COMPETENCE PLANNING AND RESILIENCE OF QUOTED OIL AND GAS COMPANIES IN SOUTH-SOUTH, NIGERIA

Akporaro, E. E.
Department of Management, Faculty of Management Sciences, Rivers State University, Port Harcourt, Nigeria
Email: euny_akporaro@yahoo.com

Zeb-Obipi, I.
Department of Management, Faculty of Management Sciences, Rivers State University, Port Harcourt, Nigeria
Email: zeb-obipi.isaac@ust.edu.ng

and

Oparanma, A. O.
Department of Management, Faculty of Management Sciences, Rivers State University, Port Harcourt, Nigeria

ABSTRACT

The study examined the relationship between competence planning and organizational resilience of quoted Oil and Gas Sector in South-South Nigeria. The measures of organizational resilience, which was the criterion variable were, situation awareness keystone vulnerability management and adaptive capacity. The study adopted a correlational survey research design in its investigation of the variables. Primary data was generated through well-structured questionnaire. Data generated and presented were analyzed using inferential statistical technique. The hypotheses were tested using the Spearman's Ranking Correlation Coefficient at 99% confidence interval and 0.05 level of significance to determine the strength and weaknesses of the relationship between the variables under study. Empirical findings revealed that there is a positive and significant relationship between competence planning and organizational resilience. It observed on the findings that competence planning significantly influence organizational resilience. Therefore, in conclusion the study asserts that competence planning has a strong influence on organizational resilience in the quoted oil and gas companies in South-South, Nigeria. The study recommends that organizations should ensure that prospective and existing employees possess the right competences. Through competence planning which involve mapping, skill gap analysis personal development plan, organizations should identify the ideal behaviour as well as individual skills needed in the organization and this will not only increase their ability to understand and perceive the entire operating environment, it will help the organizations gather and utilize information for present and future wellbeing.
.

Keywords: Competence planning, situation analysis, keystone vulnerability management, adaptive capacity

INTRODUCTION

Nigeria's quoted oil and gas companies generate about 5.9% to 9% of the country's gross domestic product (GDP) and more than 95% of the country's export earnings. The government of Nigeria funds almost all emerging sectors, infrastructure, etc. from the revenue derived from oil production. The industry also provides jobs to millions of Nigerian citizens and has greatly improved the standard of living of the people. However, studies have consistently outlined numerous challenges facing oil and gas companies in Nigeria; these challenges according to McManus et al. (2008) are highly debatable and indicate a low level of situation awareness in the organization and its adaptive capability to the environment. Some of the major challenges hindering the smooth functioning of these oil and gas companies in Nigeria such as lack of steady power supply (where 30% of the gross profit generated by the companies is used for electricity supply), insecurity, multiplicity of tax and levies by government agencies (occasionally overlapping functions and lack of coordination among such regulators) has led to problems that are reflected in the heavy financial burden of oil and gas companies in Nigeria.

In addition to the above, these companies are facing both internal and external challenges and disruptions. Some of these external issues include oil theft, pipeline vandalism, hostage taking, community demonstrations resulting from non-compliance with the agreed Memorandum of Understanding (MoU) among others. These issues in most cases lead to poor revenue, poor service delivery, high employee turnover rates due to delayed compensation, and poor employee well-being. In addition to these adverse consequences mentioned above, the productivity level of these oil and gas companies is negatively affected, resulting in reduced revenue, which also affects their sustainability. Resilience is one of the most important inherent features of an organization to survive and thrive in a challenging complicated and uncertain business world. Organizational resilience assists the organization in overcoming obstacles stemming from environmental threats and risks, enhancing the likelihood of organizational success.(Manfield R, 2016). Kim (2021a) opined that organizational resilience refers to a business ability to adapt and evolve as the global market is evolving, to respond to short-term shocks and to shape it to respond to long-term challenges. Jaja and Amah (2014) share the view that resilience is not about only surviving or coping. At organization level, resilient are those, who are continuously and pro-actively able to adjust and adapt to challenging and changing conditions.

