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Strategic Agility and Non-Financial Performance of Telecommunication Companies in Nigeria

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Abstract:
This paper aimed mainly at evaluating the effects of Strategic Agility (SA) on the Non-Profit performance of Telecommunication Firms in Nigeria but, specifically, it meant to determine the key strategic dimensions adopted by the telecommunication firms, assess the extent of the utilisation of the identified strategic agility dimensions, and examine the effects of the strategic agility dimensions on the non-financial performance of the telecom firms. The sampled cohort of telecom employees includes members of the low, middle and top-level management. A total sample of 310 employees was drawn from a population of 1320, using a widely accepted formula as contained in the methodology section of this paper and employing a survey method research questionnaire. The collected primary data was analysed quantitatively with the aid of SPSS v22 by way of descriptive and inferential analysis after rigorous data cleaning. Four options of commonly used dimensions, as identified in the extant literature, were given as options to pick as many from, namely: people, technology, organisational processes, and organisational principles. Of all the four, the people's (the HR) dimension has the highest adoption rate from the responses, followed by technology, organisational processes, and organisational principles in that descending. As for the extent of utilisation of the SA dimensions, the majority of respondents revealed that both Technology (about 96%) and People (about 94%) were utilised either at very high or high levels. Nearly 87% agreed that Organisational Principles were being deployed either at a very high or high level, while about 86% thought the same for Organisational Processes. With regards to the effects of strategic agility dimensions on the non-financial performance of the telecom firms in Nigeria, the results indicated a significant relationship between strategic agility and the non-financial performance of the telecommunication companies. In fact, when the effects of each of all of the four were considered on whether negative or positive, the Chi-Square (X^2) results showed all to have a significant association with the non-financial performance of the telecom firms, with the rating effects as follows: Technology at $X^2 = 43.758$, $p \leq 0.05$, Organisational Principles at $X^2 = 31.013$, $p \leq 0.05$, Organisational Processes at $X^2 = 17.135$, $p \leq 0.05$ and People at $X^2 = 15.302$, $p \leq 0.05$. The follow-up regression analysis also revealed a significant correlation between the strategic agility dimensions and non-financial performance of the telecommunication firms with an acceptable data-model fit at $F = 7.450$, $p = .000$. When the results were further disaggregated to look into the effect of each of the four strategic agility dimensions separately, only Technology appeared to be significant at $t = 3.485$, $p \leq 0.05$, all the other three were not statistically significant within the model as their p-values exceeded the threshold limit of 0.05. The study concluded that although each of the strategic agility dimensions may have a role or another to play in improving the telecom firms' performance, technology holds the key to them having the strongest competitive advantage within that industry.

Keywords: *Strategic agility, non-financial performance, telecommunication firms, Nigeria*

1. Relevant Literature

Most studies on *Strategic Agility* (SA) have focused on the productivity aspect and the supply chain side of the concept. However, the *financial ramifications from its adoption*, its link to firms' competitive advantage, operational factors within the firms, and its determinants have not been adequately researched (Amini & Rahmani, 2023). Although the authors' study delves more into the financial aspect of the phenomenon, one can argue (based on Amini and Rahmani's most recent findings) that this study's focus on determining the *non-financial* nexus to the phenomenon with the Telecommunication industry in Nigeria has a strong basis in what this study can contribute to the extant literature on the

subject matter. In a similar vein, Lungu (2020) describes how technology and innovation are paving the way for companies to adapt to the ever-dynamic business environment and assist them in maneuvering the difficult terrain by becoming the driver of change. Lungu associates 21st-century businesses' capability to improve their performance and results with the application of *strategic agility* as a tool. These explanations and results further reiterate the significance of SA as a necessary vessel for businesses to focus on as part of their desire to achieve competitive advantage for businesses to continue as a going concern, remain viable and sustain their presence in the market, at the minimum, if improving their share of the current market proves elusive in temporary terms.

Doz (2020, p.1) captures the essence of strategic agility thus:

"*Strategic agility, as an observable organisation performance outcome, results from the behaviors and skills of the organisation's managers in taking and implementing strategic actions. So, the key to strategic agility is not just analytical strategy from superior minds or thoughtful and effective organisational design but the set of management practices, behaviors, skills, values and beliefs that animate the senior management of an organisation in making and implementing strategic commitments."*

In the previous paragraph, Doz (2020) illuminates *Strategic Agility (SA)* as a phenomenon that does not take rocket science to activate and get right but that, once managers are armed with the appropriate, adequate and adaptable organisational and personal culture, they can achieve results through strategic commitments. SA is what firms that show superior profitability in their industries have in common. It is a highly developed capacity that allows firms to adapt to changes in their environment. It distinguishes firms that are more profitable relative to their contemporaries. Recent research has shown that a few firms that constantly outdo their competitors over a long period in the midst of significant changes in their highly competitive and uncertain environment are all strategically agile. They adjust to changes in their external environment more quickly and reliably than others. Strategic agility is a nurtured capability that helps an organisation to respond to changing circumstances in a timely, effective and sustainable manner; it transcends the mere ability to change. Past literature in management has referred to agility as a *dynamic capability*, which is the potential to perceive opportunities and threats, change an organisation's resource base and solve problems. It helps firms maintain their competitive edge over competitors (Williams, Worley and Lawler, 2014).

McCann (2004) defined strategic agility as the ability to swiftly detect and seize opportunities, change direction and make adjustments to avoid collisions. Strategically agile firms have the ability to respond to varying and unpredictable customers' demands and manage supply disruptions (Lee, 2002). Firms with high levels of business agility performance are capable of sensing and responding quickly to uncertain events in their environment and breaking the rules of the game by broadening (or shrinking) specific aspects of their capabilities or reducing cycle times beyond existing levels of flexibility (Sengupta & Masini, 2008).

