

DIGITAL TRANSFORMATION STRATEGIES AND ORGANISATIONAL RESILIENCE OF SMALL/MEDIUM ENTERPRISES IN PORT HARCOURT, RIVERS STATE.

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ABSTRACT

The study examined the relationship between digital transformation strategies and organisational resilience of SMEs in Port Harcourt, Rivers State. The study adopted the correlational research design, taking cognizance of the cross-sectional survey. The population of the study comprised of 1200 leaders of registered SMEs in Port Harcourt. However, 30 leaders were chosen through a census, from which 4 leaders were chosen from each SME, based on the focus of the study. Data was analyzed and results presented in tables showing the mean and standard deviation. The hypotheses were tested using the Spearman Rank Order Correlation Coefficient. The findings revealed a positive and significant relationship between digital transformation strategies and organisational resilience using the Pearson Product Moment Correlation tool at a 95% confidence interval. The study concluded that Digital Transformation Strategies: Strategic Leadership, Team structure, and Cultural Change/Communication significantly enhances organisational resilience of SMEs. It was therefore recommended that the leadership of SMEs should adopt the tested attributes of digital transformation strategies in the study so as to drive organisational resilience of SMEs in Port Harcourt, Rivers State.

Keywords: Digital Transformation Strategies, Strategic Leadership, Team Structure, Cultural Change/Communication, Adaptability, Situational Awareness

INTRODUCTION

Digital transformation has become a critical factor in enhancing the organizational resilience of small and medium enterprises (SMEs), especially in rapidly evolving business environments. SMEs in Port Harcourt, a major economic hub in Nigeria, face numerous challenges, including infrastructural deficits, market volatility, and the impacts of global disruptions like the COVID-19 pandemic. These challenges necessitate the adoption of digital transformation strategies to ensure survival, growth, and competitiveness. Digital transformation refers to the integration of digital technologies into all areas of an organization, fundamentally changing how businesses operate and deliver value to customers (Vial, 2019). It encompasses adopting tools such as cloud computing, data analytics, artificial intelligence, and e-commerce platforms to streamline processes and enhance decision-making (Bharadwaj, Sawy, Pavlou, & Venkatraman, 2013). For SMEs, digital transformation can provide cost-effective solutions for improving operational efficiency, expanding market reach, and fostering innovation (Ravichandran, 2018).

Organizational resilience, on the other hand, is defined as an organization's ability to anticipate, adapt, and respond to adverse conditions while maintaining core functions and long-term sustainability (Duchek, 2020). In the context of SMEs in Port Harcourt, resilience is crucial given the region's exposure to economic fluctuations, environmental challenges, and social unrest. Digital transformation strategies, such as leveraging online platforms for marketing and remote work solutions, have proven to strengthen resilience by enabling SMEs

to adapt quickly to disruptions (Linnenluecke, 2017). The SMEs in Port Harcourt, like many others in developing economies, face unique barriers to digital transformation, including limited access to technological infrastructure, skills gaps, and financial constraints (Adebayo & Oyewole, 2021). Despite these challenges, the adoption of digital tools has shown significant potential to enhance organizational resilience by fostering agility, improving supply chain management, and ensuring business continuity during crises (Agwu & Murray, 2015). This study seeks to explore the relationship between digital transformation strategies and the organizational resilience of SMEs in Port Harcourt. By examining this relationship, it aims to provide insights into how SMEs can leverage digital tools to thrive in the face of adversity and contribute to sustainable economic growth in the region.

