

# Employee Dynamic Capability and Organizational Adaptation of Selected Oil And Gas Firms in Warri, Delta State

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## Abstract

The study examined the effect of employee dynamic capability on organizational adaptation of selected oil and gas firms in Warri, Delta State. This study used a descriptive survey design. A total population of 251 employees of the selected oil and gas firms in Warri, Delta State were used for the study. The study used the stratified sampling technique. The research instrument used in this study is a structured questionnaire. Data collected from the field survey were analyzed using descriptive statistics, correlation and multiple regressions. Findings showed that employee sensing ( $\beta = 0.196, P < 0.05$ ), learning capability ( $\beta = 0.524, P < 0.05$ ), reconfiguration capability ( $\beta = 0.313, P < 0.05$ ) have positive effect on organizational adaptation of selected oil and gas firms. Findings showed that the dimensions of employee dynamic capability explained 58% of the variability in organizational adaptation. Based on the findings, the study concluded that, the use of employee dynamic capability-related practices in corporate settings is expected to enhance adaptability of the firms operating in the cultural industry and improve their strategic planning. The study recommended that, managers need to pay attention to acquisition of new knowledge and integrate it into the existing structures through learning capability, create new capabilities, rebuild resources and organizational structures to address the environmental turbulence through reconfiguration capability, to achieve superior organizational adaptations.

**Keywords:** Employee Dynamic Capability, Sensing Capability, Learning Capability, Reconfiguration Capability and Organizational Adaptation

## I. INTRODUCTION

The current business world is highly affected by the global changes, organizations faces tremendous challenges to sustain their business in a highly competitive world. Maintaining and providing an innovative climate has gained a major

attention among all the organization. For organizations to be sustained in the rapidly changing business environment, they must build up their skills, abilities and human resources capabilities in order to create an innovative climate. Changes in the business environment leads to creation of new capabilities and employees' capabilities differ from firm to firm based on the nature of business and change implementation. Employee capability refers to the skills, knowledge, and competencies that an individual possesses in the work place. It encompasses the ability of an employee to perform their effectively, contribute to the organization's goals, and adapt to changing work requirements. These includes both technical skills related to the specific job and soft skills such as communication, problem-solving, and teamwork.

Employee dynamic capability would imply the capability of employees to adapt, learn, evolve within a rapidly changing work environment. It involves not only possessing current skills, but also having the ability to acquire new demands, and contribute effectively to the organization's overall adaptability. Employees with strong dynamic capabilities can navigate shifts in technology, market trends, and organizational priorities, making them valuable assets in a dynamic and evolving workplace. The business environment today is characterized by constant changes, predicted activities and continuous progress which imply a state of flux and turbulent movement. Organizations that encourage continuous learning and growth mindset, would most likely foster employee dynamic capability, therefore, there is need for organizations to constantly invest in training and development programs to enhance employee capabilities and ensure they align with the company's objectives.

Organizational adaptation refers to an organization's ability to adjust, evolve, and strive in response to the changes in its external environment. This includes adapting to shifts in market

conditions, technological advancements, regulatory changes, or any other factors that impact the organization. Successful organizational adaptation involves not only reacting to changes, but also proactively anticipating and preparing for them. It often requires strategic planning, flexibility, innovation, and willingness to embrace new approaches. Organizations that can effectively adapt are better positioned to remain competitive and achieve long-term success in a dynamic and ever-changing business landscape. The aim of this study on employee dynamic capability and organizational adaptation of selected oil firms in Delta State is to explore the relationship between the dynamic capabilities of employees within the oil and gas sector in Delta State and the overall adaptive capacity of their firms. Delta State, Nigeria, is a significant hub for the oil and gas industry, hosting various companies engaged in exploration, production, and related activities. This research looks into the role of employee dynamic capabilities (sensing capability, learning capability and reconfiguration capability) in influencing the adaptive strategies of these firms in the midst of the ever-changing dynamics of the oil and gas sector.

Dynamic capabilities enable companies to adapt to a rapidly changing and risky environment by responding swiftly and nimbly. This is because dynamic capabilities create the ability to innovate and adapt to changing environments (Teece & Leih, 2016). Considering the rapid development in the automotive sector, companies must have good dynamic capabilities, and this must be supported by the company's resources, human resources and other resources owned by the company. It is difficult for companies to be able to survive in situations of intense competition in the traditional way. Many physical assets, the amount of investment can no longer guarantee the success of the company. Where the company's ability to manage intangible assets is far more important than just managing the physical assets they have.

According to Schilke (2014: 179), 'the dynamic capabilities perspective has been criticized for its confounding discussion of the effect of dynamic capabilities.' What deteriorates the theoretical confusion is that dynamic capabilities studies 'mainly focus on theoretical development, and empirical research lagged' (Danneels, 2016). Empirical research for mediating mechanisms is scarce. The only notable exception is Protogerou, Caloghirou, and Lioukas (2012), who propose and empirically test that a mediating model of dynamic capabilities improves firm adaptation through operational capabilities. Their study, however, appears tautological in the sense that dynamic

capabilities are defined to govern the rate of change of operational capabilities (Winter, 2013). Other empirical work explores the contingent effect of dynamic capabilities and firm performance relationship (Danneels, 2012; Wilden, Gudergan, Nielsen, & Lings, 2013; Schilke, 2014). But before establishing any contingent effects, it is critical to reach a clear understanding of the mechanism through which dynamic capabilities influence performance in the first place. The objective of this paper is to resolve this argument by establishing and empirically testing a mediating mechanism between employee dynamic capabilities and firm adaptation.

