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HUMAN CAPITAL DEVELOPMENT AND EXPLORATION AMONG OIL SERVICING FIRMS IN RIVERS STATE

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ABSTRACT

This work examined the relationship between human capital development and exploration among oil servicing firms in Rivers State. Objectives of the study were to examine how human capital development relates with exploration in terms of risk taking and flexibility. The study adopted the survey research design. The target population for this study comprised of 40 managers from 10 oil servicing firms in Rivers State, which was purposefully adopted as the sample size. Data were collected through primary (questionnaire). A structured questionnaire designed in four point likert rating scale format was adopted for the collection of data. Spearman Ranking (r) was used for the test of hypotheses via SPSS Version 25.0. The findings revealed that there is a significant relationship between human capital development and exploration among oil servicing firms in Rivers State. The study concluded that human capital development enhances exploration of firms. The study recommended that management of oil servicing firms in Rivers State should invest in training programs that focus on technical skills (such as drilling technologies, safety protocols, and environmental management), so as to empower their workforce to make informed decisions when faced with risks; Management of oil servicing firms in Rivers State should create a workforce that is adaptable to changing operational demands through training programmes as such would enable its workforce to transition more smoothly to better exploratory operations with ease.

Keywords: Human capital development, exploration, risk taking and flexibility.

Background to the Study

Exploration is one of the core functions of oil servicing firms in Rivers State. It is the systematic and intentional process of actively seeking, identifying, and implementing new opportunities, technologies, or methodologies within the domain of seismic data processing. Exploration is essential for oil servicing firms to remain innovative, competitive and resilient in an ever-changing industry landscape. It is a strategic imperative that contributes to technological advancement, market diversification, and the overall success and sustainability of companies operating in the oil sector. Exploration drives technological innovation in oil servicing firms (Akpieyi, 2024; Campanella, et al., 2020). Exploration could manifest by taking risk or flexibility.

Risk-taking denotes the willingness to engage in uncertain situations or make decisions with potentially adverse outcomes, all with the understanding that there is a chance of failure or loss. Without taking risks, oil servicing firms would not be able to achieve their goals or make progress (Stettner & Lavie, 2013). Flexibility denotes the capability of an organisation to explore new opportunities in order to adapt to or prepare for new events innovatively. Organisations which are flexible tend to be open-minded, versatile and responsive to different challenges and opportunities (Penrose, 2016). Drawing from the above, it is crucial to state that risk-taking fosters innovation while flexibility enhances responsiveness, both of which are vital for organizations aiming for successful exploration in today's fast-paced business environment. However, among others, it is important to note that effective exploration among oil servicing firms is closely linked to human capital development due to several interrelated factors.

According to Obi-Anike and Ekwe (2017), human capital development refers to the entire programme of assisting employee grow with the company so that they can be fitted for available higher positions beyond their capacity. This implies that the skills, knowledge, and experience

possessed by individuals which is critical for enhancing productivity and innovation within organizations are enhanced. To this end, the development of human capital can significantly influence a company's operational efficiency, technological advancement, and overall success in discovering and extracting oil resources.

The examination of the relationship between human capital development and exploration among oil-producing companies in Rivers State is a significant area to be studied due to the critical role that human resources play in the oil and gas sector, particularly in regions rich in natural resources. More so, from extant literature its relationship has not been validated. It is on this premise, the researcher to examine the relationship between human capital development and exploration among oil servicing firms in Rivers State.

Problem of Study

There are times were oil-servicing firms are inefficient, inadequate, or fail in the processes of discovering and extracting oil reserves. This manifests in their inadequate management of financial, operational, and environmental risks that can lead to significant losses or adverse outcomes, even when the oil industry is inherently volatile due to fluctuating oil prices, geopolitical tensions, regulatory changes, and environmental concerns. More so, some oil servicing firms are unable to adapt quickly and effectively to changing market conditions, regulatory environments, technological advancements, or shifts in consumer preferences. This phenomenon among others could be traceable to the inadequate skills, knowledge and ideas required of their workforce in the course of carrying out their tasks and responsibilities. These deficiencies hamper exploratory processes and operations which are capable of placing the companies at shipwreck. More so, research has shown that human capital development enhances exploration of firms (Doghor, 2024). However, from extant literature, the relationship between human capital development and exploration among oil servicing firms in Rivers State is yet to be established, hence the conduct of this study.

Conceptual Framework

Fig. 1.1: Conceptual Framework Showing Relationship between Human Capital Development

Source: Doghor (2024)

Aim and Objectives

The aim of the study was to examine the relationship between human capital development and exploration among oil servicing firms in Rivers State. However, specific objectives were to:

1. Ascertain the relationship between human capital development and risk taking among oil servicing firms in Rivers State.
2. Ascertain the relationship between human capital development and flexibility among oil servicing firms in Rivers State.

Research Questions

1. What is the relationship between human capital development and risk taking among oil servicing firms in Rivers State?
2. What is the relationship between human capital development and flexibility among oil servicing firms in Rivers State?