Furthermore, on the other hand, Competence planning is the process of organizing the recognized competences in the organization into a framework that allows or assists workers to understand and apply acquired competencies in the performance of a given task. worker competence management function of determining the types and extent of competence required for a superior performance. (Zeb-Obipi 2015). It has also been associated with how well workers perform to affect the productivity of their organizations and help in retaining the resilient nature of their organization. Based on the above and the observed imperatives of competency management in organizational resilience including competence planning, this study therefore will focus on how organizational resilience is affected by competence planning. Studies on the concept of Organizational resilience from extant literature have not been fully looked in the direction of competence planning but a substantial number of studies have examined the concept of competency management and its importance to organizational sustainability. For instance, (Palan,2007; Sesugh,2022; Struzyna et al.,2021; Zupancic,2020) have examined the concept of competency management and its importance to organizational sustainability. Barasa, Mbau, and Gilson (2018) identify human capital as one of the strategic enablers of organizational resilience.

Zeb-obipi (2016) in a review of literature observes that competence planning is associated with performance of organizations, while Stephenson, Tamunomiebi (2018) investigated how ethics training predicts organizational resilience, Eketu and Ogbu (2017) examined the link between human resource planning and organisational sustainability. Oparanma, and Ulunma (2019) examined the relationship between organizational resilience and corporate performance of deposit money banks in Port Harcourt, Taking into consideration previous research on organizational resilience there seems to be a dearth of knowledge especially in the oil and gas sector in Nigeria on how competence planning relates to organizational resilience, even though competency planning stands as a key construct in the continuity of most business organizations. Therefore, this study aims to bridge this gap by examining the relationship between competence planning and organizational resilience of oil and gas companies in south -south, Nigeria.

Conceptual Framework

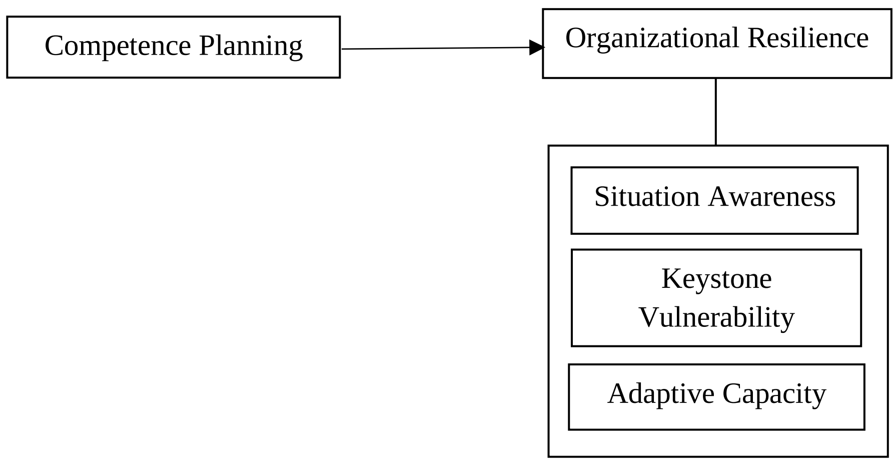

Figure 1: Competence Planning and Organizational resilience
Source: Desk Research, 2023.
Source: Dimensions and measures from the Literature: Conceptualized by the Researcher's (2023)

The following research questions were posed to guide the procedure of data gathering, analysis:

1. What is the relationship between competence planning and situation awareness of quoted oil and gas companies in South-South, Nigeria?
2. What is the relationship between competence planning and keystone vulnerability management of quoted oil and gas companies in South-South, Nigeria?
3. What is the relationship between competence planning and adaptive capacity of quoted oil and gas companies in South-South, Nigeria?

LITERATURE REVIEW

Theoretical Foundation

The relationships between the variables are examined within the integrative theoretical review of the human capital theory Becker (1964). Resource base theory by (Wernerfelt, 1984).

Human Capital Theory

The Human Capital Theory was propounded by the empirical work of Becker (1964), Schultz (1961) and Mincer (1974) however challenged the prevailing assumption that the growth of physical capital is paramount to economic success. In the 1950s, the main factors of production comprised land, labour, physical capital and management (Mincer 1962b). The theory shows a paradigm shift in human capital from an activity-based (focus on a specific measurement, input focus, preparing for a routine works, etc.) to a result based (focus on result and total performance such as business impact, cost-benefit analysis, output focus, and performance effectiveness) paradigm affects the human capital policy and practice by focusing more on the bottom line instead of top-down management (Phillip, 2005).The basic premise or relevance behind human capital theory is that people's learning capacities are of comparable value with other resources involved in the production of goods and services (Lucas 1990). Human capital theory suggests that individuals who invest in education and training will increase their skill level and be more productive than those less skilled, and so can justify higher earnings as a result of their investment in human capital.