### **Statement of the Problem**

In Nigeria, the battle for control of the oil and gas sector has intensified as both foreign and local megastores roll out expansion plans. The sector has encountered collapse as a result of poor availability of infrastructure and consistent policies which has been dominant in the last few years. This continues to cause anxiety and lost confidence amongst lenders and suppliers in the industry given the loss of revenue, job opportunities and market for suppliers occasioned by the persistent determination of the sector over the years.

Consequently, employee dynamic capability is one of the biggest focus for organizations to retain their top talent and increase the level of talent retention, enhances their climate innovativeness, so that the employees can feel more comfortable and satisfied to work in the organization. Before organizations decide to deploy any new practice in the system, the management must have provided platforms to enhance employees' knowledge and skills through various learning programs, to make employees feel more comfortable. Many organizations are keen to provide innovative practices to their employees without accessing their knowledge and learning level, at that point employees feel sense of dissatisfaction and start shifting to their level of suitable jobs. It is therefore expected that any new practice in the organization should require a proper learning platform to ensure that employees are aware of the new practices in the organization, for employees to remain comfortable and satisfied.

The study examined the effect of employee dynamic capability on organizational adaptation within the contemporary business landscape. Despite the recognized importance of dynamic capabilities for organizational success, there is a gap in the literature regarding how some specific aspects of employee dynamic capability contributes to a firm's adaptive capacity. In order to improve firm's adaptive tenacity, this study aims to address this gap

by investigating the subtle mechanisms through which employee dynamic capability influences and enhances a firm's ability to adapt to changing environments, thereby providing valuable insights for both academic research and practical implications for organizational management of selected oil and gas firms in Warri Delta State.

### Research Objective

- i To examine the effect of sensing capability on organizational adaptation of selected oil and gas firms in Warri Delta State
- ii To evaluate the effect of learning capability on organizational adaptation of selected oil and gas firms in Warri Delta State
- iii To ascertain the effect of reconfiguration capability on organizational adaptation of selected oil and gas firms in Warri Delta State

### Research Question

- i. What are the effects of sensing capability on organizational adaptation of selected oil and gas firms in Warri Delta State?
- ii. What are the effects of learning capability on organizational adaptation of selected oil and gas firms in Warri Delta State?
- iii. What are the effects of reconfiguration capability on organizational adaptation of selected oil and gas firms in Warri Delta State?

### Statement of Hypotheses

The following null hypotheses guided the study

- H<sub>01</sub>: sensing capability has no significant effect on organizational adaptation of selected oil and gas firms in Warri, Delta State
- H<sub>02</sub>: learning capability has no significant effect on organizational adaptation of selected oil and gas firms in Warri, Delta State
- H<sub>03</sub>: reconfiguration capability has no significant effect on organizational adaptation of selected oil and gas firms in Warri, Delta State

## II. REVIEW OF RELATED LITERATURE

### Concept of Dynamic Capability

The concept of dynamic capabilities has emanated from the resource-based view (RBV) for its ability to meet rapid environmental changes (Teece, 2007). Since the initial introduction of the concept by (Teece et al., 2007) is gaining greater attention in the literature. He defines dynamic capabilities as a firm's ability to integrate, build and

reconfigure internal and external competencies to address rapidly changing environments. Further, Eisenhardt and Martin (2020) describe dynamic capabilities as a set of specific and identifiable processes such as product development, strategic decision making, and aliening. Employee dynamic capabilities are distinctive in their details and path dependent on their emergence; they have significant commonalities across firms (Zollo & Winter, 2012) define dynamic capabilities as a learned and stable collective processes enable organization systematically creates and modifies its operational activities in order to improve effectiveness (Zahra & George, 2012) state that dynamic capabilities are basically changing-oriented capabilities that enable firms to renew and reconfigure their resource base to meet evolving customer demands and competitor strategies.

Dynamic capabilities involve the processes required for recognition of new opportunities and harmonization of group of related organizations, given the changing circumstances (Ellonen, 2009). Much effort has been made through optimization research (or benchmarking research programs) on employee development, especially for senior staff that seems to have more influence over organization strategy and performance. These efforts have yielded three general categories of dynamic capabilities in organizations and their administrators: (1) sensing capability, (2) seizing capability, and (3) reconfiguration capability.

More recent Rao (2016) describes dynamic capabilities as firm's capability to manage alliances, learn, integrate and reconfigure resource base to address the changing business conditions. The literature discussed on dynamic capabilities is confused with discrepancies and overlapping definitions. Several scholars suggest to better understand the nature of dynamic capabilities is distinguish between dynamic and operational capabilities. Helfat et al., (2017) distinguish between dynamic and operational capabilities. They state that operational capabilities firm ability to perform their everyday functional activities, while dynamic capabilities are used to maintain the current status. (Teece, 2017) explains that operational capabilities are organizations ability to maintain its technical competences by ensuring the efficiency of its operational activities, while dynamic capabilities help a firm's to sustain evolutionary competences by enabling the build, renewal, and reconfiguration of its resource base, thereby achieve sustainable competitive advantage. In results, employee dynamic capabilities are organization's cumulative capacity enabling the creation, extension, and

modification of its operational capabilities systematically (Protogerou et al., 2011).