In an effort to understand the concept of *agility*, a delve into extant literature is obviously essential. Haider *et al.*, in describing the concept, quote Prikladnicki et al. (2020), describing agility as*: "…The ability of an organisation to sense environmental change and to respond efficiently and effectively to it"* (2021, p.4). Conboy and Fitzgerald (2004) define agility as *"the continual readiness of an entity to rapidly or inherently, proactively or reactively,* embrace *change through high quality, simplistic, economical components and relationships with its environment"* (Oosterhout, 2010; 15). According to Gehani (1995), a firm that can quickly respond to customers' orders, regularly introduce new products, and promptly get in and out of strategic alliances is an agile organisation. Agility has also been described as a set of possible business initiatives a firm can readily deploy by leveraging pre-determined competencies, being mindful of the cost and risk; likewise, it is viewed as the ability to detect and seize market opportunities with speed and surprise, create and respond to change in order to profit in a turbulent business environment, effectively change operating states in response to uncertain and changing demands placed upon it, and being able to sense a rapidly changing customer needs, anticipate, identify and respond to the opportunities and threats with ease, speed and dexterity (Roberts & Grover, 2012; Westerman, Weill & McDonald, 2006; Narasimhan, Swink & Kim, 2006; Sambamurthy, 2003).

From the foregoing, and irrespective of the evidence of turbulence in the telecommunication industry, which requires that firms be strategically agile, only a few studies are available on this topic regarding the telecommunication industry, particularly in the context of the West African sub-region and Nigeria. For example, Oyedijo (2012) examined the relevance of strategic agility to competitive performance in the telecommunication sector using four dimensions: *organisation, people, technology, and planning*. Although Oyedijo's research focused on strategic agility and competitive performance, the empirical study did not look at the extent to which the telecom firms in Nigeria make use of strategic agility. The work also did not ascertain the influence of strategic agility dimensions commonly adopted by telecom firms to improve their performance and competitiveness. It appears that neither Oyedijo (2012) nor other previous relevant studies on Nigerian telecom have been able to examine the impact of strategic agility on the financial and non-financial performance aspects of the firms in the service industry. This has posed the challenge of measuring the direct impact of strategic agility on organisational non-financial performance, which existing literature indicates a better measure of organisational performance (Banker, Potter & Srinivasan, 2000) in the centre of high-level uncertainty that characterized today's business environment (Hoque, 2005). Current financial measures cannot capture the long-term benefits of investment made presently on strategic agility dimensions, which Vivekin group (2013) identified as *people, technology, process and principles.* Instead, activities relating to these dimensions, like research and development, employee training and relations, customer satisfaction programmes, new innovation and improved technology, and management capability, among others, are non-financial factors that drive long-term success for firms but reduce their profitability in the current period.

Despite the uncertainties that trail the Nigerian telecommunication industry, which requires firms within it to develop dynamic capabilities to sustain performance, much has not been done on strategic agility in this sector. The only

available empirical study on this topic in the telecom industry, that was accessible at the time of carrying out this research, was the study by Oyedijo (2012). The study examined the effect of strategic agility on competitive performance, using both financial and non-financial measures. Contingency management accounting literature hypothesized that the management's knowledge of the firm's environment is a prerequisite for the effectiveness of the organisational system in aligning various elements of need for its transformation (Chenhall, 2003). Several other studies that employed the contingency approach (e.g. Ezzamel, 1990; Gul, 1991; Mia, 1993; Gul & Chia, 1994; Hoque & Hopper, 1997; Hoque, 2004) give empirical support to the aforementioned opinion about management's knowledge of organisations and making strategic agility workable. The contention of this study is that strategic agility has not been observed in-depth and separately on non-financial performance measures in this sector, which, according to Hoque (2005), is more likely to impact performance favourably, especially in a volatile environment fraught with high-level uncertainty. Non-financial measures have the tendency to enable the decisions and actions of the firm that reinforce strategies centered on the demands of stakeholders, internal and external customers, regulatory bodies, managers and employees (Atkinson et al., 1997; Hoque & James, 2000; Hansen & Otley, 2003). Kaplan and Norton (2001) also posited that non-financial measures guide the management of organisations in the assessment of distortions in their business environments and evaluation of progress made towards their goals. In addition, the most commonly adopted dimensions of strategic agility peculiar to the telecom industry have not been clearly identified and tested by previous empirical studies on the Nigeria Telecom industry.

So, in view of this apparent dearth in the literature on strategic agility and non-financial performance in the sector of focus, this study addressed the aforementioned issues by assessing to what extent telecom firms make use of strategic agility and which of the strategic agility dimensions are most commonly in use in the industry. Furthermore, this research evaluated the effect of strategic agility on the non-financial performance of telecom firms in Nigeria to give a better understanding of the connection between the two variables.

1.1. Dimensions of Strategic Agility in Organisations

Authors of all persuasions have alluded to various measures or dimensions of strategic agility, and from the definitions, one can argue that the variation in the definitions may be contingent upon the environment of operations, or where the research is being carried out, data source, nature of organisation, researcher experiences, business stakeholders' experiences and need, etc. For instance, Nurjaman (2020) reckons that Strategic Agility has four key dimensions: *Strategic Sensitivity, Leadership, Unity, Resource Fluidity, and Collective Commitment*; this categorisation the author also refers to as *strategic agility measurement.* These dimensions are also referred to as the *enablers* of strategic agility. This categorisation surely differs by some margin from Vivekin's (2013) understanding of SA measurement, though with some fundamental similarities.