Resource-Based Theory (RBT)

The earliest contributor of the resource-based theory was (Wernerfelt, 1984) and he introduced a dramatic paradigm shift of focus from environment as sources of a business enterprise profit to the internal resources of the business enterprise environment Raduan et al. (2009).The resource-based theory sees the workers as a fundamental factor that affects organization's competitive advantage. The theory holds that sustained competitiveness could be achieved by acquiring, developing as well as deploying valuable, rare, and inimitable resources

Bhatt et al. (2010). This implies that business organizations that possesses and engage in steady development and deployment of inimitable and non-substitutable resources such as workers competence could enjoy sustained competitiveness (Makadok, 2001) and as well achieve agility. The resource-based theory is also concerned with the idea that a firm's internal resources can become a direct source of sustained competitive advantage for the organization. This is distinct from traditional notions of competitive advantage popularized first by Porter (1985) which stressed competitive advantage was attained for the firm through external means such as products, location or customer base.

Sveiby (2000) emphasized on the distinction that while traditional views of competitive advantage, such as Porter's, are product based, the resource-based view is knowledge-based, thus implying a focus on the development and enhancement of the competencies of the human resources or employees. The notion that a firm's human resources could be a source of advantage and competitive edge dates back to 1984 (Fahy, 2000). The resource-based theory offers a more dynamic approach towards understanding the need for employee competency as it emphasizes on the employees as the key facets and assets which can be utilized and enhanced to address organizations' effectiveness, competitiveness, performance issues.

Conceptual Review

Concept of Competence Planning

Competency Planning, also referred to as competence profiling, analyzing, modeling and identification (Berio and Harzallah, 2005; Marrelli 1998). It involves all practice geared towards ensuring that prospective and existing employees possess the right competences in the workplace. It is a process that ensures employees have the right skills, knowledge, attitudes and behaviours from the recruitment to placement stages. The HR department must clearly outline the minimum requisite competence employees are expected to possess for each job role both at entry level and for purposes of promotion; and only employees who have these competences should be identified and be given opportunities in their various functional areas or departments (John-Eke & Gabriel, 2021). Competence planning should permeate all employees and departments, irrespective of ranks, positions and job roles, The competence of all employees, potential and existing should be effectively and efficiently planned for the proper discharge of employee's duties and responsibilities (Stor & Haromszeki, 2022; Stor & Kupczyk, 2015). Evwierhurhoma and Oga (2020) noted that employee competence planning is the first stage in all competence management activities and should be carefully and properly managed by human resource practitioners and management of organizations, as ineffectiveness of this stage can mar the entire competency management process (Zeb-Obipi, 2015).

Competency planning is the responsibility of determining the types and levels of competence required for excellent employee performance. It emphasizes employees' strengths and weaknesses; and designing a clear developmental path for improving on the strengths and acquiring the requisite skilll fill the identified competency gaps. Competency planning is also useful in identifying employees' behavioural abilities within an organization (Ogoun & Tamunosiki-Amadi, 2022). Competency planning therefore if well carried out can improve organizational resilience because it sets the tone for the right workforce to be on boarded and for existing employees for be properly placed for the appropriate job role. Zeb-Obipi (2015).

Concept of Organizational Resilience

The first use of the term resilience has been contested but can be attributed to ecology, physics or psychology (Manyena, 2006). In ecology, it was introduced through Hollings' (1973) seminal work: Resilience and Stability of Ecological Systems. Holling described resilience as, "A measure of persistence of systems and their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables" (Holling, 1973). Kasperson and Kasperson (2005) discuss examples of the influence of random events on natural systems and suggest that we can better understand resilience if we "…shift the emphasis towards assuming change and then try to explain stability" Kasperson and Kasperson (2005). Holling (1973) also notes that traditional analysis within the field of ecology has been inherited from developments in physics. In physics resilience is "…the ability for a material to get back to its initial shape following an external shock" (Le Coze & Capo, 2006). Zimmerman and Arunkumar (1994) refer to psychological resilience and argue that it refers to "…fending off maladaptive responses to risk and their potential negative consequences".