Employee dynamic capability contributes to firm's adaptation. The impact of employee's dynamic capabilities on firm's adaptation has been an attractive issue among scholars. However, the way employee dynamic capability affect firm's adaptation is still under investigation. Also, the empirical studies on this linkage are limited. Helfat and Peteraf, (2019) argue that employee dynamic capabilities do not directly affect organizational adaptation and performance. They affect organizational adaptation and performance indirectly by integrating and reconfiguring resources to address the environmental turbulence or to create internal and external change (Eisenhardt & Martin, 2000; López, 2015). Dynamic capabilities create and define the firm's individual resource configuration, which shapes the firm's competitiveness and therefore performance (Galunic & Eisenhardt, 2021). Dynamic capabilities are the key to adoption to the competitive intensity and strive for survival that leads to enhancing the effectiveness of organizational performance (Wilden et al, 2013).

Finally, by employing reconfiguring capability enable organizations to discard, modify, or rebuild in order to adjust their operating routines to new conditions (Teece et al., 2017). In sum, dynamic capabilities contribute to organizational effectiveness through an effective modification of existing operating routines, enabling the organization to adopt environmental changes by way of sensing environmental conditions, learning response patterns and reconfiguring operating routines. Therefore, use dynamic capabilities enhance organizational effectiveness and performance. The impact of dynamic capabilities on organizational effectiveness and performance depends on the organizational context. Both the internal and external contexts are significant in the understanding effect of dynamic capabilities. Internal fit describes the congruent between dynamic capabilities and organizational structure, and external fit, characterized in matching dynamic capabilities and levels of competitive intensity, represent to fundamental requirements that support the role of dynamic capabilities in affecting organizational effectiveness and performance (Wilden et al., 2013). Dynamic capabilities are a multidimensional construct of interrelated and complementary dimensions (Barreto, 2010; Teece, 2017). In order to explore in an integrated way, the impact of dynamic capabilities on organizational effectiveness this study determined the dynamic capabilities in three measured dimensions: sensing

capability, learning capability, and reconfiguration capability. Sensing capability measures the organization's ability to recognize shifts in the environment to discover opportunities that could impact the organization's business. Learning capability measures the organization's ability to create internal knowledge, to acquire external knowledge, and to assimilate internal and external knowledge through knowledge sharing. Reconfiguration capability measures the organization's ability to create new capabilities, reconfigure assets and organizational structures to address the markets and technologies changes.

### **Sensing Capability and Organizational Adaptation**

The sensing capability has been recognized as one of the vital components of dynamic capabilities to enhance sustainable organizational adaptation. It is defined as an organization's capability to identify, interpret, and pursue innovative opportunities in its business environment as well as the ability to resist innovative threats (Teece, 2017). For example, through sensing capability, organizations can continuously analyze their strength and weakness, which compels them to innovate their products and processes to reduce the negative impact of threats posed by their key competitors. Similarly, Chatwani (2019) argues that a relationship exists between strategic planning intensity and sensing capability. However, few empirical investigations have examined the moderating effect of sensing capability (Zahra & George, 2002; Kotha, Zheng, & George, 2021). Besides the main effect, this study examines the moderating effect of sensing capability on the relationship between strategic planning intensity and innovation performance.

### **Learning Capability and Organizational Adaptation**

Learning capability as the source of knowledge creation and knowledge as a unique, inimitable and infinite resource (Kocoglu, et al., 2021), is emphasized as an important factor for realizing organization's competitive advantages. It is also considered as a key factor for gaining a sustainable competitive advantage and enhanced organization adaptation (Martínez-Costa & Jiménez-Jiménez, 2019). Previous study that examined the effects of collaboration and team learning, continuous learning, inquiry and dialogue, empowerment of people, connection of organization to its environment and the support of leadership on the financial measurement of adaptation demonstrated that the relationship between

organizational learning practices and organization's financial adaptation are positively linked (Ellinger, et al., 2012).

Furthermore, it is stated that knowledge creation through generative learning that creates core competency, develops flexible strategy by questioning the ineffective strategy, realizes the innovative disruptions as customer satisfaction maximization tool rather than customer feedback are some of direct and positive influences of learning (Baker & Sinkula, 2019). The impact of organizational learning on organization adaptation is further indicated by (Martínez-Costa & Jiménez-Jiménez, 2019). It is argued that organizations better at learning get a better chance of sensing events and trends in marketplace which will in turn lead to better sales and increased market share, flexible and responsive structure that responds new challenges faster than the competitors, and fast improvement of market information processing activities. Consistent with this (Chaveerug & Ussahawanitchakit, 2018) claimed that the greater commitment to learning, the more likely that organizations will achieve higher organizational adaptation. Similarly, studies by (Kocoglu, et al., 2011; Onağ, et al., 2014) consolidated that organizational learning capability enhances organization adaptation.

### **Reconfiguration Capability and Organizational Adaptation**

Change is the lifelong practice of organizations, changes in the organizations take place to increase productivity, by using good strategic plan, which helps the organization to be more efficient and innovative, (Wachira & Anyieni, 2017). Organizational change is the process of changing an existing organization or transition of an organization from one state to another by modifying structure, work activities, technology, and goal of the organization in response to external or internal pressures. employee restructuring or reconfiguration seems to have become a way of life and a feature of many organizations. Reconfiguration is an act of reorganizing the legal, ownership, operational or other structures of the organization to make it more profitable and better organized for its present needs. Reconfiguration is a crucial strategy to remain competitive in the business world. Reconfiguration capability is a process that organizations properly split, clustered, and coordinate their jobs and tasks (Avdelidou-Fischer, 2015). Reconfiguration is strategically a rearrangement to attain the objectives, vision and mission of the organization. The causes of organizational restructuring can be needed to reduce organizational costs, increase productivity due to

declining sales, falling stock, and capital market situations, to improve poor financial performance unbalanced staffing, changes in the business environment, inconsistent or fragmented communications, due to excess production capacity of goods or services, due to customers preferences, technology, the need for new skills, capabilities and turnover and overall competitiveness; these will be the driving force for organizational change. Euro found (2017) stated that mergers, internal reorganizations, job cutting or delocalization used as a means of organizational restructuring. Organizations implement organizational restructure in seek of opportunities, to improve poor performance, to enhance empowerment and to be competent in the market (Akib, et al., 2019; Bowman).