Study Variables

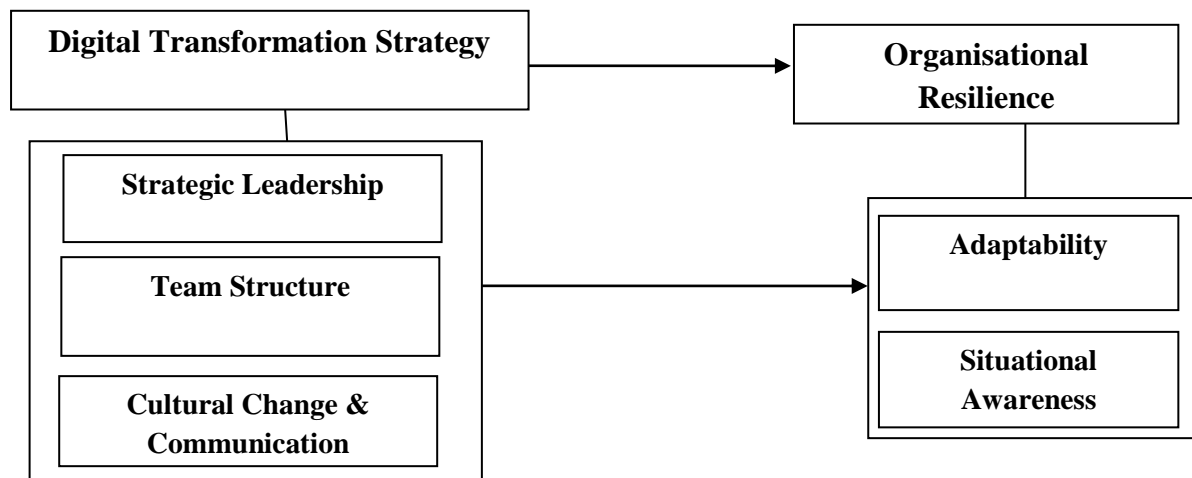


Fig. 1. Researchers Conceptualisation of Digital Transformation Strategies and Organisational Resilience, 2023

In order to achieve the study objectives, the following hypothetical statements guided the study:

- H01:** There is no significant relationship between strategic leadership and adaptability of small/medium enterprises in Port Harcourt, Rivers State.
- H02:** There is no significant relationship between strategic leadership and situational awareness of small/medium enterprises in Port Harcourt, Rivers State.
- H03:** There is no significant relationship between team structure and strategic leadership of small/medium enterprises in Port Harcourt, in Rivers State.
- H04:** There is no significant relationship between team structure and situational awareness of small/medium enterprises in Port Harcourt, Rivers State.
- H05:** There is no significant relationship between cultural change/communication and adaptability of small/medium enterprises in Port Harcourt, Rivers State.
- H06:** There is no significant relationship between cultural change/communication and situational awareness of small/medium enterprises in Port Harcourt, Rivers State.

THEORETICAL FRAMEWORK

The Dynamic Capability Theory postulates the firm's ability to adapt in dynamic market conditions as the critical source of superior performance (Liu et al. 2012). Dynamic capability affirmed the firm's ability to recognize, integrate, develop, envisage, and

reconfigure internal and external capabilities to deal with environmental dynamics. Dynamic capability theory is considered as a source of competitive advantage. It goes beyond the idea that sustainable competitive advantage is based on a firm's acquisition of valuable, rare, inimitable and non-substitutable resources. Dynamic capabilities are responsible for enabling firms to integrate, marshal, and reconfigure their resources and capabilities to adapt to rapidly changing environments. Thus, dynamic capabilities are the strategies that enable firms to reconfigure its strategy and resources to achieve sustainable competitive advantages and superior performance in a rapidly changing business environment.

CONCEPT OF DIGITAL TRANSFORMATION STRATEGY

The exploitation and integration of digital technologies often affect large parts of companies and even go beyond their borders, by impacting products, business processes, sales channels, and supply chains. Potential benefits of digitization are manifold and include increases in sales or productivity, innovations in value creation, as well as novel forms of interaction with customers, among others. As a result, entire business models can be reshaped or replaced (Downes and Nunes 2013). Owing to this wide scope and the far-reaching consequences, digital transformation strategies seek to coordinate and prioritize the many independent threads of digital transformation. To account for their company-spanning characteristics, digital transformation strategies cut across other business strategies and should be aligned with them for overall efficiency and effectiveness.

Strategic Leadership

Strategic leadership is not a new categorization or type of leadership such as transformational leadership or learning-centred leadership. Rather it is best considered as the strategic element within the broader leadership paradigm. Initially, a definition of strategy can make use of five concepts. First, it is concerned with the idea of direction-setting. To decide on the direction for the institution, it is necessary to understand its history and its current situation. This is articulated by Garratt (2003) who gives an excellent definition of strategic thinking: Strategic Thinking is the process by which an organisation's direction givers can rise above the daily managerial processes and crises to gain different perspectives of the internal and external dynamics causing change in their environment and thereby giving more effective direction to their organisation. Such perspectives should be both future-oriented and historically understood. Strategic thinkers must have the skills of looking both forwards and backwards while knowing where their organisation is now, so that wise risks can be taken by the direction-givers to achieve their organisations purpose, or political will, while avoiding having to repeat the mistakes of the past.