Azusa and Hiroyuki (2013) perceive resilience as a term which essentially refers to the physical ability to return to one's original state, elasticity or flexibility. In addition, there are a number of definitions and concepts of resilience in the field of psychology. The definition by Masten et al. (1990) is widely used: resilience is 'the process of capacity for or outcome of successful adaptation despite challenging or threatening circumstance.. Denyer (2017) skillfully and intelligently opined that organizational resilience is the ability of an organization to anticipate, prepare for, respond and adapt to incremental change and sudden distortions in order to survive and prosper. Another common understanding of resilience is the ability to bounce back (Coutu, 2002). Holling (1996) discusses the difference between resilience in engineering versus resilience in ecology. He describes resilience in engineering as the stability of equilibrium near a steady state and argues that, in engineering, resilience can be measured as the speed of return to equilibrium. Judging from these views, the term "resilience," can be described as a word that denotes both strength and flexibility; implies the ability to adjust to "normal" or anticipated stresses and strains and to adapt to sudden shocks and extraordinary demands.

Measures of Organizational Resilience

Situation Awareness

The historicity of the term "situation awareness" is traceable to the military, where pilots are required to understand, absorb, and act on large volumes of information to enable them to perform their roles (Endsley, 1995). An organization that is not always conscious of its operating environment is bound to make costly mistakes. Situation Awareness is the ability to identify products, processes, and administrative capabilities and follow serious features of evidence around the happenings to the organization with regards to its vision and mission. Understanding what is happening within the organization is very important and it is seen as a strong leadership quality. When organization loses its situation awareness, it increases the potential for human error and mishaps (Ahmad et al., 2021b). Ahmad et al. (2021a, 2021b) effective organization situation awareness depends on the composition of its members developing accurate expectations for organizational performance by drawing on a common knowledge base.

This process involves anticipating the needs of organization members; predicting the needs of organizational members; and adaptation to efficient demand of organizational tasks. To ensure effective situation awareness, organizational members must share their knowledge relative to organization task and goals (vision and mission); their individual tasks; and organizational members' roles and responsibilities. To provide a solid base for building team situation awareness, organizational members need to have information that will help them develop relevant expectations about the entire organizational task (Baader et al., 2020). When organizations lose focus, it puts them in a grey area where no one may be able to predict outcomes with any certainty thereby making process, product and administrative capability most difficult (Kästle et al., 2021).

Keystone Vulnerability Management

Within the context of disasters, vulnerability is generally described as the human product of any physical exposure to a disaster that results in some degree of loss, combined with the human capacity to withstand, prepare for and recover from that same event. It describes the relative degree of 'risk, susceptibility, resistance and resilience' to a hazard event or disaster (Kubacki et al., 2020). Individual research disciplines tend to adopt definitions of vulnerability that explicitly suit their own needs. While the study of vulnerability began with the social sciences, the applications have reached far into economics, geophysical sciences, information systems, environmental science and politics, and include organizational management and policy decisions.

Vulnerability is inherently complex and is not a static entity. There is a spatial-temporal element to vulnerability research in which different aspects of vulnerability become dominant at different times and in different places (Kurniawan et al., 2017; Mietala, 2020; Mohile et al., 2018). Often, vulnerability is defined by one of its causal properties, for example poverty. When analyzing vulnerability however, one must be aware that not everyone suffers the same way in response to the same event (Nienaber et al., 2015; Stankov & Tsochev, 2020). Some researchers contend vulnerability cannot, and perhaps should not, be reduced into simplistic term (Svensson, 2015). One of the most pressing challenges in modern vulnerability and disaster research may be to find ways of assessing the inherent vulnerability that exists in the daily life of the general population (Tanner & Su, 2019).

Adaptive Capacity

Adaptive capacity describes context specific organizational capabilities that facilitate continuous evolvement to keep up with the needs of the operating environment (Meyer & Allen, 1991). (Hamel, 2008) describe adaptive capacity as "organization's ability to constantly and continuously evolve to match or exceed the needs of its operating environment before those needs become critical". Adaptive capacity is context-specific McManus et al. (2008), and varies in terms of value and nature. Adaptive capacity has been analyzed through coping ranges, by the conditions that a system can deal with, accommodate, adapt to, and recover from Smith and Pilifosova (2003). Most firms can cope with normal conditions and moderate deviations from the norm but may find it challenging to cope with exposure to extreme events that may lie outside their coping range(Ahiauzu & Jaja, 2015). Some scholars use coping ability to address short-term capacity to just survive and employ adaptive capacity to address long-term and more sustainable adjustments. Organizations' adaptive capacity and coping range are not static; they are flexible and respond to changes in economic, social, political and institutional conditions over time(Smit & Wandel, 2006) in Ahiauzu and Jaja (2015). Adaptive capacity is a measure of the culture and dynamics of an organization that allows it to make decisions in a timely and appropriate manner both in day-to-day business and also in crises. Adaptive capacity considers aspects of an organization that may include (but not be limited to): leadership and decision-making structures, the acquisition, dissemination and retention of information and knowledge, and the degree of creativity and flexibility that the organization promotes or tolerates.