### **Dynamic Capability Theory**

The capabilities approach is a holistic approach, not only because it allows overarching competencies to be developed, but also because it focuses on both the internal and external environments. The Dynamic Capability Theory emphasize the key role of strategic management in suitably adapting, integrating, and reconfiguring internal and external organizational skills, wealth, and purposeful competencies to match the necessities of a changing environment' (Teece et al., 1997). Because the capabilities approach focuses on processes, when a business can still specialize in one or a few specific processes that they do best, but these processes should be overarching, so that they can rimpact all business assets. This approach allows businesses to become superior at one capability, which will enable them to utilize all external and internal assets in the most competitive manner. Capabilities are multifaceted bundles of skills and knowledge entrenched in organizational processes (Helfact& Peteraf, 2003).

They are critical sources of sustainable organizational adaptation used by firms to control their assets and accomplish better performance. Distinctive capabilities enable firms to convene customer needs more efficiently and cost proficiently. Capabilities serve as the 'glue' that binds dissimilar resources together and allows them to be deployed to utmost advantage (Day, 2014). The predominant view in past research work is that capabilities are positively allied with performance (Day, 2014). Nevertheless, a number of studies report that capabilities can turn into core rigidities and might even have a negative influence on some aspects of firm performance. Consequently, empirical generalizations through a meta-analysis would aid in assessing the generally impact of firm

capabilities on performance and emphasize study distinctiveness that may cause variation in the capability-performance relationship.

Capabilities reside in organizational processes and routines that are complicated to duplicate, enabling firms to enjoy sustainable advantage over their rivals. Capabilities have been demarcated into those that belong in different functional areas such as R&D, products development and marketing in the case of research institutes. Marketing capability, therefore, is the organizational competence that supports market sensing and customer connecting (Day, 2014). The theory also emphasized the exploitation of the firm-specific existing knowledge in the creation of new knowledge to enhance productivity and development, which is the main concern of this study. According to the theory, learning capabilities include expertise, knowledge documents, lessons learned, policy and procedures, and data.

### III. Review of Empirical Studies

Jasna Prester (2023), examined the relationship between operating and dynamic capabilities and their impacts on operating and business performance in Croatia. He used the confirmatory factor analysis, verified a new measurement model for measuring dynamic capabilities based on current propositions in the literature, and used a database of 1008 manufacturing sites from 16 countries. The indirect and direct effects of dynamic capabilities on ordinary capabilities and operating and business performance were also checked and the tests were performed through SEM in AMOS and OLS in SPSS. The mediating and moderating effects of dynamic capabilities measured showed only partial mediation and only low and non-significant levels of moderation, meaning that further analysis of their interrelationships on performance should be investigated. Measurement models for dynamic capabilities are especially scarce. Virtually no work dealt with dynamic capabilities in the field of operations management; yet it is exactly by means of operations that one can verify the dynamic capabilities being used and what benefits they bring.

Sheikhi, Zatzick and Babapour (2022), studied the effect of dynamic capability view in exploring the relationship between high-performance work systems and innovation performance in Iran. The aim of the study was to develop and test the framework that theories of high-performance work systems (HPWS) a set of interrelated HR practices build dynamic capabilities (i.e. learning, integration, and reconfiguration capabilities), which in turn leads to innovative

performance. They also hypothesize that organizations with a stronger innovation culture, where employees share a common understanding of the value and importance of innovation, will be better able to convert capabilities into innovative performance. The hypotheses were tested using time-lagged, multisource data from 173 companies in the Iranian pharmaceutical industry, a knowledge-intensive, high-velocity environment highly dependent on HRs to innovate. The results revealed that the relationship between HPWS and innovation performance is mediated by dynamic capabilities (DCs). Their findings revealed that innovation culture moderates the indirect effect of HPWS on innovation performance via DCs such that culture strengthens the mediated relationship.

Gizem and Ömür (2023) examined the effect of organizational learning capability on the moderating effect of organizational resilience in turbulent markets in Iraq. Moreover, the study was aimed at developing a moderated mediation model that measures both the indirect effect of organizational learning capability on organizational performance, and the direct effect of organizational learning capability on organizational performance, with the mediating effect of organizational resilience under the moderation of market turbulence. The study adopted the instrument of questionnaire for primary data, which was applied to the high-level managers of 109 manufacturing organizations. According to the findings from the data obtained in the study, it was seen that organizational learning capability plays an important role in order to have strong organizational performance in turbulent markets, with the help of the mediating effect of organizational resilience.

Shamim, Tian, Shuja, Shleikh and Iram (2021) analyzed the impact of organizational learning capability on the innovation performance of the firms in Iraq. This study also observes the mediating role of information technology adoption between the relationship of organizational learning capability and innovation performance. Data were collected from employees of banks via questionnaire method and furthered analysed by using SmartPLS software. The results explained that organizational learning capability has a positive and significant impact on innovation performance directly. Moreover, they said variables also positively and significantly affect innovation performance when mediated by the firm's information technology adoption.