Second, strategy, while very often associated with planning in traditional definitions (Fidler, 1996) might better be thought of as a perspective, as a holistic way of looking at things. Third, strategy does not get involved in the detailed day-to-day activities but is concerned with the broad major dimensions of the organisation. Fourth, a medium to longer-term time framework is useful when considering strategy. A final useful concept is that strategy can be used as a template against which to set shorter-term planning and activities.

Team Structure

Minterzberg (1972) stated that organisational structure is the framework of the relations on jobs, systems, operating process, people and groups making efforts to achieve the goals. Organisational structure is a set of methods dividing the task to determined duties and coordinates them. Hold and Antony (1991) stresses that structure is not a coordination

mechanism and it affects all organisational process. Organisational structure refers to the models of internal relations of organisation, power and relations and reporting, formal communication channels, responsibility and decision making delegation is clarified. Amold and Feldman (1986) Helping the information flow is one of the facilities provided by structure for the organisation (Monavarian, Asgari, & Ashena, 2007). Organisational structure should facilitate decision making, proper reaction to environment and conflict resolution between the units. The relationship between main principles of organization and coordination between its activities and internal organisational relations in terms of reporting and getting report are duties of organisation structure (Daft, Translated by Parsayian and Arabi, 1998). Conceptualization of organisational structure is the manifestation of systematic thinking.

Organisation consists of elements, relations between elements and structure of relations as a generality composing a unit. Structure is high combination of the relations between organizational elements forming existence philosophy of organisational activity. Systematic view of organization to structure shows that structure is composed of hard elements on one side and soft elements on the other side. At the end of hard dimension, there are tangible elements as groups and hierarchy organisational units. The relations between these units and groups show soft element in organization structure. At the end of soft continuum dimension, judgment of organisation people to structure can be observed. The review of literature views structural relations from various aspects. According to the study of Schine (1971, 1988) regarding the identification of three dimensions: Hierarchy, functional and inclusion, it is a unique study. Three dimensions of his study are as followings:

- Hierarchy dimension: It shows relative ranks of organisational units by similar method of organizational chart.
- Functional dimension: It shows different works performed in organisation.
- Inclusion dimension: The close or far distance of each person in organisation to central core of organisation.

The proper combination of mentioned dimensions shows formal structure as manifested in organisational chart. The reality is that there are many organisational forms and they cannot be easily explained by organisational chart (Foruhi, 2004).

Cultural Change & Communication

The requirements for organisations to achieve adaptation to changes underlie the paths that lead to innovations in various fields, in particular organisational and social field (Davies, et al., 2000). Organisational development partner seems to be the key to those enterprises may face internal and external requirements. To achieve and improve business performance is necessary to understand its elements that business performance is realistic, sustainable and able to provide continuous improvement. One alternative is to provide corrective actions aligned to organisational change as an enabler to support business outcomes (Jensen et al., 2012). Cultural change is necessary for organisations to survive and prosper. In fact, most of the organisations are responsible for the change continuously (Burke, 2002). Cultural change is an initiative undertaken by businesses seeking to tailor its operations in accordance with the market demand. To accomplish this process of organisational improvement, cultural change and communication depends on many factors to get the expected result, among these, systematic support for the development of the initiative, involvement and communication of key stakeholders and the management of critical success factors (Capelli, 2009).

CONCEPT OF ORGANISATIONAL RESILIENCE

Organisational Resilience (OR) is one of such branches that address how organisations can combat the uninvited environmental uncertainties. Along with the inaugural work of Weick (1993), OR, which thrived in the face of the accelerated presence of disasters in the world of business, gained greater attention from both scholars and professionals (Vogus & Sutcliffe, 2008; Hillmann & Guenther, 2020). For instance, the pandemic situation that arose due to the new COVID 19 virus compelled businesses to reassess how resilient they are as businesses. Hillmann and Guenther (2020) pointed the threat towards the significance of the concept for practice and research due to deficiencies associated with the definition and the measurement. On the other hand, OR has become the centre of organisational dialogues with the increased business uncertainties. Likewise, many leading practitioner journals often stage the insights of resilient organisations (Linnenluecke, 2015; DesJardine, Bansal, & Yang, 2017; Hillmann & Guenther, 2020). Despite the immense presence of the term in the empirical inventory, issues of conceptualization are still prevailed (Hillmann & Guenther, 2020).

