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Quality Management as an Agility to Unlock Firm Size of Selected SMEs in Port Harcourt Nigeria

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Abstract**:** *The purpose of this paper is to examine the relationship between quality management as an agility to unlock firm size in selected SMEs in Port Harcourt. Although quality management has been adopted globally, In Nigeria SMEs industry are still only at the very initial stages of the quality management journey as most SMEs cannot live to celebrate five years of continue operational activities which has hitherto hindered the performance in area of profitability and firm size. This study embraced a cross-sectional survey research design. From the study, it was that there was a statistically significant relationship between quality management dimension such as research and development on firm size of selected SMEs in Port Harcourt Nigeria. The researcher therefore recommend that for operators of SMEs to achieve superior organizational performance in the current dynamic business environment is a function of the size of the firm defined by resource capability, technology capability and research and development.*

Keywords: *Quality Management, Firm size, Agility, Research and Development,*

Introduction

Small and Medium Enterprises (SMEs) play a major role in most economies, particularly in developing countries. SMEs account for the majority of businesses worldwide and are important contributors to job creation and global economic development. They epitomize for about 90% of businesses and more than 50% of employment worldwide. As stimulant to economic advancement, they equally contribute to improvement in income distribution and reduction in extreme poverty. Hence, the government is giving much concern to SMEs because of their prodigious potential for sustainable growth in size. Despite the veritable achievement and the encouragement from the government SMEs worldwide still encounter multiplicity of challenges such as paucity in quality management which has led to dip in size and expansion of the organizations. However, access to finance is a key constraint to SMEs size and expansion; it is the second most cited obstacle facing SMEs to grow their businesses in emerging markets and developing countries. This has equally reduced the profitability and expansion base of SMEs. Most organization for economic cooperation and development (OECD) countries has policy standard to promote sustainable economic growth and development of SMEs. One-quarter of all public support programmers reported to the OECD primarily target SMEs. Germany, Iceland, Japan and New Zealand dedicated more than 50 per cent of their entire public support programs to SMEs (The World Bank IBRD IDA, 2019). In 1993, a total of US$3.75 billion of public money was paid to help start-up of SMEs, most especially in acquisition of equipment, R&D, training and consultancy services, in the form of direct grants, tax concessions, low

interest rate loans or loan guarantees. More than 50 per cent of SME programmes are administered locally making leadership commitment and co-ordination between authorities more precarious. However, access to finance is a key constraint to SME size and development; it is the second most cited obstacle facing SMEs to grow their businesses in emerging markets and developing countries.

In response to increase global competitiveness in the small and medium enterprises quality management becomes viable as most organizations have adopted the practices that will increase the size and growth of the firm. These varied circumstances are practically evident in the global market leading to the use of information technology to facilitate organizational effectiveness. This has compelled organizations to adopt appropriate technological approaches and skilled to coordinate all aspects of modern technology which place unprecedented focus on quality management in other to drive expansion and size. However, many studies have been initiated in developed and developing countries of the world but the anticipation has been unimpressive and academic question are been asked with reference to why SMEs in Port Harcourt are facing precarious challenges that has resulted to SMEs depression in size and expansion. The possible offered explanations were connected to dearth in quality management practice (Aigboje, 2021). According to the Nigeria Bureau of Statistic (2017), manufacturing SMEs in Nigeria botched the quality management practice, leadership commitment, research and development which some authors term as tokenism leading to SMEs inability to expand in size. Thus, Aduralere (2019) recommended additional studies in Nigeria on the relationship between quality management dimensions on firm size.

Although quality management has been adopted globally, In Nigeria SMEs industry are still only at the very initial stages of the QM journey as most SMEs cannot live to celebrate five years of continue operational activities which has hitherto hindered the performance of SMEs in area of size and size and expansion.

Literature Review

2.1.2 Quality Management

Quality management has been recognized as a successful management philosophy in manufacturing and service industries (Giogio, Verbane & Kasren, 2015). Chibba (2017) defined quality management as a managerial philosophy that aims to providing customers with products and services that satisfy their needs. Cloud (2017) defined quality management as the degree to which the product or service meets the specifications and the needs of customers. Cloud (2017) added that there are several critical principles for successful quality management practices which among others include top management commitment, customer focus, supplier relationship, teamwork, training and benchmarking. Jones (2018) defines quality management as an embracing philosophy of management which aims at coordinating all functions of organizations that aligned to meet customer expectations and the organization's objectives. However, the definition of Jones (2018) is more robust as it incorporates and coordinates all segments of the organizational activities. Ohikere and Chukwuemeka (2018) see quality management as a philosophy and methodology for managing the operations of companies by utilizing the resources available to enhance performance.