Rina and Setyo (2021) analyzed the effect of Dynamic Capability on Knowledge Management, analyze the effect of Dynamic Capability on Employee Performance, and to analyze the effect of

Knowledge Management on Employee Performance in SINOTRUK companies. The data analysis technique used is the Structural Equation Modeling (SEM) method, the method of collecting data using a questionnaire to employee SINOTRUK. Sampling technique using purposive sampling method with a sample size of 120 respondents. Based on the results of the study it can be concluded that Dynamic Capability has on positive effect on Knowledge Management, Dynamic Capability has a positive effect on Employee Performance, and Knowledge Management also has a positive effect on Employee Performance.

Agnieszka and Katarzyna (2020) examined EDC (Employees' Dynamic Capabilities)—and the mechanism of its influence on the job performance of contemporary employees aiming to contribute to the sustainable development of organizations in Wroclaw, Poland. Their paper was aimed at defining and characterizing Employee Dynamic Capability and then develop a mediation model of EDC influence on job performance, introducing the person–job fit, work motivation, job satisfaction, work engagement and organizational commitment as potential mediators related to sustainable development. The model was empirically verified based on the sample of 550 employees from Poland and USA (research carried out in December 2018) using factors analysis for verification of EDC as a new construct and then regression analysis with mediators for the verification of the proposed model. The results confirmed the role of person–job fit, work motivation, job satisfaction and work engagement as mediators of the analyzed relation, underlining the mechanism of the EDC influence on job performance. The empirical research confirms that EDC influences job performance in a way that is crucial for achieving sustainable development of organizations.

Mohanad and Alee (2020) investigated the impact of dynamic capabilities constructs i.e. sensing capability, learning capability, and reconfiguration capability on organizational effectiveness in the selected Small and Medium Scale Enterprises in Indonesia. This study adopted the survey method to collect primary data. An online questionnaire was distributed to around 342 employees, out of which 215 completed questionnaires were obtained. The data were collected during the period from 02- 08-2018 to 03-10-2018. The reliability and validity of the dimensions are assessed through confirmatory factor analysis (CFA) and the hypotheses are tested by using structural equation modeling SEM. The analytical results indicate that sensing capability does not have a positive impact on organizational

effectiveness while learning capability and reconfiguration capability have a positive impact on organizational effectiveness. Thus, this study provides a better understanding of the effects of dynamic capabilities. The results of this study have the potential to help the decision makers of universities to develop learning capability and reconfiguration capability, in turn; universities will be able to achieve superior organizational effectiveness.

Sajjed and Tahere (2020) examined the impact of the Firms operating in culture industry in alignment with the resistive economy from the perspective of the respondents. This is an applied research conducted based on a descriptive, correlational survey design with a combined qualitative-quantitative approach. The statistical population included nearly 20000 managers of the firms operating in the culture industry. We formed a sample consisting of 385 managers based on the Cochran formula for finite population. The required quantitative data were collected using questionnaires. For data analysis, structural equation modeling (SEM) technique was used in PLS software where dynamic capabilities were the independent variables and the organizational culture and performance of the managers in these firms were the dependent variables. The results indicated that the dynamic capabilities, in the form of (valuable) innovations, identified (environmental) opportunities, and reconfigured organizational resources, had a positive and statistically significant effect on management culture and performance in the understudy enterprises.

Zainuddin, Ribka and John (2018) comprehensively analyzed the effect of employee restructuring on the performance of the organization, directly or indirectly in Indonesia, the study involved 276 employees in the education office and the Ministry of Education and Culture offices and data were collected by survey method. Data analysis was done using causal correlation technique to see the effect of organizational restructuring on organization performance. The results of the research indicated that there are direct influence of employee restructuring on organization performance. Another result is that there is an indirect effect of restructuring through employee performance and leadership effectiveness on organization performance. The influence of organization performance improvement was due to organization restructuring implemented in Maluku Province education office which led to behavioural change, where the employees of education office were able to improve individual performance and could work together with the leadership as an

efficient and effective structure which in turn impacted on improving organization performance.

Wayama (2017) assessed the effects of dynamic managerial capabilities on the performance of sugar industry in Western Kenya. The study examined the effect of Participative leadership, relational capability on performance of sugar industry in Western Kenya. A survey design based on samples drawn from across the sugar industry in western Kenya was adopted. The target population was 108 employees. Data was collected by use of questionnaires and analyzed using inferential and descriptive statistics using SPSS version 20. From the results the predictors of performance of sugar industry were dynamic managerial capabilities constructs namely PL, RC with 68.5% of the variation in organization performance (Adjusted R Square = 0.685) and positively related to performance of sugar industry. Therefore, the study recommended that the management of sugar industry and policy makers should formulate, implement and evaluate dynamic managerial capabilities-oriented policies in order to engender high organization performance.

#### IV. METHODOLOGY

This study used a descriptive survey design. The study population comprised of employees of selected oil and gas firms (Rust Control- Warri, Strides Energy and Maritime, Delta

Marine Oil Services, Pan Ocean Oil Corporation Nigeria Ltd., Lubserve Engineering Energy and Nexco Engineering) in Warri, Delta State. A total population of 254 respondents were used for the study. These selected oil and gas employee respondents were expected to have the basic knowledge of employee dynamic capability and organizational adaptation. The sample size for the study was determined using the Taro-Yamane (1964) sample size determination formula. The formula is given as:

$$n = \frac{N}{(1 + N(e^2))}$$

Where n = sample size; N = population size; 1 = constant; e = error limit margin of error of level of significant (accepted error at 5% i.e. 0.05)

$$n = \frac{254}{1 + 254(0.05)^2} = 155.35 = \text{approximately } 155$$

The sample size for the study is 155.