Empirical Review

Competence Planning and Organizational Resilience

Examining the relationship between competence planning and measures of organizational Resilience, which includes (situation awareness, vulnerability management, adaptive capacity) Competence planning is one of the dimensions of worker competence management that ensures employees have the right skills, knowledge, attitudes and behaviors from the recruitment to placement stages. Through competence planning employees with the right competence are hired and deployed to positions that best suit their competence level. This improves productivity level of the employees which ultimately translates into improved profitability for the organization (John-Eke & Gabriel, 2021). Effective and efficient worker competence planning leads to proper discharge of employees' duties and responsibilities (Stor & Haromszeki, 2022; Stor & Kupczyk, 2015), increased customer loyalty and productivity. It will also enhance the skills of workers to be sensitive to changes in the business environment and proactively respond to these changes. Evwierhurhoma and Oga (2020) noted that a carefully and properly managed competence planning can create a competitive edge of an organization, make the organization stand the test of time, and become a force to reckon with within its industry.

METHODOLOGY

This study adopted correlational survey research design conducted in a non-contrived setting. The target population of the study is the 13 quoted oil and gas companies located in South- South Nigeria Hence, the population is relatively small (13 oil and gas companies), therefore, our sample size remains the same as the population. This makes it a census study. However, the study adopted the entire population as the sample size of the study. 222 respondents (population elements) cutting across the staff personnel's that was used for the study. It is believed that respondents from the above oil and gas companies gave adequate and informed responses to the study due to the experiences and knowledge gained from their job roles. This study utilized both primary and secondary data. Semi-structured questionnaire was utilized in the generation of data on the study variables: competence planning and organizational resilience. The validity of the research instrument was further tested for face and content validity. To determine the reliability of the research instrument, a pilot study was conducted, and the data was subjected to Cronbach's Alpha reliability test with a threshold of 0.70 set by Nunally (1978) as shown in Table 1, while the hypotheses were tested using the Spearman's Ranking Correlation Coefficient at 99% confidence interval and 0.05 level of significance to determine the strength and weaknesses of the relationship between the variables.

Table 1.0: Reliability Analysis of items on all variables

Variables	No of Items	Cronbach alpha
Competence Planning	4	0.840
Situation Awareness	4	0.883
Keystone Management of Vulnerabilities	4	0.720
Adaptive Capacity	4	0.801

Source: (SPSS Output), based on 2023 field survey data.

DATA ANALYSIS AND RESULTS

Relationship between Competence Planning, Situation Awareness, Keystone Vulnerability Management and Adaptive Capacity

Table 2: Correlation Matrix for Competence Planning, Situation Awareness, keystone Vulnerability Management and Adaptive Capacity

			Competence Planning	Situation Awareness	Keystone Vulnerability MGT	Adaptive Capacity
Spear mrho	Competence Planning	Correlation Coefficient	1.000	.737**	.425**	.737**
		Sig. (2-tailed)	.	.000	000	.000
		N	222	222	222	222
	Situation Awareness	Correlation Coefficient	.759**	.917**	845**	.917**
		Sig. (2-tailed)	.000	.000	000	.000
		N	222	222	222	222
	Keystone Vulnerability MGT	Correlation Coefficient	.425**	.909**	1.000	.909**
		Sig. (2-tailed)	.000	.000	.	.000
		N	222	222	222	222
	Adaptive Capacity	Correlation Coefficient	.737**	1.000	909**	1.000
		Sig. (2-tailed)	.000	.	000	.
		N	222	222	222	222

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

Source: SPSS output version 23.0

Ho$_1$: There is no significant relationship between competence planning and measures of organizational resilience of oil and gas companies South-South, Nigeria.