Vivekin (2013) identified four enablers of strategic agility in organisations: *People, Principles, Processes, and Technologies.* People and Principles are linked to the organisational culture and have a huge influence on long-term performance. Processes and Technologies steer the operations of the organisation and have more impact on short-term performance. Firms that would enjoy both long-term enduring excellence and short-term performance must focus on these four enablers. These dimensions are similar to the four elements of strategic agility used by Oyedijo (2012): organisation, people, process and planning. Khandwalla (1995) also identified people, processes and technology as the key elements for a successful organisational transformation.

- People: The value of people within organisations cannot be overemphasized. Having a visionary leader in an organisation for a long would develop stability and direction. It has been noticed that companies that have long-serving CEOs display enduring success. However, a study carried out at Wharton shows that it is equally important to identify and retain an ordinary worker because when such talent leaves, it may take many years to reproduce employees that would possess the same corporate knowledge as the previous worker, which is absolutely important for the success of the organisation. Great companies create extraordinary results with ordinary people (Viveken, 2013). The ethos of the company is largely determined by individuals and their interactions with one another. The philosophy informed by the collective habits of people breeds the spirit of the organisation and governs its response to rapidly evolving situations. The ability of an organisation to take care of its workforce and encourage collectivism determines its strategic agility.
- Principles: Principles shape the character of an organisation. The "character" of an organisation determines its value orientation; it tells whether a company would be "customer-oriented" or "innovation-centric". Character is developed when the organisation's principles are adhered to. These principles could be ethical (for example, "honesty", "fair practice", and so on) or business-centred ("put customers first", "think web first", or "innovate"). Long-term performance is shaped by the public's admiration of a company's character and goodwill (Viveken, 2013).
- Processes: For companies that are innovative across the globe, innovation goes beyond the products; it also bothers processes. Processes house the organisational principles and the interactions between people in the company towards the actualisation of strategy. Processes become central in enabling strategic agility with the understanding that it is not only what organisations do but also how they do it that provides a competitive advantage (Viveken, 2013). Processes that develop around human capital policies or corporate governance enhance the long-term performance of organisations, while the ones developed around the dynamics of operating environments drive short-term performance.
- Technology: Technology does not just enable processes; it also permits alternative ways of carrying out a process. Equally, technologies allow innovation of these processes. The processes of Japanese car manufacturers have succeeded based on their risk-taking behaviour when it comes to new technologies. Japanese firms in the middle

of the 1980s delved into new production technologies like flexible manufacturing, CAD/CAM and CIM (Robert, 1988). These technologies have made Japanese firms focus on quality, leading to a long-term reputation for reliability. Charles Schwab is known for transforming the stock brokering industry through technology and the Internet. Charles Schwab's strategic agility thrives on the ability to combine old and new technologies and constantly make progressive improvements with regard to underlying technologies rather than bring about dramatic and infrequent changes (Viveken, 2013).

At this juncture, one would like to argue that, going by the four principles of measuring SA by Vivekin, they actually capture the key essence of what the phenomenon is about and show that, many a time, measuring a construct is sometimes a matter of nomenclature because the fundamental principles with most definitions are similar in one shape or form.

1.2. Objectives of the Paper

The broad objective of this research was to examine the effects of strategic agility on the non-financial performance of telecommunication firms in Nigeria. More specifically, it was to:

- Determine the strategic agility dimensions mostly adopted in the Nigerian telecommunication industry;
- Assess the extent to which telecommunication firms in Nigeria utilise strategic agility dimensions and
- Evaluate the effects of strategic agility dimensions on the non-financial performance of telecom firms in Nigeria.

1.3. Study Assumption

The research was based solely on the premise that: *Strategic agility has no direct effect on the non-financial performance of telecom firms in Nigeria.*

1.4. Conceptual Framework for the Study

This research was anchored on studies by Vivekin (2013) and Oyedijo's (2012) on strategic agility. The Vivekin group characterised *people, process, technology and principles* as the four dimensions that enable strategic agility in an organisation. Oyedijo also identified strategic agility dimensions as *organisation, people, technology and planning*. However, only two variables (*people and technology*) from Oyedijo's study, which are also contained in Vivekin's research, are adopted as strategic agility dimensions with the addition of the other two dimensions recognised by the Vivekin group: *process and principle*.

Oyedijo (2012) also used financial and non-financial constructs to measure the competitive performance of telecommunication firms in Nigeria. Non-financial measures, such as *public image (public perception of the organisation), employee morale, environmental adaptation, new ideas (innovation), and social impact on society*, were also adapted from Oyedijo's research for this study. Figure 1 depicts the assumed relationship between Strategic Agility and Non-Financial Performance of organisations.

