developed following a critical literature review. This study followed the use of a research questionnaire in a similar study by [20, 18, 14]. The questionnaire is economical and covers wider audiences in a shorter time.

To ensure that quality and unbiased data are collected, the following sample selection criteria were set; 1) participants must have spent at least 5years in the construction industry of Nigeria, 2) must have participated in the delivery of construction projects in the study area, 3) must have experienced in stirring a company out of trouble, and 3) must be willing to participate in the survey. A snowball sampling technique was adopted in the administration of the questionnaire among the quantity surveying organisations. The snowball sampling technique is dependent on referrals and it has the capability to increase the sample size [40-41]. The snowball sampling technique was adopted since it was impracticable to obtain a database/separate list of QS organisations in the study area that met the study criteria. The Questionnaire was administered by self and through the help of trained research assistants who were well brief of the purpose of the study. The questionnaire was designed to collect data on the background of the respondents and on the most important survival strategies adopted during times of economic turbulence and hardship.

During a survey period of twelve (12) weeks, 86 Quantity surveyors were sampled and this response rate was deemed fit for the analysis. The garnered data were analysed using frequency, percentages, and mean item score (MIS) and independence sample test. The background information was analysed using frequency and percentages. The data collected on the survival strategies were analysed using MIS. The reliability of the research instrument was determined using Cronbach's alpha test. The test showed an alpha value of over 0.70 for the assessed variables. This implies that the data is of good quality and unbiased. It further means good reliability of the research instrument.

Table 1 shows the cut-off points for establishing how important the strategies are. These cut-off points were obtained from [42-43]. The percentage weight will be derived from dividing

the obtained mean scores by the highest Likert scale of 5. The entire methodological flow chart is shown in figure 1.

Table 1: Cut-off for the level of importance.

S/N	Per cent cut-off	Description
1	90 - 100	very high importance
2	70 - 89	High importance
3	50 - 69	moderate importance
4	30 - 49	little importance
5	1 - 29	very little importance

Source: [42-43].

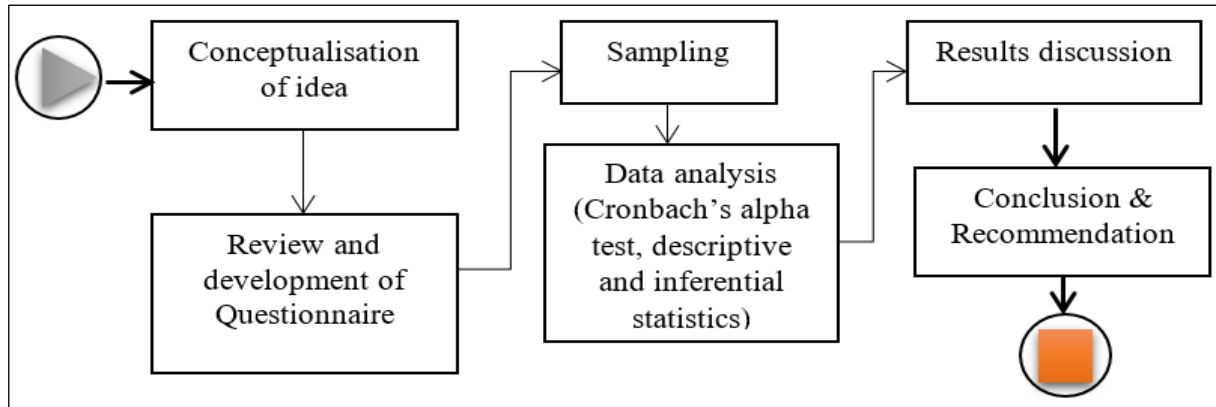


Figure 1: Research methodological flow chart.

Source: Authors, (2021).

#### IV. RESULTS AND DISCUSSIONS

##### IV.1 RESPONDENTS BACKGROUND CHARACTERISTICS

From the respondents' profiles in Table 2, The responsibility/ranks in their organisations show that 17.44% are project managers, 12.79% are principal/managing partners, 26.74% are procurement managers, 22.09% are commercial managers, 13.95% are contract managers, and 6.98% are senior estimators/quantity Surveyors. In terms of years of experience, 29.07% have between 5-10years of experience, 38.37% have spent between 11-15years in the industry, 18.60% have spent 16-20years, and 13.95% have over 20 years of industry experience.

The distribution of their years of experience shows that they have considerable industry experiences that can aid in meeting this study aim.

Their highest education qualification shows that 24.42% have HND, 18.60% have PGD, B.Sc/B.Tech (30.23%), MSc/M.Tech. (24.42%), and PhD is 2.33%. This shows that they are educationally qualified to contribute meaningfully to the subject of this study. The professional status of the respondents shows that a larger proportion of them are corporate members of the Nigerian Institute of Quantity Surveyors, NIQS. This shows that they are professionally qualified to participate in the subject of this study.