Hypotheses

In the course of carrying out this study, two (2) null hypotheses were tested which were stated thus:

Ho_1: There is no significant relationship between human capital development and risk taking among oil servicing firms in Rivers State.

Ho_2: There is no significant relationship between human capital development and flexibility among oil servicing firms in Rivers State.

Concept of Human Capital Development

Human capital can be said to be specifically within an economic setting as a manufacturing factor, and as an economic term used to describe the skills and knowledge that individuals attract upon to generate outputs of value, such as innovation and productivity in job performance. It is no exaggeration in the assertion that the most significant resource of any organisation is often said to be its people. Capital development is the process by which people and organisations create and strengthen their capacity over time (Vega, 2017). Support to capacity development are the inputs and processes that external actor, whether domestic or foreign can deliver to catalyze or support capital development of persons, an organisation, or a network of organisations.

Drawing from the above, Obi-Anike and Ekwe (2017) defined human capital development as the entire programme of assisting employee grow with the company so that they can be fitted for available higher positions beyond their capacity. Human capital development is a function of management aimed at helping employees to acquire the necessary knowledge and skills to meet the organisation's task required of them and assume more complex responsibilities. It means preparing an employee for a future, but well-defined job at a higher level. According to Obi-Anike and Ekwe (2017), the first systematic effort on organisational development in education was carried out in the 1960s by Miles, who worked with a school district near New York City and one near Pittsburgh. Human capital development began almost a century ago, with a range of approaches that varied from university degrees such as the MBA, through non-degree executive development courses or open programmes of differing lengths, to tailored, in-company equivalents (Jackson, et al. in Ewhu, 2015).

Chukwunenye and Igboke (2016) broadly refer to human capital development as job enrichment that has an intrinsic mechanism to motivate a senior staff to accept and play challenging organisational tasks. Specifically, human capital development involves activities that enable a senior staff to comfortably and conveniently perform organisational tasks. It refers to activities and programmes designed specifically to improve the skills and capability of those at the managerial cadre. Development represents the planned opportunity that is provided for training, educating, directing and planning experience, growth and training opportunity provided for those who perform the management function. Human capital development is said to be about training and the development of these potential capabilities of the human capital or the people. They discoursed that human capital development is very crucial in order to have the maximum utilization of the manpower for the benefit and advantage of both the employees and the organisation (Oladipupo & Olubusayo, 2020).

Human capital development refer to the process, strategies or approaches adopted by management of an organisation to enhance and optimize the knowledge, skills, abilities, and overall capacities of individuals within an organisation. Effective human capital development is often tailored to the

specific needs and goals of the organisation, taking into account the industry, workforce demographics, and strategic objectives. Nabi, et al. (2023), continuous assessment and adaptation of these methods are essential for staying responsive to changing organisational dynamics and external factors. The idea behind human capital development was, and still is, to provide advanced management training and education to mature, motivated and experienced managers. The main focus of both university open programmes and in-house programmes was, and still is, on the individual development of executives in order to improve their performance and prepare them for future positions. Over the years the preponderance of undergraduate management programmes has increased, with large numbers of universities offering business studies degrees, resulting in more managers having followed management education programmes by the time they reach senior management levels (Dawodu & Akintunde, 2023). Whatever approach is adopted, there have always been problems with executive capacity development that are still in evidence today: transferring knowledge back to the job and the difficulty of measuring the benefits of development, are two examples.

It is possible for returnees (business executives who undergo capacity building programmes outside the organisation) to encounter resistance to their new ideas from colleagues who had not had the benefit of following the course (Tichy in Jackson, et al., 2017). In the past, and indeed today, some organisations were never convinced of the relevance of formal executive education. Instead, they preferred their executives to gain experience on-the-job through such methods as job rotation and project assignments, which they believed equipped them with enough knowledge of vital operations to prepare them for senior-level positions. More formal training was left to individual initiative as a form of self-development (Jyoti et al., 2020; Manzini & Kufa, 2016). Whether university-based, in-house, or a combination of the two, executive capacity development today tends to cover global issues such as culture, employment conditions, and the pursuit of opportunities in foreign markets. It provides specific knowledge of how organisations can survive in a globally competitive world. Human capital development stresses the importance of leadership, communication, the customer relationship and implementing organisational change to harness business opportunities.

Concept of Exploration

The concept of exploration refers to the set of activities and strategies that focus on seeking out new opportunities, fostering innovation, and venturing into uncharted territory (Lee, et al., 2021). It involves an organisation's capacity to experiment with novel ideas, technologies, or business models in order to discover and create new sources of value. To Birkinshaw and Gupta (2013), exploration emphasizes the generation of new ideas, the cultivation of a culture of innovation, and the encouragement of creative thinking. It involves exploring unconventional solutions and approaches. Organisations engaged in exploration actively seek to develop new products or services that may not have been part of their existing portfolio. This involves identifying emerging trends, customer needs, and technological advancements. Exploration extends beyond the boundaries of current markets. Organisations explore new geographic regions, demographic segments, or niche markets to identify untapped opportunities and potential sources of growth. The exploration process often involves experimentation, prototyping, and testing of new concepts. This allows organisations to learn from failures, iterate on ideas, and refine their innovations before scaling them (Birkinshaw & Gupta, 2013; Raisch et al., 2019; Stadler et al., 2014).