The correlation coefficient (r) shows a significant relationship between competence planning and situation awareness. The *rho* value 0.759 indicates this relationship and it is significant at p 0.000<0.01. The correlation coefficient represents a high correlation indicating a strong relationship. Therefore, based on this result the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between competence planning and situation analysis of quoted oil and gas companies in South-South Nigeria

Ho$_2$: There is no significant relationship between competence planning and keystone vulnerability management of quoted oil and gas companies in South-South Nigeria

The correlation coefficient (r) shows a significant relationship between competence planning and keystone vulnerability management. The *rho* value 0.425 indicates this relationship and it is significant at p 0.000<0.01. The correlation coefficient represents a high correlation indicating a strong relationship. Therefore, based on this result the null hypothesis earlier stated is hereby rejected and the alternate upheld.

Thus, there is a significant relationship between competence planning and keystone vulnerability management of quoted oil and gas companies in South-South Nigeria.

Ho3 There is no significant relationship between competence planning and adaptive capacity of quoted oil and gas companies in South-South Nigeria

The correlation coefficient (r) shows that there is a significant relationship between competence planning and adaptive capacity. The *rho* value 0.037^{**} indicates this relationship and it is significant at p $0.000<0.01$. The correlation coefficient represents a high correlation indicating a strong relationship. Therefore, based on this result the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between competence planning and adaptive capacity of quoted oil and gas companies in South-South Nigeria

DISCUSSIONS AND FINDINGS

Relationship between competence planning, situation awareness and keystone vulnerability management in South-South, Nigeria

This relationship was tested using three null hypotheses which examined the relationship between competence planning and the measures of organizational resilience at the workplace. The findings showed that there is a strong positive and significant relationship in all three instances. Competence planning had a very strong positive and significant relationship with situation awareness. Similarly, competence planning had a very strong positive and significant relationship with keystone vulnerability management. Finally, competence planning has a very strong positive and significant relationship with adaptive capacity. Organizational resilience is measured in terms of situation awareness; keystone vulnerability. "Moreover, authors agreed that when conceptualized situation awareness on Ahiauzu and Jaja (2015) further states that "situation awareness is dynamic, hard to maintain, and easy to lose". Ability to anticipate opportunities and possible threats, disturbances:

Keeping in touch with the environment all the time is very difficult for any organization, especially during complex high stress operations (Tamunomiebi, 2018). Employees therefore require skills and knowledge to continually scan their environment to discern opportunities that could be exploited and threats that should be avoided. Situation awareness is a measure of an organization's understanding and perception of its entire operating environment. Essentially, organizations must have precise understanding of the links between components within their system and be able to manage the vulnerabilities that may arise from these. Such vulnerabilities according to Ahiauzu and Jaja (2015) include "specific tangible organization components such as buildings, structures and critical supplies; computers, services and specialized equipment; individual managers, decision makers and subject matter experts"

CONCLUSION AND RECOMMENDATIONS

The purpose of the work was to examine the relationship between competence planning and organizational resilience of quoted oil and gas companies in South-South, Nigeria. Hence, drawing from the results of the empirical study and findings of previous studies, as well as the review of literature on the variables; the study conclusively affirms that competence planning has a strong and significant influence on organizational resilience of quoted oil and gas companies in South-South, Nigeria under study. Therefore, in conclusion the study asserts that self-development has a strong influence on organizational growth in South-South, Nigeria.

From the findings and the conclusions arrived at in the study, the following recommendations are hereby proffered:

Organizations should ensure that prospective and existing employees possess the right competences. Through competence planning which involve mapping, skill gap analysis personal development plan, organizations should identify the ideal behaviour as well as individual skills needed in the organization and this will not only increase their ability to understand and perceive the entire operating environment, it will help the organizations gather and utilize information for present and future wellbeing.

Organizations should make deliberate effort to improve the technical, theoretical, conceptual, and moral abilities of employees; they should ensure workers put into practice the knowledge they have acquired over time as this will equip the employees with sufficient skills and knowledge on organizational processes and their interdependencies. It will also enable organizations constantly and continuously evolve to match or exceed the needs of its operating environment before those needs become critical.

REFERENCES

Ahiauzu, L. U., & Jaja, S. A. (2015). Process innovation and organizational resilience in public Universities in South-South Nigeria. *International Journal of Managerial Studies and Research, 3*(11), 102-111.

Ahmad, A., Maynard, S. B., Desouza, K. C., Kotsias, J., Whitty, M. T., & Baskerville, R. L. (2021a). Cybersecurity incident response in organizations: an exploratory case study and process model of situation awareness. *Comput. Secur., 101*, 102-122.