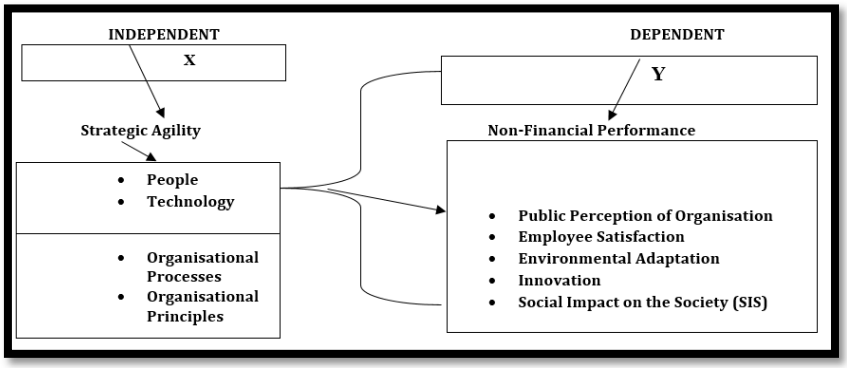

Figure 1: Relationships between Strategic Agility and Non-Financial Performance
Source: Researcher's Compilation Based on Vivekin (2013), Oyedijo (2012), Nassimbeni (2003) and Chen (2004)

2. Research Methods

The section describes the method and procedures that would be used to carry out this study. It also discussed the research design, study population, and data-gathering techniques; the discussion also centered on data analysis and measurement techniques. The population for this study is made up of low, middle and top-level employees of the mobile telecommunication firms operating in Nigeria. Olagbegi (2015) reckoned that the total population of the employees domiciled at the head offices of the aforementioned telecom firms is 1320. Table 1 shows the distribution of employees across the four telecommunication firms. A sample size of 310 was drawn adequately from the population using the Taro Yamane formula. Unfortunately, only 200 (about 64.5%) were returned in analysable form. Questionnaires were administered randomly to the employees of the firms under study. Table 2 explains some of the ways the two variables were operationalised by breaking them down into measurable questionnaire items. The study collected relevant information through a survey questionnaire that was adapted from Oyedijo (2012) and Yusuf & Adeleye (2002), which was later analysed quantitatively using descriptive and inferential statistics. The *people, processes, principles, and technology* constructs used to measure strategic agility were grounded in Vivekin (2013), but some of them were also adapted from Oyedijo (2012) and Yusuf & Adeleye (2002).

Telecom Firms	No. of Employees
Mtn	412
Glo	355
Airtel	297
Etisalat	256
Total	1320

Table 1: Distribution of Employees of the Four Telecommunication Firms Studied
Source: Olagbegi (2015)

Variable(s)	Measurement Constructs	Sources
Independent Variable: Strategic agility	• People • Process • Technology • Principles	Yusuf and Adeleye (2002), Oyedijo (2012), Khandwalla (1995), Vivekin (2013), Latvytė (2013), and Rosenbach (2013).
Dependent Variable: Non-financial Performance	• public perception of the organisation • employee satisfaction • environmental adaptation and flexibility • innovations • social impact on the society • market share	Powell (1992); Oyedijo(2012)

Table 2: Operationalisation of Independent and Dependent Variables
Source: Generated by Researcher from Extant Literature (2023)

3. Findings and Discussions

This section presents and discusses the outcome of the field data analysis. First, it presents table 3, which shows the reliability of the instrument used; the value of Cronbach's alpha ***0.75*** indicated a high level of internal consistency of the instrument. Compared to the standard acceptable alpha coefficient level of ***.7*** minimum, the model has met the threshold for being used to conduct further analysis because it has been shown to have high internal consistency. *Cronbach's Alpha coefficient* measures the internal consistency of the scale instrument (Tavakol & Dennick, 2011). Generally, acceptable alpha scores range from .70 to .95 (Tavakol & Dennick, 2011; Helms et al., 2006; George & Mallery, 2003; Gliem & Gliem, 2003).

Number of Items	Cronbach's Alpha
20	0.75

Table 3: Reliability Statistics
Source: SPSS v22 Output

3.1. Strategic Agility Dimensions Mostly Adopted in the Nigerian Telecom Industry

To determine the strategic agility dimensions that are mainly embraced in the sector, the following question was asked in the questionnaire: "Which of the following factors do your organisation rely on to respond to changes in the business environment?" and respondents were given the option of picking more than one factor. Results showed that Nigerian telecommunication firms adopted all the four dimensions of strategic agility that were identified in this study. Each respondent ticked at least one of the dimensions while answering this question. About 67% (121) of the total respondents (181) confirmed that their organisations rely on People to cope with several changes that characterise the business environment. This fraction of respondents cut across all the four mobile telecommunication firms. 100 employees out of the total respondents, representing more than 55%, also claimed that telecommunication firms equally adopt technology to cope with uncertainties in the business environment, while 53% of the employees that took part in the survey confirmed that their organisations depend on organisational processes. In the same vein, 95 respondents, representing close to 53%, agreed that their firms adopt organisational principles to cope with market uncertainties.

Among these four dimensions, the Human resource (People) dimension has the highest rate of adoption, followed by technology. Organisational processes and principles both have similar rates of adoption. There were multiple responses as respondents picked more than one dimension as the adopted dimension of strategic agility. From the aforementioned, the strategic agility dimension that is mostly adopted in the Nigerian mobile telecommunication industry is the human

resource (people) dimension. This is appropriate as human resources serve as the resources that coordinate all other resources in the organisation. Technology would be operated by the people in the organization; also, organisational processes and principles are put in place by the people and for the people.

Respondents were further asked to pick only one dimension, which is the most adopted among these four strategic agility dimensions in the telecommunication sector. In table 4, just over 50% of the respondents picked people as the dimension that is mostly used among all the dimensions they adopt in their organisations. More than 25% of the total respondents also chose the technology dimension to be the most adopted element of strategic agility. In the same order, 13% of the employees who participated in the field survey claimed that organisational processes are the dimension that is mostly in use. About 11% implied the same about organisational principles.

This analysis reiterated that human capital (people) is the most adopted dimension out of all measures of strategic agility in the Nigerian telecommunication sector.