The sampling techniques used for the study was the simple random sampling in which the stratified simple random sampling was used. The data were collected using primary sources. The data collected were analyzed using descriptive and inferential statistical techniques, correlation analysis was used to measure the degree of association between different variables of the study; multiple regression was used to ascertain the strength of relationship that exist among variables.

#### V. ANALYSIS OF DATA

**Table 1 Analysis from the field survey on response rate**

S/N	Questionnaire	Frequency	Percentage
1	Total questionnaire distributed	155	100
2	Questionnaire retrieved	155	100

Source: Distributed Questionnaire (2025)

A total of 155 copies of questionnaire were administered and retrieved. The copies of questionnaire were properly filled, and were useable. Therefore, the analysis in this section was based on the response rate of 100%.

**Table 2 Frequency Analysis of Respondents Profile**

S/N	Characteristics of the Respondents	Frequency	Percentage (%)
1	<b>Gender:</b>		
	Male	83	53
	Female	72	47
	Total	154	100
2	<b>Age Range:</b>		
	Below 30	54	35
	31-40	65	42
	Above 41	35	23
	Total	154	100
3	<b>Marital Status:</b>		
Single	55	36	

	Married	77	50
	Divorced	22	14
	Total	154	100
4	<b>Educational Qualification:</b>		
	OND/ NCE	67	43
	HND/ B.Sc	69	45
	MSc./MBA	18	12
	Total	154	100
5	<b>Work Experience:</b>		
	1-5years	75	49
	6-10years	56	36
	Above 10years	23	15
	Total	154	100

Source: Field Survey, 2025

Table 3 showed the background attributes of the research respondents for analytical purposes representing 100% of the sample size. It was indicated on the gender composition that 83 of the respondents representing 53% of the sample were males while 72 being 47% were females. The age bracket of the respondents showed that 54 of the respondents being 35% were below 30 years of age; 65 of the respondents representing 42% falls within the age bracket of 31-40 years of age; lastly, 35 of the respondents representing 23% were above 41 years of age. The marital composition of the respondents indicated that; 55 of the sample respondents were single being 36%, 77 of the

respondents being 50% were married, while 22 other respondents being 14% were divorced. On the educational background of the sample, it was indicated that most of the respondents have a high level of those with tertiary background with 69 respondents representing 45% being HND/ B.Sc. holders; while 67 respondents being 43% of the sample size were OND/ NCE holders, while 18 respondents being 12% of the sample size were M.Sc/MBA holders. On work experience, 75(49%) of the respondents have below 5 years work experience; 56(36%) of the respondents have 6-10years work experience; while 23(15%) of the respondents have above 11 years work experience.

**Table 3 Correlation Analysis of the Dimensions of Employee Dynamic Capability**

S/N	Dimensions of Employee Dynamic Capability	1	2	3
1	Sensing Capability	0.004	1	
2	Learning Capability	.099	0.506**	1
3	Reconfiguration Capability	0.229**	0.683**	0.597**

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

Table 3 showed that all the correlation coefficients between the constructs in this study showed positive correlation. The correlation coefficient between Sensing Capability and organizational adaptation showed strong positive relationship ( $r = 0.229^{**}$ ,  $p < 0.01$ ). Learning

capability and which is the second variable exhibited positive correlation with organizational adaptation ( $r = 0.683^{**}$ ,  $p < 0.01$ ). Reconfiguration Capability showed positive correlation with organizational adaptation ( $r = 0.597^{**}$ ,  $p < 0.01$ ).

**Table 4 Multiple Regression Analysis of Employee Dynamic Capability Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-3.969	2.262		1.755	.081		

Sensing Capability	.205	.055	.196	3.733	.000	.987	1.013
Learning Capability	.492	.057	.524	8.625	.000	.742	1.347
Reconfiguration Capability	.464	.090	.313	5.131	.000	.735	1.360

a. Dependent Variable: Organizational Adaptation

The general form of the equation to predict EDC =  $\beta_0 + \beta_1ES + \beta_2LC + \beta_3RC + \epsilon$   
 $EDC = -3.969 + 0.205ES + 0.492LC + 0.464RC$

Table 4 showed the multiple regression analysis result for the effects of all the dimensions employee dynamic capability. It was indicated that sensing capability has positive effect on organizational adaptation ( $\beta = 0.196$ ,  $P < 0.05$ ). Learning Capability which is the second has positive effect on organizational adaptation ( $\beta = 0.524$ ,  $P < 0.05$ ). It was indicated that learning capability has positive effect on organizational adaptation ( $\beta =$

$0.313$ ,  $P < 0.05$ ). Table 4.4 indicated that there is no multicollinearity because the VIF of Sensing Capability (1.013), learning capability (1.347), and reconfiguration capability (1.360) towards organizational adaptation are below 10. The tolerance level is more than 0.1 where workload has 0.987, learning capability has 0.742, and reconfiguration capability has 0.735.

**Table 5 Fitness of the Models ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	56.428	3	18.809	71.817	.000 <sup>b</sup>
	Residual	39.286	150	.262		
	Total	95.714	153			

a. Dependent Variable: Organizational Adaptation

b. Predictors: (Constant), sensing capability, learning capability, reconfiguration capability

The *F*-ratio in table 5 tests, showed that the dimensions of employee dynamic capability such as sensing capability, learning capability, and reconfiguration capability statistically predict the dependent variable (organizational adaptation),  $F = 71.817$ ,  $0.000 < 0.05$ . This implies that the regression model is significant for the study.