Adaptability

Adaptability is the ability of an organisation to recognize the need to change and seize opportunities in dynamic environments. In an increasingly complex world, leadership must pay close attention to dynamic, distributed, and contextual aspects in order to position their organisations for adaptability. The theory of dynamic capabilities constitutes a central concept for the requirements that enable organisational adaptability. According to (Uhl-Bien & Arena 2018), Adaptation to changing environmental conditions is a focal subject of organisational studies and deemed a necessity for organisations in every industry. The dynamic nature of most competitive environments requires organisations to continuously or periodically innovate in order to create a competitive advantage and eventually to survive (Hauschildt et al. 2016).

Situational Awareness

According to Gilson (1995), the concept of situational awareness was identified during World War I by Oswald Boelke who realised 'the importance of gaining an awareness of the enemy before the enemy gained a similar awareness, and devised methods for accomplishing this.' This idea of separation between the human operators understanding of system status and actual system status is at the crux of the definition of situational awareness (Woods, 1988). Woods (1988) points out that in order for people to maintain an adequate awareness of system status, they need to track the development of events as they gradually unfold. He argues that incidents evolve by the propagation of disturbances over time. These problems become exacerbated if human controllers fail to adapt to new events. This can lead to an uncoupling of system state and the human operators understanding of system state. The resulting control actions on the basis of mistaken situational awareness could, potentially, make a bad incident even worse. Such as the events precipitating the explosion at Chernobyl (Reason, 1990).

METHODS

The study population was made up of 1200 registered small and medium enterprises operating within Port Harcourt Metropolis. Four executives occupying leadership positions were chosen through a census from 30 SMEs from the overall population, making a total of 120 participants. There was no need for a sample size since the study adopted the census strategy, also, due the fact that the entire population was manageable. A cross sectional survey method was adopted for the study. The content validity of the instrument was

determined by giving a set of the drafted questionnaire which serves as instrument for data collection to four senior executives involved in daily decision-making in their organisations and four questionnaires to other researchers in the specific area of executive decision-making. These executives reviewed the content of the instrument and confirmed that the items were suitable for gathering relevant data for the research study.

DATA ANALYSIS

To empirically evaluate the relationship between the predictor and criterion variables of this study (including their dimensions and measures), the spearman's rank order of correlation coefficient (RHO) was adopted. As a tool, it is considered to be more flexible and it is not limited or confined to parameters statistical assumption such as applicable in the Spearman Rank Order Correlation Coefficient. The analysis was executed using the scientific package for social sciences (SPSS) version 23 software.

We begin by showing evidence of a relationship between the variables.