Factors	Responses	Percent of Cases
People	91	50.3%
Technology	46	25.4%
Organisational processes	24	13.3%
Organisational principles	20	11.0%

Table 4: The Most Adopted Among the Dimensions of Strategic Agility
Source: SPSS v22 Output

As shown in table 5, the analysis delved further to ascertain the strategic agility dimensions that are mostly used in various departments of the four telecommunication firms. About 5% of the respondents are from the administration department, and the majority claimed that people and technology are the dimensions that are mostly used in their organisation. By implication, technology and people are the dimensions most adopted by the administration department. Many respondents from the operations department also picked technology ahead of other strategic agility dimensions. In the sales and marketing department, more than 50% of the respondents considered people to be the most adopted dimension, followed by technology.

Half of the respondents from the technical unit indicated that technology is the most adopted dimension in the organisation. In the same vein, more than half of the respondents from the information system department reported that technology is the most adopted dimension of strategic agility in their organisation. These results are expected as both departments are largely in charge of machinery, equipment and other technical skills in the organisation. In the human resource department, the larger half of the respondents there confirmed that the people dimension is the most adopted dimension of strategic agility in their organisation, and this was followed by technology. Also, in the customer service department, many respondents considered people to be the most used dimension in their organisations. Across all the departments in the sampled organisations, the *people* dimension was considered to be the most adopted dimension of strategic agility. This was followed by technology, principle and process.

		Adopted Dimensions of Strategic Agility				
Department		**People**	**|Technology**	**Process**	**Principle**	**Total**
Administration	Count	3	3	1	2	8
	% of Total	1.7%	1.7%	0.4%	0.8%	4.6%
Sales & Marketing	Count	12	6	3	2	23
	% of Total	6.6%	3.3%	1.7%	1.1%	12.7%
Technical	Count	2	3	0	1	6
	% of Total	1.1%	1.7%	0.0%	0.6%	3.3%
Information System	Count	3	8	1	2	14
	% of Total	1.7%	4.4%	0.6%	1.1%	7.7%
Customer Service	Count	29	15	10	13	67
	% of Total	16.0%	8.3%	5.5%	7.2%	37.0%
Human Resources	Count	5	5	3	2	15
	% of Total	2.8%	2.8%	1.7%	1.1%	8.3%
Finance	Count	11	9	2	11	33
	% of Total	6.1%	5.0%	1.1%	6.1%	18.2%
Operations	Count	3	5	2	3	13
	% of Total	1.7%	2.8%	1.1%	1.7%	7.2%
Others	Count	2	0	2	0	4
	% of Total	1.1%	0.0%	1.1%	0.0%	2.2%
Total	Count	67	54	24	36	181
	% of Total	37.0%	29.8%	13.3%	19.9%	100.00%

Table 5: The Most Adopted Strategic Agility Dimensions within Each Department of the Organisations
Source: SPSS V22 Output

Table 6 shows the adopted strategic agility dimensions among the managerial cadres in the telecommunication firms. Among the junior and middle-level employees, more than 30% of the respondents considered people as the most adopted dimension of strategic agility. Almost 22% in the low and middle cadre who answered the question showed that technology is the dimension that is mostly in use within their ranks; about 15% of respondents in this bracket stated that organisational principle is the most adopted dimension during uncertainties, and less than 12% of the junior and middle-level staff picked organisational process as the dimension that is mostly in use among them. The larger half of respondents under this category attested that the people dimension remains the most adopted of the four dimensions of strategic agility. This dimension of people is followed by technology, principle, and process.

For the top-level management staff, technology appears to be the most adopted dimension of strategic agility in the telecommunication industry. 8% of the top-level managers who participated in this survey claimed that technology is the most adopted element of strategic agility, and more than 7% also said the same about the people dimension. Close to 5% and less than 1% of the respondents in this cadre selected principle and process as the dimensions that are mostly in use among the top management staff of telecom firms. This implies that top management staff interact more with technology to communicate and connect with various units of the organisation, and they also recognise the role of human capital in the organisation.

		Level of Employee in the Organization		**Total**
		Low and Middle Level	**Top Level**	
People	Count	55	13	68
	% of Total	30.4%	7.1%	37.6%
Technology	Count	40	14	54
	% of Total	21.8%	8.0%	29.8%
Organisational processes	Count	21	2	23
	% of Total	11.8%	0.8%	12.6%
Organisational principles	Count	27	8	36
	% of Total	15.5%	4.6%	19.9%
Total	Count	143	38	181
	% of Total	79.4%	20.6%	100.0%
Percentages and totals are based on responses.				

Table 6: The Most Adopted Dimension and Managerial Cadre in the Firms
Source: SPSS v22 Output

Table 7 shows the dimensions that are most adopted by individual firms in the industry. More than 30% of the respondents in MTN posited that people are the most adopted dimension of strategic agility in their organisation. For Glo, 9 out of the 11 employees who populated the questionnaire claimed that people are the most adopted dimension. Close to 65% of the respondents (48) from Etisalat also attested that people are the most adopted dimension, while about half of the employees from Airtel also stated that people are the most adopted dimension of strategic agility in their firm. The analysis also reflects that MTN embraces all other dimensions of strategic agility in its organisation. Amongst the respondents who picked process as the most adopted dimension in their organisations, MTN employees (18) accounted for 75% of this fraction (24). Similarly, 75% of the population that confirmed that the principle is the most adopted dimension of strategic agility was from MTN. Etisalat has the highest adoption of technology among mobile telecommunication firms.