Hansson (2017) observed that quality management (QM) is a concept associated with continuous improvement in an organization which assists in promoting the quality of

products and services required by the market. Organizations can improve their competitiveness by implementing quality management strategies in their business model (Hossain, Tasnim & Hasan, 2017).

Research and Development

Zhenji, Yue and Jian (2018) defined research and development (R&D) as the process by which an organization work to obtain new knowledge designed to create new technology, product and services in order to enhance the organizational bottom line. To succeed in this competitive and tough business environment, organizations are striving to increase the demand for research and development as they are indices that drive quality product and business performance. Sigalas and Vassilis (2018) defined research and development as a method of investigation which assumed that new scientific knowledge is discovered due to series of line and sequential stages that consists of basic research, applied research and development. (Beld, 2014) defined research and development as a wide range of business activities designed to gather new knowledge in order to expand the frontiers of the business. Lietenberg (2015) defines R&D as a systematic creative work of cognition, including the cognition of humans, culture and society, and the exploitation of the newly obtained results for competitive advantage.

Erdal and Ferdi (2015) viewed research and development as creative and systematic work undertaken in order to increase the stock of knowledge of people and to devise a way of solving problem utilizing the new knowledge. This definition is a shift from the human cognition; culture and society. International Accounting Standard Board (IASB, 2012) further emphasized that research and development is an original and planned investigation undertaken with the prospect of gaining new scientific or technical knowledge and understanding. Debuque (2013) defined research and development as the collection of efforts directed toward gaining greater knowledge or understanding and applying knowledge toward the production of useful materials, devices, and methods. Beld (2014) perceived that research and development (R&D) add value and knowledge to existing products, creation of new products and innovation of the production processes of companies, thereby improving firm´levels of competitiveness.

Firm Size

Aduralere (2019) defined firm size as the quantity and range of production capability and potential a firm possesses within a prevailing period. Shaheen and Malik (2012) defined firm size as the volume of product quantity and diversity of services a firm can make available simultaneously to its clients. Ali (2017) defined firm size as the size of a business which has the lowest average cost of production. Halil and Hassan (2016) defined firm size as the total sales and the volume of resources both human and material that sustained the firm operational; activities. Becker-Blease, Kaen, Etebari and Baumann (2018) observed that the size of a firm is essential in today's business world due to the phenomenon of economies of scale. Bigger firms can manufacture the quality product at much lower costs in contrast to smaller firms. Also, firms increase the size to gain a competitive advantage by depressing production costs and increasing market share (Etebari & Baumann, 2018).

Maja and Josipa (2012) observed that firm size and year of operations (Age) determine firm growth and competitiveness. Some business Parameters such as return on

investment ROI and return on assets ROA were observed as measures of firm size. Dogan (2013) state that firm competitiveness is determined by the size of the firm in the form of input-output relationship. Halil and Hassan (2016) concurred to the definition of Maja and Josipa (2012) that firm size and age is a function of firm performance and is a determining factor for firm competitive advantage. Akiyomi and Olaguyi (2013) observed that the level of its resources measures that firm size. Also, the growth and size of a firm is a function of the resources available for operations. Ali (2017) advanced that size play a significant role in organizational activities as large organisations have a higher capacity of competitiveness by charging higher prices on a product and earning higher profits.

This is possible due to economy of scale. Moreover, a large firm operating on economic of scale secured better opportunities to drive at a low costs rate which brings about effective bargaining power with the suppliers. Shaheem and Malik (2017) noticed that when quality products are standardized and produced on a mass scale as a result of large size; it permits the firm to sell at a very low price and still make a profit. Oladele, Akiyomi and John (2013) perceived that firm size determine the level of its competitiveness. Moreover, firms with a high level of competitiveness are expected to cope better with changes that might occur in the market. Besides, they secure a better opportunity to offset random losses from market uncertainties as a result of large scale production. Becker-Blease, Kaen, Etebari and Baumann (2018) postulated that the size and the resources of a firm determine the firm capacity to borrow as small firms often suffer from borrowing capacity as they may not have required collateral contrary to large firms. Therefore, capital as an obstacle might not be a challenge to big firms. He added that in area of research and development (R&D), large firms with robust resources have an advantage through economies of scale to finance R&D which is an opportunity to exploit the outcomes of research benefit. Gloria (2016) added that there is an extraordinary high business failure in a nation dominated by small firms. Moreover, the size of the firm depends on the degree to which the firm's assets are tangible as firm size supports lower or heavy investment in tangible assets and also permits higher or lowers financial borrowing.