Table 2: Respondents profile.

Variables	Classification	Freq.	%	Cum. %
Ranks/Responsibility	Project managers	15	17.44	17.44
	Principal/Managing partners	11	12.79	30.23
	Procurement managers	23	26.74	56.98
	Commercial managers	19	22.09	79.07
	Contract managers	12	13.95	93.02
	Senior estimators/Quantity Surveyors	6	6.98	100.00
	<b>TOTAL</b>	<b>86</b>	<b>100.00</b>	
Years of experience	5-10years	25	29.07	29.07
	11-15 years	33	38.37	67.44
	16-20 years	16	18.60	86.05
	21-above	12	13.95	100.00
		<b>TOTAL</b>	<b>86</b>	<b>100.00</b>
Highest education qualification	HND	21	24.42	24.42
	PGD	16	18.60	43.02
	BSc/Btech	26	30.23	73.26

Variables	Classification	Freq.	%	Cum. %
	M.Sc/M.Tech	21	24.42	97.67
	PhD	2	2.33	100.00
	<b>TOTAL</b>	<b>86</b>	<b>100.00</b>	
Professional status	Corporate member of NIOS	79	91.86	91.86
	Probationer member	7	8.14	100.00
	<b>TOTAL</b>	<b>86</b>	<b>100.00</b>	

Source: Authors, (2021).

#### IV.2 SURVIVAL STRATEGY OF QSFs DURING ECONOMIC TURBULENCE

The result of the analysis of the data gathered on the Survival strategy adopted by QSFs during economic turbulence is shown in Table 3. The top ten (10) survival strategies are; Improved networking system to increase reach (MIS=4.58; S.D=0.7587), Effective management of knowledge (MIS=4.40; S.D=1.1301), Retaining Experienced staff in the company (MIS=4.36; S.D=1.1052), Reduction of service charges (MIS=4.33; S.D=1.1002), Improved service delivery (MIS=4.29; S.D=1.0501), Usage of new technologies/innovations (MIS=4.28; S.D=1.1024), Adoption of Innovative ideas (MIS=4.27; S.D=1.1106), Effective marketing (MIS=4.24; S.D=1.0396), cutting back on employment and Staff layoff/downsizing (MIS=4.12; S.D=1.1316), and Mergers, acquisitions, and joint ventures (MIS=4.08; S.D=1.2387). While the least five (5) ranked survival strategies are; Diversifying into other construction-related ventures (MIS=3.81; S.D=1.4101), Change in geographical location (MIS=3.80; S.D=1.4375), Workforce training and retraining (MIS=3.73; S.D=1.4586), Improving organisational culture (MIS=3.72; S.D=1.5002) and Improving organizational structure (MIS=3.66; 1.5232).

Although these strategies have a varying ranking based on the different mean weighting, they all have a high impact on the survival of Quantity Surveying firms. This is premised on the average mean weight for the assessed variables of 4.07(81.32%) and a maximum and minimum mean weighting of 4.58 (91.63%) and 3.66 (73.26%) respectively. Furthermore, it can be observed from (column 7 of Table 3) that based on the cut-off points for determining the level of significance or importance of the assessed survival strategies, 95.45% of them have a high level of importance to ensuring the survival of QSFs. This assertion is premised on the range 70-89%. Only one (4.55%) of the variables showed a very high level of importance to the survival of QSFs. Overall, the assessed variables have a significant impact on ensuring that QSFs can survive the economic downturn in Nigerian and by extension QSFs in other developing countries with similar construction markets and the economy as Nigeria.

The findings of this study support the findings of [14, 20, 36, 18, 35, 2]. Building a stronger bond with important

stakeholders and enhancing the quality of services renders or products offers are key aspects of marketing differentiation that impact the survival of construction organisations [35]. Skill development has been emphasised by a previous study of [20]. This is achieved through training and education to ensure continuous improvement in products and services. Embracing innovation techniques and technologies is a sustainable way of attaining sustainable growth, development and survival [14, 20]. Retaining experienced staff and a pool of professionals is one of the survival strategies that has been successful in delivering construction organisation during economic hardship and stiff competition. This was emphasized by the studies of [39, 18, 14, 20].

Reducing services charges and improvement in products and survives rendered are ways of surviving the economic downturn. During periods of economic hardship, clients like other construction industry stakeholders are hit by a reduction of funds to invest or embark on development projects. Reducing services charges is a customer-attracting and enticing strategy for keeping and ensuring continuous patronage by customers. Since clients and their investors in the construction projects are facing financial issues; they will naturally be attracted to firms that will deliver their project at a reduced cost and professional fee. During financial hardship, QSFs could channel the limited resources available can be channelled productively to improve their services rendered and products offered. With improved products and services, new clients could be attracted and existing clients' loyalty improved. Reducing services charges and improvement in products and survives rendered is part of the major strategies reported by [14, 20, 36, 18].