Most Adopted Dimensions among the Firms							
			People	Technology	Process	Principles	Total
Firms	MTN	Count	22	15	18	15	70
		% of Total	12.20%	8.30%	9.90%	8.30%	38.70%
	Glo	Count	9	0	2	0	11
		% of Total	5.00%	0.00%	1.10%	0.00%	6.10%
	Etisalat	Count	48	23	1	3	75
		% of Total	26.50%	12.70%	0.60%	1.70%	41.40%
	Airtel	Count	12	8	3	2	25
		% of Total	6.60%	4.40%	1.70%	1.10%	13.80%
Total		Count	91	46	24	20	181
		% of Total	50.30%	25.40%	13.30%	11.00%	100.00%

Table 7: Analysis Showing the Most Adopted Dimension of Strategic Agility in Each Firm
Source: Source: SPSS v22 Output

3.2. The Extent to Which Telecommunication Firms in Nigeria Utilise Strategic Agility Dimensions

As revealed in table 8, the majority (50.8%) of the respondents posit that the extent of utilisation of human resource dimension of strategic agility is very high, while about 40% of the telecommunication staff that filled the

questionnaire agreed that human resource dimension is utilised at a high extent. Less than 4% are not sure about the extent of utilisation of people in the organisation to deal with market uncertainties. Close to 2% reported that the use of this dimension is low, and less than 1% of the respondents claimed that the people dimension is used at a very low degree. Nearly 50% of the respondents assert that the extent of utilisation of technology to adjust to changes in the business environment is high; about 46% of the employees implied that their organisations make use of technology at a very high level. More than 2% reported that the use of technology during turbulent market situations is low, and less than 1% was uncertain about the extent to which their organisations make use of technology. In the same vein, less than 1% of those who answered the questions believed that the utilisation level of technology is very low.

In favour of organisational principle, 32 % of the respondents indicated that the dimension has a very high extent of utilisation in their organisation; about 55% also claimed that the degree of use is high. Close to 4% of the respondents were not sure of the extent of application in their firms; more than 8% of the employees that took part in the survey claimed the extent of utilisation of organisational principles in their workplace is low, and about 1% say it is very low. A large number of respondents (55.8%) stated that the degree of utilisation of organisational process as an element of strategic agility is high; almost 30% say the extent of application is very high. More than 4% of all the respondents indicated that they were not sure of the extent to which this dimension is applied in their organisations. About 8% reported that the extent of utilisation is low, while close to 2% of respondents reported a very low degree of utilisation of this strategic agility dimension.

As shown in table 8, the extent to which telecommunication firms in Nigeria make use of these strategic agility dimensions are similar. In coherence with the level of adoption, people and technology were the most utilised in the industry, and the extent of use of the two dimensions is almost at the same level (x = 3.4±0.7). Organisational processes (x = 3.0±0.9) and organisational principles (x= 3.1±0.9) were less utilised by these mobile telecommunication firms. More than half of the respondents claimed that the extent of use of human resources during turbulence is very high; about 46% also say the same for technology. Approximately 30% of respondents agree that organisational processes and principles are utilised to a very high extent to deal with changes that occur in the market. The analyses so far implied that people and technology are still the most adopted and most utilised strategic agility dimensions in the Nigerian telecommunication industry to deal with several uncertainties that trail the business environment. Considering the degree of variability of the instruments, technology (SD= 0.7) can be said to be the most utilised dimension of strategic agility in the sector.

The Extent of Utilization of Strategic Options in the Firm	Very High	High	Unsure	Low	Very Low	X	SD
People	92(50.8)	78(43.1)	7(3.9)	3(1.7)	1(0.6)	3.4	0.9
Technology	83(45.9)	90(49.7)	3(1.7)	4(2.2)	1(0.6)	3.4	0.7
Organisational process	54(29.8)	101(55.8)	8(4.4)	15(8.3)	3(1.7)	3.0	0.9
Organisational principles	58(32.0)	99(54.7)	7(3.9)	15(8.3)	2(1.1)	3.1	0.9

Table 8: The Extent to Which Telecommunication Firms in Nigeria Utilise Strategic Agility Dimensions
Source: SPSS v22 Output

3.3. The Effects of Strategic Agility Dimensions on the Overall Performance of Telecom Firms in Nigeria

From table 9, the preponderance of the respondents (90.6%) described the effects of strategic agility dimensions on the overall performance of the organisation as being positive. However, when viewed serially, technology (91.2%) and human resources (89.5%) are considered to have the greatest upshots on organisational performance among the four strategic agility dimensions. Organisational principles (89%) and organisational processes (88.4%) also have strong influences on firms' performance in the sector. Reflecting on the analysis in table 8, one could deduce that the effect of strategic agility dimensions on the overall performance of telecommunication firms in Nigeria is highly positive.

Technology is discovered to be the dimension that influences both individual and overall organisational performance the most. Scheepers (2009) also identified technology (Information Technology) as a key enabler of strategic agility for organisational performance. Organisational processes are seen to be the second most important factor in personal performance, while human resources (people) are the second most important factor in organisational performance.

Effect of Strategic Agility Dimensions On the Overall Performance of Your Organization	Yes	No
Technology	165(91.2)	16(8.8)
Human Resource Development	162(89.5)	19(10.5)
Organisational principles	161(89.0)	20(11.0)
Organisational process	160(88.4)	21(11.6)

Table 9: Effect of Strategic Agility Dimensions on Overall Performance of Organisation
Source: Source: SPSS v22 Output

3.4. The Effect of Strategic Agility Dimensions on the Non-Financial Performance of Telecom Firms in Nigeria

To measure the third objective of this study, which is the effects of strategic agility on non-financial performance, several statements that linked the dependent variable with the independent variable were presented in a table on a scale of 5 points, which ranged from 'Strongly Disagree' to 'Strongly Agree'. About 39% of the respondents strongly agreed, almost 50% agreed, close to 2% of the respondents were neutral, less than 4% of the participants disagreed, and almost 7% strongly disagreed that 'employees in the organisation put commensurate efforts towards achieving organisational goals and objectives.' This implies that the majority of the employees in these organisations are reward-driven; the effort they put into work is proportionate to the reward they expect to get for their services.