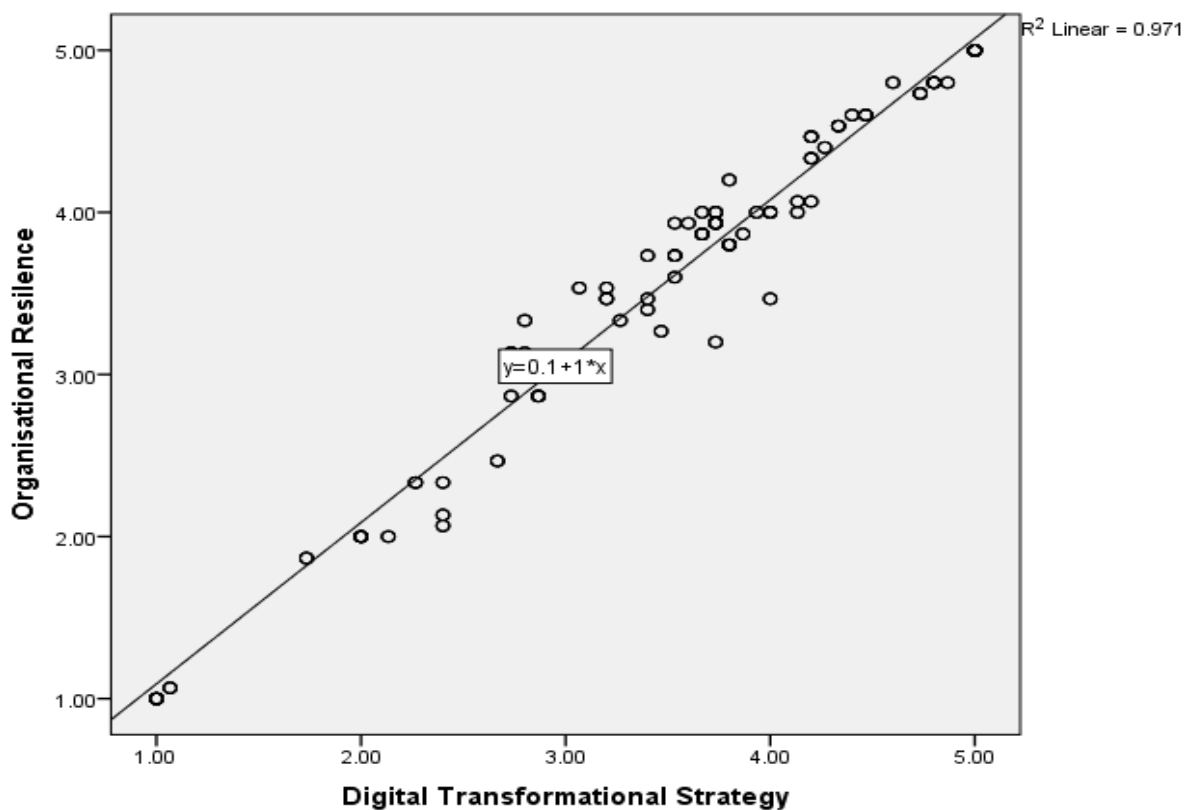


Figure 1: Scatter plot for digital transformation strategies and organisational resilience

Figure 1 shows a strong relationship between digital information strategy (independent variable) and organisational resilience (dependent variable). The scatter plot graph shows that the linear value of (0.971) depicting a very strong viable and positive relationship between the two constructs. The implication is that an increase in digital information strategy simultaneously brings about an increase in the level of organisational resilience. The scatter diagram has provided vivid evaluation of the closeness of the relationship among the pairs of variables through the nature of their concentration.

Table 1: Correlation for strategic leadership and measures of organizational resilience

			Strategic Leadership	Adaptability	Situation Awareness
Spearman's rho	Strategic Leadership	Correlation Coefficient	1.000	.867**	.947**
		Sig. (2-tailed)	.	.000	.000
		N	109	109	109
	Adaptability	Correlation Coefficient	.867**	1.000	.884**
		Sig. (2-tailed)	.000	.	.000
		N	109	109	109
	Situation Awareness	Correlation Coefficient	.947**	.884**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	109	109	109

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

H₀₁: There is no significant relationship between strategic leadership and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.867 on the relationship between strategic leadership and adaptability. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in adaptability was as a result of the strategic leadership. Table 1 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between strategic leadership and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

H₀₂: There is no significant relationship between strategic leadership and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

Table 1 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.947 on the relationship between strategic leadership and situation awareness. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in situation awareness was as a result of the strategic leadership. Table 1 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between strategic leadership and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

Table 2: Correlation for strategic leadership and measures of organisational resilience

			Team Structure	Adaptability	Situation Awareness
Spearman's rho	Team Structure	Correlation	1.000	.871**	.828**
		Coefficient			
		Sig. (2-tailed)	.	.000	.000
	Adaptability	N	109	109	109
		Correlation	.871**	1.000	.884**
		Coefficient			
		Sig. (2-tailed)	.000	.	.000
	Situation Awareness	N	109	109	109
		Correlation	.828**	.884**	1.000
		Coefficient			
		Sig. (2-tailed)	.000	.000	.
		N	109	109	109

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

H03: There is no significant relationship between team structure and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

Table 2 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.871 on the relationship between team structure and adaptability. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in adaptability was as a result of the team structure. Table 1 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between team structure and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

H04: There is no significant relationship between team structure and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

Table 2 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.828 on the relationship between team structure and situation awareness. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in situation awareness was as a result of the strategic leadership. Table 2 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between team structure and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

Table 3: Correlation for strategic leadership and measures of organisational resilience