Ahmad, A., Maynard, S. B., Desouza, K. C., Kotsias, J., Whitty, M. T., & Baskerville, R. L. (2021b). How can organizations develop situation awareness for incident response: A case study of management practice. *Computers & Security, 101*, 102-122.

Azusa, K., & Hiroyuki, Y. (2013). Organizational resilience: an investigation of key factors that promote the rapid recovery of organizations. *Academic Journal of Interdisciplinary Studies*, *2*(9), 188-188.

Azusa, K., & Hiroyuki, Y. (2013). Organizational resilience: an investigation of key factors that promote the rapid recovery of organizations. *Academic Journal of Interdisciplinary Studies*, *2*(9), 188-188.

Baader, F., Borgwardt, S., Koopmann, P., Thost, V., & Turhan, A.-Y. (2020). Semantic technologies for situation awareness. *KI-Künstliche Intelligenz*, *34*(4), 543-550.

Becker, G.S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education.* New York: Colombia University Press.

Berio, G., & Harzallah, M. (2005). Knowledge management for competence management. *Journal of Universal Knowledge Management*, *1*, 21-28.

Bhatt, G., Emdad, A., Roberts, N., & Grover, V. (2010). Building and leveraging information in dynamic environments: The role of IT infrastructure flexibility as enabler of organizational responsiveness and competitive advantage. *Information & Management*, *47*(7-8), 341-349.

Coutu, D. L. (2002). How resilience works. *Harvard Business Review*, *80*(5), 46-56.

Denyer, D. (2017). Organizational resilience. *UK: BSI and Cranfield University*.

Endsley, M. R. (1995). A taxonomy of situation awareness errors. *Human Factors in Aviation Operations*, *3*(2), 287-292.

Evwierhurhoma, E. D., & Oga, K. C. (2020). The impact of employees' competence management on organizational agility of deposit money banks in Rivers State, Nigeria. *International Journal of Management Sciences*, *8*(2), 11-21.

Fahy, J. (2000). The resource-based view of the firm: some stumbling-blocks on the road to understanding sustainable competitive advantage. *Journal of European Industrial Training*, *9*(1), 1-23.

Hamel, G. (2008). The future of management. *Human Resource Management InternationalDigest*, *21*(5), 1-10.

Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics*, 10(2), 1-23.

Ikirobo, I., Jaja, S., & Eketu, C. (2017). Performance management and organizational resilience: A study of commercial banks in Port Harcourt. *International Journal of Advanced cademic Research—Social & Management Sciences*, *3*(11), 86-110.

. Jaja and Amah (2014). Mentoring and organizational resilience . A mall enterprisesstudy of manufacturing companies in Rivers State. Journal of Business and Management 16(10), 1-9

John-Eke, E. C., & Gabriel, J. M. O. (2021). Emploee competence management and corporate vitality of indigenous oil and gas companies in South-South, Nigeria. *Journal of Strategic and Internet Business*, *6*(3), 2094-2104.

Kasperson, J. X., & Kasperson, R. E. (2005). *The Social Contours of Risk*, (Vol. 1).

Kästle, J. L., Anvari, B., Krol, J., & Wurdemann, H. A. (2021). Correlation between Situational Awareness and EEG signals. *Neurocomputing*, *432*, 70-79.

Keller, S., & Price, C. (2011). Organizational health: The ultimate competitive advantage. *McKinsey Quarterly*, *2*(6), 94-107.

Kim, Y. (2021a). Building organizational resilience through strategic internal communication and organization–employee relationships. *Journal of Applied Communication Research*, 1-20.

Kubacki, K., Siemieniako, D., & Brennan, L. (2020). Building positive resilience through vulnerability analysis. *Journal of Social Marketing*, *8*(1), 46-61.

Kurniawan, R., Zailani, S. H., Iranmanesh, M., & Rajagopal, P. (2017). The effects of vulnerability mitigation strategies on supply chain effectiveness: risk culture as moderator. *Supply Chain Management: An International Journal*, *10*(2), 36-71.

Le Coze, J.-C., & Capo, S. (2006). A conceptual and methodological comparison with the field of child resilience. 2. Resilience engineering Symposium, Lengnick-Hall, C.a, Beck, T.E.,(2011). Developing capacity for organizational resilience through strategic human resoiurce management Human Romanian micro- and small and medium enterprises journal 13(23), 439-457

Linnenluecke, M. K. (2017). Resilience in business and management research: A review of influential publications and a research agenda. *International Journal of Management Reviews*, *19*(1), 4-30.