More than 40% of the respondents strongly agreed, about 49% agreed, close to 2% were undecided, nearly 3% disagreed, and approximately 6% strongly disagreed that training and development of people have a positive impact on employees' attitude to work. This indicates that training and development of manpower have a strong impact on their disposition to work. More than 36% strongly agreed, over 50% of the respondents agreed, close to 2% felt indifferent, over 3% disagreed, and 5% strongly disagreed that improved technology positively impacted the sampled organisations. This suggests that telecommunication firms are required to focus on improving their technology to achieve their goals.

Over 57% of the respondents agreed, close to 32% strongly agreed, less than 3% of the respondents were neutral, and about 2% and 6% of the respondents disagreed and strongly disagreed with the statement that investment in innovation programmes has led to the development of new ideas in the organization. This shows that investment in technology and innovation programmes is very effective for organisational performance. 32% strongly agreed, about 56% agreed, less than 3% were indifferent, more than 4% disagreed, and about 6% strongly disagreed that improvement in technology would enhance innovation in the organisations.

Almost 32% strongly agreed, a little above 53% agreed, about 6% were indifferent, while approximately 4% disagreed, and 5% strongly disagreed that regular review of policies helps organisations provide the services customers want and need. This result implies that regular review of organisational policies has a relatively high effect on the non-financial performance of telecommunication firms. Almost 30% of the respondents strongly agreed, more than 56% agreed, close to 6% were neutral, almost 4% disagreed, and 5% strongly disagreed that business units have the ability to rapidly handle clients' needs compared with our competitors. The effect of this on firms' performance is relatively high as well. Out of the total respondents, more than 25% strongly agreed, about 56% agreed, almost 8% were undecided, 5% disagreed, and close to 6% of the respondents strongly disagreed that better organisational process has helped project the public image of organisations in a positive light. The effect of organisational processes on the public image of telecommunication firms is positive but relatively above average.

High level of agreement about the principles that should guide the behaviour in conducting our business unit's operations: the result shows that the effect of this on organisation is positive but normal. More than 25% of the respondents strongly agreed, almost 55% agreed, less than 7% were undecided, about 4% disagreed, and close to 9% strongly disagreed with the statement that flexible organisational principles and policies have improved the environmental adaptation of our generation. This implies that organisations need to be flexible in adapting to changes in the business environment, but it will have an average effect on their performance. About 22% of the respondents strongly agreed, more than 50% agreed, almost 15% were undecided, less than 5% disagreed, and approximately 8% strongly disagreed that they are satisfied with the human capital development programmers of their organisations.

In general, table 10 shows a detailed descriptive analysis of the effect of strategic agility dimensions on the non-financial performance of the organisation. It revealed that top on the list of effects were observed in the areas of training and development ($x = 3.2$), improved technology ($x = 3.2$) and employees putting in commensurate efforts to achieve organisational objectives ($x = 3.2$). Other areas of significant effects include investment in technology and innovation programmes ($x = 3.1$), improved technology making our organisation more innovative ($x = 3.1$), and regular review of the company's policies to help provide the service needed by customers ($x = 3.0$). However, scoring relatively low impacts the business's ability to provide a broad services mix within the same facilities compared with competitors' and organisational processes' impact on the public image of the organisation ($x = 2.9$), while employees' satisfaction with human resources development programmes has the least effect ($x = 2.6$) on a scale of 5 points.

The overall implication is that strategic agility dimensions have positive effects on the non-financial performance of firms in the industry. While some have strong effects on non-financial performance, others have a low effect on the dependent variable.

Effect of Strategic Agility Dimensions on the Overall Performance of the Organization	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	X	SD
Employees in my organisation put commensurate efforts to achieve organisational objectives	12(6.6)	6(3.3)	3(1.7)	90(49.7)	70(38.7)	3.2	0.9
Training and development of people have a positive impact on employees' attitudes to work	10(5.5)	5(2.8)	3(1.7)	89(49.2)	74(40.9)	3.2	0.9
Improved technology positively impacts my organization	9(5.0)	6(3.3)	3(1.7)	97(53.6)	66(36.5)	3.2	0.8
Investment in technology and innovation programmes has led to the development of new ideas in the organization	11(6.1)	4(2.2)	5(2.8)	104(57.5)	57(31.5)	3.1	0.9
Improved technology makes our organisation more innovative	10(5.5)	8(4.4)	4(2.2)	101(55.8)	58(32.0)	3.1	0.9
We need to regularly review our policies to help us provide the service our customers want and need	9(5.0)	7(3.9)	11(6.1)	97(53.6)	57(31.5)	3.0	1.1
Our business unit has the ability to rapidly handle clients need compared with our competitors	9(5.0)	7(3.9)	10(5.5)	102(56.4)	53(29.3)	3.0	1.0
Our business unit has the ability to provide a broad service mix within the same facilities compared with our competitors	12(6.7)	7(3.9)	14(7.7)	102(56.4)	46(25.4)	2.9	1.3
Better organisational process has helped to protect the public image of our organisation in a positive light	10(5.5)	9(5.0)	14(7.7)	102(56.4)	46(25.4)	2.9	1.1
We have a high level of agreement about the principles that should guide our behavior in conducting our business unit's operations	8(4.4)	8(4.4)	18(9.9)	106(58.6)	41(22.7)	2.8	1.1
Flexible organisational principles and policies have improved the environmental adaptation of our generation	16(8.8)	8(4.4)	12(6.6)	99(54.7)	46(25.4)	2.8	1.1
Our employees appear satisfied with Human Resources Development Programmes	14(7.7)	8(4.4)	27(14.9)	93(51.4)	39(21.5)	2.6	1.3