Empirical Review

Quality Management and Firm Size

On quality management and firm size, different studies have been conducted with diverse findings (Becker-Blease Kaen, Etebari & Baumann, 2018; Gillies, 2015; Tosi, Misangyi, Fanelli, Waldman & Yammarino, 2004; Bryson, Erhel & Salibekyan, 2019). This implies that there are some authors who agree that quality management and firm's size linkage is possible, while some are in disagreement. There is a strong connection between quality management and firm size as evident from the result indicated that QM implementation depends on employees' attitudes and satisfaction (Halil & Hassan, 2016). Aduralere (2019) found a significant relationship between quality management and firm size. Continuous improvement which is the core issue in quality management that promotes firm size become noticed when the staff at all levels are subject to regular training and improvement in work culture which enables employees to be updated with the recent technology and principles that support and accelerate the organisation's position.

The author's findings equally revealed that continuous improvement in an organisation is not a temporary course that has an end if organisations have to expand in size. Samuel

and Eyunubor (2019) and Shaheem and Malik (2017) in their studies reported a positive relationship between quality management and firm size. Likewise, the relationship between QM and its components will produce a significant positive relationship on firm size. Therefore, firms that have quality management culture focus not just on the quality of the product, but also on the quality of its employees in order to drive at size and expansion.

Becker-Blease Kaen, Etebari and Baumann (2018) initiated a study utilizing employee satisfaction and customer satisfaction as measures of firm size and found a significant positive relationship between quality management and firm size. Authors emphasized that firm size and expansion is a guarantee since one of the prerequisites for desirable business success is hinged on the size and growth of the firm. Additionally, quality management (QM) philosophy authorizes employees to control the task before him. In essence, such employees have been invested with some right of autonomy, which allows him to suggest improvement statement that will contribute to increasing firm size.

The linkage between quality management and firm size is adjudged to be positive by different authors. However, some studies have identified that no relationship exists between quality management and firm's size. For instance, Gillies (2015) and Tosi, Misangyi, Fanelli, Waldman and Yammarino (2004) have not found any relationship between quality management and firm size. What determines the success and failure of businesses is the experience of the leaders and not quality management and firm size.

Theoretical Review

Quality Control Trilogy Theory

There abound many theories in the study of quality management as an agility to unlock firm size. However, quality control trilogy theory extensive supported to explain the interactions between quality management as a swiftness to promote firm size as identified in this study. This theory was propounded by Joseph Juran in 1920. Juran developed a philosophy of quality while working with Western Electric Company in the 1920s and later, in 1940s while working with Deming, here he developed his own approach which resembles Deming's in certain aspects but differs in others (Zhang & Liu, 2015). Like Deming, Juran saw that the poor quality of products in the US generally resulted in the loss of customers to foreign competitors, which presented a crisis for many UK companies. Juran theory was in agreement with Deming theory in areas of improving quality which involves new thinking and changes at all levels within the management hierarchy (Abbas, 2018). His contribution to quality management was presented in the form of a trilogy published in 1986 in which he proposed three processes necessary to bring about quality improvement. Quality control emphasis is on the prevention of defect in the product or service and if it occurred, rectifying such defect to provide a product or service free from imperfections. must set a target for quality improvement. It is essential to coordinate people to achieve the targeted task by delivering training at all level of the organization.

The theory has some devotees such as Christian, Henrik and Mats (2018); Dedy, Zakuan, Zaidi, Ariff, Chin, Zameri and Saman (2016); Sime, Shawriez and Cornelia (2018); Sohail, Ayaz-ul-Haq (2018) the scholars advanced that quality improvement aims to create breakthroughs to unprecedented levels of performance. According to Jorge, et al. (2014) Juran's trilogy is a system for managing not just quality, but also for managing innovation, and providing hands-on operational information about how to organize and to implement

a quality management program within an organisation. Conversely, the theory has some critics such as Dauglas, Smith and Ralph (2017); Stephane (2015). The scholars argued that all the past research were mainly based on the assumption that the bond between control and firm's performance is the key factor affecting organizational commitment. Also, regarding studies devoted to the effects of ISO 9000 standard certification on performance, they have found that the effects of ISO 9001 standards on quality management are not so clear. Some ISO certified firms do not outperform those without such certification (Shurafa &Mohamed, 2016).