Downsizing and reducing the number of employment made is another proven strategy for surviving the economic downturn. During times of economic turbulence when companies are without jobs or reduced projects, reducing the number of workers on their payroll or cutting back on the number of employees engaged on regular basis is a way of reducing expenses, that have proved to be critical to firms survival and remaining in business. This strategy was found as important to the survival of construction firms like the QSFs in similar previous by [14, 20, 2]. Going into some sort of partnerships, mergers, joint ventures is another way of surviving economic turbulent that has been found to be useful to companies. Pooling resources and sharing areas of competencies and weaknesses can help QSFs survive during hard times.

Table 3: Survival strategy of QSFs during economic turbulence.

S/N	Variables	MIS	S.D	Rank	%	Remark
1	Improved service delivery	4.29	1.0501	5	85.81	High
2	Improved networking system to increase reach	4.58	0.7587	1	91.63	Very High
3	Retaining Experienced staff in the company	4.36	1.1052	3	87.21	High
4	Effective management of knowledge	4.40	1.1301	2	87.91	High
5	Usage of new technologies/innovations	4.28	1.1024	6	85.58	High
6	Documentation of improvement in process	3.87	1.3442	16	77.44	High
7	Proper Financial management	3.90	1.2081	15	77.91	High
8	Improving organizational structure	3.66	1.5232	22	73.26	High
9	Adoption of Innovative ideas	4.27	1.1106	7	85.35	High

S/N	Variables	MIS	S.D	Rank	%	Remark
10	Going after work in new areas	4.02	1.1780	14	80.47	High
11	Reduction of overheads	3.84	1.3272	17	76.74	High
12	Change in geographical location	3.80	1.4375	19	76.05	High
13	Workforce training and retraining	3.73	1.4586	20	74.65	High
14	Diversifying into other construction-related ventures	3.81	1.4101	18	76.28	High
15	Diversifying into areas of competence such as procurement management, risk management, etc.	4.03	1.1827	13	80.70	High
16	Reviewing organizational policy	4.05	1.2263	12	80.93	High
17	Mergers, acquisitions, and joint ventures	4.08	1.2387	10	81.63	High
18	cutting back on employment and Staff layoff/downsizing	4.12	1.1316	9	82.33	High
19	Reduction of service charges	4.33	1.1002	4	86.51	High
20	Effective marketing	4.24	1.0396	8	84.88	High
21	Improving organisational culture	3.72	1.5002	21	74.42	High
22	Freezing salaries of employee	4.07	1.1457	11	81.40	High

Source: Authors, (2021).

## V. CONCLUSIONS

This study assessed the survival strategies of quantity surveying firms (QSFs) during economic turbulence in Port Harcourt, Nigeria. The questionnaire administered using snowball sampling techniques in the study area were adopted in gathering data from the target respondents. After the analysis of the gathered data, some critical findings were made and a conclusion was drawn.

The study found that the most critical Survival strategy adopted by QSFs during economic turbulence are; improved networking systems to increase reach, effective management of knowledge, retaining experienced staff in the company, reduction of service charges, improved service delivery, usage of new technologies/innovations, adoption of innovative ideas, effective marketing, cutting back on employment and staff layoff/downsizing, and mergers, acquisitions, and joint ventures. This study concludes that the assessed survival strategies have a high level of importance and plays a critical role in ensuring that Quantity Surveying firms survive the economic downturn and the stiff competitive market of the construction sector. It is recommended that the managers of QSFs should focus on those major strategies that will keep them above the competition, in continuous business, sustainable growth, and survival during economic turbulence.

The outcome of this study is critical to the success of the managers of Quantity surveying firms (QSFs) in improving their decisions regarding innovative techniques that will change the fortune of their firms. The Quantity surveyors engaged by QSFs are aware of the need to network to improve the reach and engagement with potential clients and other stakeholders.

This study took place in Port Harcourt, and this is a limitation of this study. In addition, the sample size is small and this could impact the generalisation of the results. Flowing from this, a similar study should be carried out in other states or regions of Nigeria. This is important for other results that could be compared to the outcome of this study to be available. Management is a key to the survival of every construction organisation. The role of management on the survival of QSFs or other construction-based organisations during economic turbulence and stiff industry competition should be investigated.

## VI. AUTHOR'S CONTRIBUTION

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**Investigation:** Dr. Reuben A. OKEREKE, Dennis Isaac PEPPLA and Nneka Mercyjane IHEKWEME.

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