Table 10: The Effect of Strategic Agility Dimensions on the Overall Performance of the Organisation
Source: Source: SPSS v22 Output

Table 11 revealed a significant association between all the dimensions of strategic agility and non-financial performance of the firms in the telecommunication industry. This was determined by rating the effect of an independent variable on the dependent variable as either negative or positive. Technology $X^2 = 43.758$, $p<0.05$), organisational principles ($X^2 = 31.013$, $p<0.05$), organisational processes ($X^2 = 17.135$, $p<0.05$), and people ($X^2 =15.302$, $p<0.05$) in descending order are all found to be statistically significant to the dependent variable. Overall, this study showed that strategic agility dimensions had a significant association with non-financial performance. However, technology and organisational principles had more association based on the P-value.

	Non-Financial Performance			
Strategic Agility Dimensions	Negative	Positive	X^2	P-value
People	17(9.4%)	164(90.6%)	15.302	.004
Technology	17(9.4%)	164(90.6%)	43.758	.000
Organisational processes	17(9.4%)	164(90.6%)	17.135	.002
Organisational principles	17(9.4%)	164(90.6%)	31.013	.000

Table 11: Chi-square($X^{2)}$ Showing Association between Strategic Agility and Non-Financial Performance of Telecom Firms in Nigeria
Source: Source: SPSS v22 Output

3.5. Hypothesis Testing

The study's initial assumption is that *Strategic agility has no direct effect on the non-financial performance of telecom firms in Nigeria.*

Table 12 indicates a significant relationship between strategic agility and non-financial performance of telecom firms *(F = 7.450, p < 0.05).* This result is in line with the empirical findings of Fartash & Davoudi (2012) and Oyedijo (2012) on strategic agility and organisational performance. The regression model appears fit for purpose because the regression equation fits the data; table 12 indicates that the regression model predicts the dependent variable significantly well. In this case, *F = 7.450, p < 0.05* level of significance suggested that, overall, the regression model statistically significantly predicted the outcome variable (non-financial performance of telecom firms); hence, it is a good fit for the data. However, when the effects of each dimension were disaggregated, the analysis revealed that ***Technology was the only Strategic Agility dimension*** *(t = 3.485, p < 0.05)* that significantly influenced the non-financial performance of telecom firms in Nigeria; the other dimensions, namely people, organisational principle, and organisational were all insignificant since they did not satisfy the 95% level of significance threshold.

Factors		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	0.394	0.110		3.589	0.000
	People	0.020	0.027	0.059	0.728	0.468
	Technology	0.120	0.034	0.294	3.485	**0.001**
	Organisational Process	-0.047	0.030	-0.147	-1.533	0.127
	Organisational Principle	0.059	0.033	0.179	1.807	0.052

Table 12: The Effect of Strategic Agility on Non-Financial Performance of Telecom Firms in Nigeria
R^2 = 0.15, F = 7.450, P = .000
Source: SPSS V22 Output

4. Conclusion

Based on the result of this research, it can be concluded that strategic agility has a positive effect on the non-financial performance of telecommunication firms in Nigeria while also influencing the overall performance of the companies. Results also show that among the four dimensions of strategic agility, the people dimension is the most adopted in the Nigerian telecommunication industry. This is followed by technology, process, and principle. Furthermore, it can be deduced that technology and people have a very high extent of utilization among telecommunication firms in Nigeria during uncertainties, compared to organisational principles and processes. However, within the regression model, when the predictor variables were all combined, the overall significance was positive with regard to their influence on the non-financial performance of the firms, but only technology was significant in all four dimensions.

5. Implications for Practice and Research

The outcome of this research has lent credence to the positive impact of strategic agility on organisational performance. With a focus on non-financial factors, which are considered to be the most reliable measure of organisational performance in uncertain periods, this study provides empirical insights into how firms cope in the business environment. Also, this research has helped to identify the most adopted dimensions of strategic agility in the telecommunication sector. According to Vivekin (2013), people and principles are linked to organisational culture and are said to have a superior impact on long-term performance, while processes and technology, on the other hand, have more impact on short-term performance. This study has helped to identify technology and organisational principles that have a greater impact on non-financial performance.

6. Limitations to the Study

Out of the 310 copies of the questionnaire, less than 200 (about 64.5%) were completed and returned. The outcomes of this research were limited to the data retrieved. A lot of challenges were encountered in the process of administering the questionnaire. These include the unwillingness of respondents to accept and populate the questionnaire, some offices declined by refusing to accept the questionnaire, a sizeable number of the questionnaires were wrongly filled, and there were delays in the retrieval of the questionnaire. Also, in the process of data analysis, multiple responses were discovered, which affected the measurement of the first objective of this study. These are areas that can be strengthened in future studies.

7. Suggestion for Relevant Future Studies

This research focused on the effects of strategic agility on non-financial performance in the telecommunication sector, but similar studies are recommended in the manufacturing and other service sectors. Studies in other industries will help to ascertain the strategic agility dimensions peculiar to respective industries with respect to their level of adoption and extent of use.

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