Methodology

3.0 Research Design

This study embraced a cross-sectional survey research design. Cross sectional survey design is utilized to assess the thoughts and opinions of diverse groups of persons and allowing them to give more valid and honest response on the concepts of study. The reason for the adoption of research design is based on the assumption that the group of the population under study is heterogeneous in its features that is people of different ages, behavior and opinion are represented within the study population (Osuala, 2013).

3.1 Population

The study population was 844 employees from 24 selected SMEs in Port Harcourt Rivers State Nigeria. The 844 employees comprised of the senior officers, supervisors and managers. The SMEs for this study are domiciled in Port Harcourt, the capital city of Rivers State.

4.1 Data Analysis Results and Discussion

Table 4.16: Descriptive Statistics of Firm Size

Statements	Level of Agreement (n=844)								
	Strongly Agree	Agree	Partially Agree	Partially Disagree	Disagree	Strongly Disagree	Missing	Mean	Std. Deviation
My firm has robust resources for operations	55.2%	39.3%	4.3%	0.4%	0.0%	0.0%	0.8%	5.46	.779
Our company has more branches	41.8%	53.0%	4.5%	0.1%	0.0%	0.0%	0.6%	5.34	.708
Our company's total asset has expanded	40.0%	57.0%	1.9%	0.1%	0.0%	0.0%	1.0%	5.33	.744
Production capacity of my firm has increased	41.7%	55.2%	2.3%	0.0%	0.0%	0.0%	0.8%	5.35	.724
The company has increased the number of employees	45.5%	51.8%	1.9%	0.0%	0.0%	0.0%	0.8%	5.39	.726
Average								5.37	.736

Source: **Researcher's Field Survey, 2024**

Table 4.16 presents the results of descriptive analysis of firm size. The results of the descriptive analysis revealed that 55.2% of the respondents strongly agree that their firm has robust resources for operations, 39.3% of the respondents agree, 4.3% indicated partially agree, 0.4% partially disagree and 0.8% was missing. On average, the respondents agree that their firm has robust resources for operations (mean = 5.46, STD = 0.779). Further, 41.8% of the respondents strongly agree that their company has more branches, 53% agree, 4.5% partially agree, 0.1% partially disagree and 0.6% was missing. On average, the respondents agree that their company has more branches (mean = 5.34, STD = 0.708).

Also on their company's total asset has expanded, 40% strongly agree, 57% agree, 1.9% partially agree, 0.1% partially disagree and 1% was missing. On average, the respondents agree that their company's total asset has expanded (mean = 5.33, STD = 0.744). With regards to production capacity of my firm has increased, 41.7% strongly agree, 55.2% agree, 2.3% partially agree and 0.8% was missing. On average, the respondents agree that production capacity of my firm has increased (mean = 5.35, STD = 0.724). Finally, 45.5% strongly agree that the company has increased the number of employees, 51.8% agree, 1.9% partially agree and 0.8% was missing. On average, the respondents agree that the company has increased the number of employees (mean = 5.39, STD = 0.726). The average score of the statements is 5.37 with a standard deviation of 0.736 which means that on average the respondents agree with the statements under firm size, with variations in some statements responses as revealed by the grand standard deviation of 0.736 which confirms the divergence in respondents' opinions towards the mean. In view of the above table it was discovered that quality management dimensions such as research and development could improve firm size of selected SMEs in Port Harcourt, Nigeria.

Conclusion and Recommendations

From the analytical outcome of this study it was observed that there was a statistically significant relationship between quality management dimension such as research and development on firm size of selected SMEs in Port Harcourt Nigeria. Generally, the study established that quality management significantly affects business performance of selected SMEs in Port Harcourt Nigeria. The researcher therefore recommend that for operators of SMEs to achieve superior organizational performance in the current dynamic business environment is a function of the size of the firm defined by resource capability, technology capability, and functional integration among others. The study therefore recommended that owners and managers of manufacturing SMEs should seek sustainable business growth through effective merger and acquisition utilization coupling with the implementation of quality management practices to gain improved overall size and performance of SMES in Nigeria.

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