Lucas, R. (1990). Why doesn't capital flow from rich to poor countries? *American Economic Review, 80*(1), 92–96.

Makadok, R. (2001). Toward a synthesis of the resource‐based and dynamic‐capability views of rent creation. *Strategic management journal*, *22*(5), 387-401.

Manfield R, (2016). Organizational resilience, a dynamic capabilities approach. *The University of Queenland Journal 12*(4) 23-26

Manyena, S. B. (2006). The concept of resilience revisited. *Disasters*, *30*(4), 434-450.

Marrelli, A. F. (1998). An introduction to competency analysis and modeling. *Performance Improvement*, *37*(5), 8-17.

Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, *2*(4), 425-444.

McManus, S., Seville, E., Vargo, J., & Brunsdon, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, *9*(2), 81-90.

Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, *1*(1), 61-89.

Mincer, J. (1962). Labour force participation of married women: a study of labour supply. In: Lewis, H.G. (ed.) *Aspects of Labour Economics*. Princeton, NJ: Princeton University Press, 63–105.

Mincer, J. (1974). *Schooling, Experience, and Earnings*. New York: Columbia University Press

Nienaber, A.-M., Hofeditz, M., & Romeike, P. D. (2015). Vulnerability and trust in leader-follower relationships. *Personnel Review*.

Ogoun, B., & Tamunosiki-Amadi, J. O. (2022). Worker Competence Management and Employee Responsiveness. *International Journal of Current Business and Social Sciences*, *8*(4), 21-40.

Oparanma, A. O., & Ulunma, E. P. (2019). Organizational Resilience and Corporate Performance of Deposit Money Bank In Port-Harcourt Nigeria. International Journal of Business and management Future,3(2)1-12.https://doi.org/10.46281/ijbmf.v312.357.

Phillips, J.J. (2005). Investing in your company's human capital: Strategies to avoid spending too little or too much. New York: Amacom.

Phillips, J.J. (2005). Investing in your company's human capital: Strategies to avoid spending too little or too much. New York: Amacom

Porter, M. E. (1985). Technology and competitive advantage. *Journal of Business Strategy*, *9*(2), 81-90.

Raduan, C., Jegak, U., Haslinda, A., & Alimin, I. (2009). Management, strategic management theories and the linkage with organizational competitive advantage from the resource-based view. *European Journal of Social Sciences*, *11*(3), 402-418.

Sachenko, L. (2020). Organizational Resilience, cost optimazation approaches. Journal of Business Mnanagement 10(12)30- 39

Sawalha, I. H. S. (2015). Managing adversity: understanding some dimensions of organizational resilience. *Management Research Review*, *6*(1), 69-86.

Smit, B., & Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Global Environmental Change*, *16*(3), 282-292.

Stankov, I., & Tsochev, G. (2020). Vulnerability and protection of business management systems: threats and challenges. *Problems of Engineering Cybernetics and Robotics*, *72*, 29-40.

Stor, M., & Kupczyk, T. (2015). Differences in competency management–comparative analysis between Polish, Spanish, and Austrian business practices. *Journal of Intercultural Management*, *7*(2), 49-74.

Sveiby, K.-E. (2000). *Measuring intangibles and intellectual capital*. Cambridge, Massechusetts: The MIT Press.

Svensson, G. (2015). A Conceptual Framework of Mutual and Interactive Vulnerability in Business Relationships. In *Revolution in Marketing: Market Driving Changes* (pp. 131-131). Springer.

Tanner, E. C., & Su, L. (2019). Reducing perceived vulnerability to increase utilization of nonprofit services. *Journal of Services Marketing*, *41*(3), 393-405.

Stor, M., & Haromszeki, Ł. (2022). Competency management and the financial results of the foreign subsidiaries of Polish MNCs: The empirical research findings. *Human Systems Management*, *41*(3), 393-405.

Umoh, G. I., & Amah, E. (2013). Knowledge Acquisition and Organizational Resilience in Nigerian Manufacturing Organizations. *Knowledge Acquisition*, *3*(9), 32-45

Wernerfelt, B. (1984). A resource-based view of the firm.*Strategic Management Journal*, *5*(2), 171-180

Zeb-Obipi, I. (2015). Worker Competence Planning and Corporate Productivity Performance: A Study of Organiztions in Nigeria. *International Journal of Human Resource Management and Research*, *5*(4), 51-60.