			Cultural Change/Com munication	Adaptability	Situation Awareness
Spearman's rho	Cultural Change/Com munication	Correlation Coefficient	1.000	.831**	.846**
		Sig. (2-tailed)	.	.000	.000
		N	109	109	109
	Adaptability	Correlation Coefficient	.831**	1.000	.884**
		Sig. (2-tailed)	.000	.	.000
		N	109	109	109
	Situation Awareness	Correlation Coefficient	.846**	.884**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	109	109	109

** . Correlation is significant at the 0.01 level (2-tailed).

Source: SPSS Output

H₀₅: There is no significant relationship between cultural change/communication and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

Table 3 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.831 on the relationship between cultural change/communication and adaptability. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in adaptability was as a result of the cultural change/communication. Table 1 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between cultural change/communication and adaptability of small/medium enterprises in Port Harcourt, Rivers State.

H₀₆: There is no significant relationship between cultural change/communication and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

Table 3 shows a Spearman Rank Order Correlation Coefficient (rho) of 0.846 on the relationship between cultural change/communication and situation awareness. This value implies that a very strong relationship exists between the variables. The direction of the relationship indicates that the correlation is positive; implying that an increase in situation awareness was as a result of the strategic leadership. Table 3 also shows the statistical test of significance (p-value) which makes possible the generalization of our findings to the study population. From the result obtained the sig- calculated is less than significant level ($p = 0.000 < 0.05$). Therefore, based on this finding the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between cultural change/communication and situation awareness of small/medium enterprises in Port Harcourt, Rivers State.

FINDINGS

The result revealed that there is a positive significant relationship between digital transformation strategies and organisational resilience of small/medium enterprises in Port Harcourt, Rivers State. Digital transformation strategies and organisational resilience are crucial for the success and survival of small and medium-sized enterprises (SMEs) in today's rapidly evolving business landscape. As highlighted by Sobczak (2022), digital transformation refers to the integration of digital technologies into all aspects of a business, resulting in fundamental changes to how the business operates and delivers value to its customers. This transformation is necessary for SMEs to stay competitive, improve operational efficiency, and meet the changing needs and expectations of their customers. Furthermore, Sobczak (2022) emphasizes that organizational resilience is an essential component of a successful digital transformation strategy. Organisational resilience enables SMEs to adapt to disruptions, such as technological advancements, market fluctuations, or unexpected events like the COVID-19 pandemic. By adopting a digital transformation strategy and fostering organizational resilience, SMEs can enhance their agility, responsiveness, and ability to seize new opportunities. This is particularly important for SMEs, as they often have limited resources and face unique challenges in implementing digital transformation initiatives.

He, Huang, Choi and Bilgihan (2023) explored the positive relationship between digital transformation strategies and organisational resilience. They argue that organizations that adopt a digital transformation strategy are better equipped to withstand and recover from disruptions and challenges. The authors highlighted the importance of leveraging digital technologies and capabilities to enhance organizational processes, agility, and flexibility. They emphasize that digital transformation is not just about implementing new technologies, but also about reimagining business models and organisational structures to adapt to the digital age. The study provides evidence from various industries and sectors to support their argument. For instance, the authors cited examples of organizations that have successfully utilized digital technologies to improve their supply chain management, customer engagement, and decision-making processes. Moreover, the review demonstrated that organizations that embrace digital transformation are more likely to be proactive in identifying and addressing potential risks and disruptions. The findings of this study contribute to the understanding of the relationship between digital transformation strategies and organisational resilience by providing empirical evidence and insights into the benefits that organizations can derive from embracing digital technologies (He et al., 2023).

CONCLUSION AND RECOMMENDATION

The study concludes that digital transformation strategy positively enhances organisational resilience of small/medium enterprises in Port Harcourt, Rivers State. The study's implications highlight that SMEs that invest in digital transformation are likely to gain a competitive advantage in the market. By embracing technology-driven strategies, SMEs can better position themselves to respond to market dynamics, customer preferences, and industry trends. Therefore, based on the foregoing conclusion, the following recommendations were made:

- i. SMEs in Port Harcourt should invest in leadership development programs that emphasize strategic leadership skills. This includes training and workshops that focus on long-term planning, adaptability, and effective decision-making.

- ii. SMEs should consider implementing cross-functional teams that bring together individuals with diverse skills and expertise. These teams can help address multifaceted challenges and contribute to innovative problem-solving.
- iii. SMEs should promote transparent and open communication channels throughout the organization. Encourage employees to share concerns, ideas, and information freely.

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