**Table 6 Model Summary Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768 <sup>a</sup>	.590	.581	.512

a. Predictors: (Constant), sensing capability, learning capability, reconfiguration capability

Table 6 showed that change in sensing capability was brought about by the dimensions of employee dynamic capability by 58% (0.581) as indicated by the adjusted  $R^2$  value. The dimensions of employee dynamic capability explained 58% of the variability in organizational adaptation.

**Test of Hypotheses**

The multiple regression analysis was used as an analytical technique for testing the formulated hypotheses for the study.

**Decision Rule**

If the calculated probability value is higher than the critical significance level, then the null hypothesis is accepted and the alternate hypothesis is rejected.

The P-value is the lowest significant level at which a null hypothesis can be rejected (Gujarati & Porter, 2009). Therefore, the P-value = 0.05(5%).

**H<sub>01</sub>:** sensing capability has no significant effect on organizational adaptation

Since the P value calculated in table 4 is lesser than the critical level of significance ( $0.000 < 0.05$ ), the null hypothesis was rejected while the alternate hypothesis is accepted this implied that sensing capability has significant relationship with organizational adaptation.

**H<sub>02</sub>:** learning capability has no significant effect on organizational adaptation

Since the p value calculated in table 4 is lesser than the critical level of significance ( $0.000 < 0.05$ ), there was need to reject the null hypothesis and accept the alternate hypothesis indicating that learning capability has significant positive relationship with organizational adaptation.

**H<sub>03</sub>:** reconfiguration capability has no significant effect on organizational adaptation

The P value calculated in table 4 is lesser than the critical level of significance ( $0.000 < 0.05$ ), therefore the null hypothesis is rejected while the alternate hypothesis is accepted implying that there is significant effect between reconfiguration capability and organizational adaptation.

## VI. Discussion of Results

In line with the findings from the study analyses, as well as the review of relevant literature, the findings of this study are presented as follows.

### Sensing Capability and Organizational Adaptation

Table 4 showed that sensing capability have significant effect on organizational adaptation ( $\beta = 0.196$ ,  $P < 0.05$ ). Test of hypothesis one showed that sensing capability has significant effect with organizational adaptation ( $0.000 < 0.05$ ). The result is in agreement with Mohanad and Alee (2020) who examined the role of employee sensing capabilities on the organizational performance of small business enterprises (SMEs) in Indonesia. The findings of the study revealed that the employee sensing capability significantly and positively influence the organizational performance. Nevertheless, the moderating effects of organizational culture among the relationship of human resource capabilities, innovation on organizational performance have been reported not supported. Generally, these results supported the view that the human resource capabilities like training and development, skills, innovation with the help of adoption of latest technology can enhance the organizational performance.

### Learning Capability and Organizational Adaptation

Table 4 showed that learning capability effect on organizational adaptation ( $\beta = 0.524$ ,  $P < 0.05$ ). Test of hypothesis two showed that learning capability has significant effect with organizational adaptation ( $0.000 < 0.05$ ). This finding is in tandem with Shamim, Tian, Shuja, Sheikh and Iram (2021) analyzed the impact of organizational learning capability on the innovation performance of the firm. This study also observes the mediating role of information technology adoption between the relationship of organizational learning capability

and innovation performance. Data were collected from employees of banks via questionnaire method and furthered analyzed by using Smarts software. The results explained that organizational learning capability has a positive and significant impact on innovation performance directly. Moreover, they said variables also positively and significantly affect innovation performance when mediated by the firm's information technology adoption.

### Reconfiguration Capability and Organizational Adaptation

Table 4 showed that reconfiguration capability has significant effect on organizational adaptation ( $\beta = 0.313$ ,  $P < 0.05$ ). Test of hypothesis three showed that there is significant positive relationship between reconfiguration capability and organizational adaptation ( $0.000 < 0.05$ ). This finding is in conformity with Zainuddin, Ribka and John (2018) who focused of this research is to comprehensively analyze the effect of employee restructuring on the performance of the organization, directly or indirectly, involving 276 employees in the education office and the Ministry of Education and Culture offices in Indonesia and collected by survey method. Data analysis was done using causal correlation technique to see the effect of organization restructuring on organization performance. The results of the research indicate that there is a direct influence of employee restructuring on organization performance.

## VII. Findings

The findings from the study are summarized as follows:

- i. The study discovered that sensing capability has significant effect on organizational adaptation ( $\beta = 0.196$ ,  $P < 0.05$ ).
- ii. The study revealed that learning capability which is the second has significant effect on organizational adaptation ( $\beta = 0.524$ ,  $P < 0.05$ ).
- iii. It was discovered that learning capability has positive significant relationship on organizational adaptation ( $\beta = 0.313$ ,  $P < 0.05$ ).

## VIII. Conclusion

In terms of managerial implications, the results of this study provide key implications for managers on how to build and develop employee dynamic capabilities in order to enhance organizational adaptation.

The results from the analysis confirm that sensing capability, learning capability and

reconfiguration capability have a significant impact on organizational adaptation, in this case, managers should focus and put into practice the creation of learning capability and reconfiguration capability instead of sensing capability. For example, managers need to pay attention to how to acquire new knowledge and integrate it into the existing structures through learning capability and how to create new capabilities, rebuild resources and organizational structures to address the environmental turbulence through reconfiguration capability, in turn; oil and gas firms will be able to achieve superior organizational adaptations.

### IX. Recommendations

Based on the result from the study, the following are recommended

- i. The study points to the potential for new fruitful developments in the area of sensing capability of employees and strategic control processes that may allow firms to become more responsive in the face of dynamic environmental conditions by utilizing subtle insights obtained by front-line employees in their day-to-day operations
- ii. The study recommends that management of organizations use reconfiguration capacity as a dimension of employee dynamic capability to restructure their organization when centralization is not giving required organizational adaptation.
- iii. Supporting the culture of learning capability of employees in oil and gas firms, where it is considered one of the pillars of the learning organization. Supporting the culture of learning capability ensures the acquisition of knowledge and capabilities of workers by generating knowledge acquired by workers within firms.

### REFERENCES

- [1]. Alegre, J., & Chiva, R. (2018). Assessing the Impact of Organizational Learning Capability on Product Innovation Performance: An Empirical Test. *Technovation*, 28(06), 315-326. doi:10.1016/j.technovation.2007.09.003.
- [2]. Barreto, I. (2010). *Dynamic capabilities: A review of past research and an agenda for the future*. *Journal of Management*, 36(1). 256–280.
- [3]. Danneels, E. (2012). Second-order competences and schumpeterian rents. *Strategic Entrepreneurship Journal*, 6(1), 42–58.
- [4]. Danneels, E. (2016). Survey measures of first- and second-order competences. *Strategic Management Journal*, 37(10), 2174–2188
- [5]. Day, S. (2011). Closing the marketing capabilities gap. *Journal of Marketing*, 75(4): 183–195.
- [6]. Eisenhardt, K. M., & Martin, J. A. (2020). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10)-11, 1105–1121.
- [7]. Ellinger, A. D., Ellinger, A. E., Yang, B. & Howt, S. W. (2012). The Relationship between the Learning Organization Concept and Firms' Financial Performance: An Empirical Assessment. *Human Resource Development*, 13(1), 5-29.
- [8]. Helfat, C. E. & Peteraf, M. A. (2003). The dynamic resource-based view: capability lifecycles. *Strategic Management Journal*, 24 (10), 997-1010.
- [9]. Helfat, C. E., & Peteraf, M. A. (2009). Understanding dynamic capabilities: Progress along a developmental path. *Strategic Organization*, 7(1), 91–102.
- [10]. Helfat, C. F. (2017). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Oxford: Blackwell Publishing.
- [11]. Kocoglu, I., Imamoglu, S. Z., Ince , H. & Keskin , H. (2021), The relationship between organizational learning and firm performance: the mediating roles of innovation and total quality management. *Journal of Global Strategic*
- [12]. Mandinach, E. B., & Cline, H. F. (2013). *Implementing a Technology-Based Learning Environment* (st ed.). Routledge.
- [13]. Onağ, A. O., Tepeci, M. & Başalpc, A. . A. (2014), Organizational Learning Capability and its Impact on Firm Innovativeness. *Procedia - Social and Behavioral Sciences*, 150, 708 -717.
- [14]. Protogerou, A. C. (2012). Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change*, 21(3), 615–647.
- [15]. Protogerou, A., Caloghirou, Y., & Lioukas, S. (2012). Dynamic capabilities and their indirect impact on firm performance.

- Industrial and Corporate Change, 21(3), 615–647.
- [16]. Rao, B. S. (2016). Effect of intellectual capital on dynamic capabilities. *Journal of Organizational Change Management*, 29(2).
- [17]. Sampson, R. C. (2015). Experience effects and collaborative returns in R&D alliances. *Strategic Management Journal*, 26(11), 1009–1031.
- [18]. Schilke, O. (2014). On the contingent value of dynamic capabilities for competitive advantage: The nonlinear moderating effect of environmental dynamism. *Strategic Management Journal*, 35(2), 179–203.
- [19]. Teece, D. J. (2017). Explicating dynamic capabilities: the nature and micro-foundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13). 1319–1350.
- [20]. Teece, D. J., & Pisano, G. a. (2017). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7). 509–533.
- [21]. Zahra, S. A. (2016). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), pp. 917–955.
- [22]. Zahra, S., & George, G. (2012). The net-enabled business innovation cycle and the evolution of dynamic capabilities. *Information Systems Research*, 13(2), 147–155.
- [23]. Zollo, M., & Winter, S. G. (2012). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3), 339–351.
- [24]. Wilden, R. G. (2013). Dynamic capabilities and performance: Strategy, structure, and environment. *Long Range Planning*, 46(1–2), 72–96.
- [25]. Schumacker, Randall E. & Lomax, R.G.(2010). A beginner’s guide to structural equation modeling. Taylor & Francis Group, New York.
- [26]. Spicer, D. P., & Sadler-Smith, E. (2016). Organizational learning in smaller manufacturing firms. *International Small Business Journal*, 24(02), 133–158. doi:10.1177/0266242606061836
- [27]. Rehman, K. u., & Saeed, Z. (2015). Impact of Dynamic Capabilities on Firm Performance: Moderating Role of Organizational Competencies. *Sukkur Journal of Business Administration*, 2(2).
- [28]. Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9(1), 31–51.
- [29]. Wang, H. C., He, J., & Mahoney, J. T. (2009). Firm-specific knowledge resources and competitive advantage: The roles of economic- and relationship-based employee governance mechanisms. *Strategic Management Journal*, 30(12), 1265–1285.
- [30]. Zahra, S. A., & Bogner, W. C. (2000). Technology strategy and software new ventures’ performance: Exploring the moderating effect of the competitive environment. *Journal of Business Venturing*, 15(2), 135–173.
- [31]. Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of Management Review*, 27(2), 185–203.
- [32]. Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955. Zhang, Y., Li, H., Li, Y., & Zhou, L. A. (2010). FDI spillovers in an emerging market: The role of foreign firms’ country origin diversity and domestic firms’ absorptive capacity. *Strategic Management Journal*, 31(9), 969–989.