Exploration in this domain is focused on staying at the forefront of technological developments, methodologies, and business strategies to maintain a competitive edge and address the evolving challenges of the industry. Jansen et al. (2014) opined that exploration involves staying abreast of the latest technological advancements in seismic data processing. This includes the adoption of cutting-edge processing algorithms, software tools, and hardware innovations that can enhance the efficiency and accuracy of oil data interpretation. Oil servicing firms engaged in exploration actively seek and develop innovative processing techniques through experimentation with novel approaches to improve the resolution, imaging quality, and interpretation of subsurface structures. Companies

explore how these technologies can be integrated into oil servicing firms to automate tasks, enhance predictive capabilities, and improve overall efficiency. Exploration often involves fostering collaboration across disciplines (Jansen, et al., 2014). This study indicates exploration in terms of risk taking and flexibility.

Risk Taking: Risk-taking is a fundamental aspect of human behavior and a key driver of innovation, progress, and personal development. It involves the willingness to engage in uncertain situations or make decisions with potentially adverse outcomes, all with the understanding that there is a chance of failure or loss. While often associated with entrepreneurship and business, risk-taking permeates various facets of life, contributing to individual growth, societal advancement, and the evolution of organisations (Stettner & Lavie, 2013). Risk-taking is the intentional exposure to uncertainty, with the potential for both positive and negative outcomes. It is a conscious choice to step outside one's comfort zone and embrace challenges that have the potential to lead to success or failure. Risk taking is the willingness to take chances and to act in the face of uncertainty. It is a critical component of many business decisions, as well as of everyday life. Without taking risks, individuals and organisations would not be able to achieve their goals or make progress. However, taking risks also involves the possibility of failure, so it is important to balance risk-taking with caution and prudence (Stettner & Lavie, 2013). The ability to strike the right balance is a key component of success. Effective risk-takers are those who can assess the potential benefits and costs of a particular risk, and then act in a way that maximizes the chances of success while minimizing lost.

Flexibility: Flexibility implies that business organisations explore new opportunities in order to adapt to or prepare for new events, but succeeds commercially only to the extent that it is able to exploit these new opportunities. Therefore, flexibility rests on some sort of balance between exploration and application of assets (Teece, et al., 1997). While exploration often requires that existing avenues for action are put aside from the organisational repertoire, application rests on the organisational ability to ensure a certain level of behavioural regularity (Teece, et al., 1997). This work sees flexibility as the capability of an organisation to explore new opportunities in order to adapt to or prepare for new events innovatively. Flexibility denotes the organisational capacity to respond to a turbulent environment through innovation development of products, services and processes, based on a culture of learning and renewal (Lundvall, 1992). This definition builds on the concept of a learning economy, in which human resources and innovation development are at the center of strategic interests (Lundvall & Johnson, 2015). The most representative of the surveys following such an approach is the survey developed by the Danish Research Unit for Industrial Dynamics. It focused on the search for organisational traits related to organisational capacity to react and evolve when faced with unstable environments (Volberda, et al., 2010). It involves being open-minded, versatile, and responsive to different challenges and opportunities. Flexibility involves being able to adjust one's plans, strategies, or behaviors in response to new information, unexpected events, or changing conditions. This adaptability allows individuals and organizations to thrive in dynamic environments (Hamel & Prahalad, 2015; Penrose, 2016).

Theoretical Framework

This study is theoretical founded on human capital development theory developed by Theodore W. Schultz in 1961. The theory posed the following assumptions: Individuals are rational and will make investments in their own human capital if they expect those investments to have positive return; Human capital is a productive asset that can lead to increased productivity and economic growth; Human capital is transferable and can be used in different contexts and environment; Human capital can be enhanced through investments in education, training, and other forms of learning.

The implications of human capital development theory to this study "human capital development and exploration" is noted from the fact that its emphasis is on the value of investments in individuals in the organisation. Organisation that invests in the development of their employees' skills and

knowledge, are more likely to explore in business with cognizance to risk taking and flexibility. This is because the organisation will in turn have a workforce that is more adaptable, innovative, and able to respond to respond to changing circumstances. Furthermore, employees who feel that their employers is investing in their development are more likely to be engaged and motivated, which can lead to better performance and results.

Procedure

The study adopted the survey research design. The population of the study was drawn from 10 oil servicing firms in Rivers State. The sampling for this study was done using purposive sampling so as to reach out to those organizations where data can be easily assessed. Managers such as human resource manager, information technology manager, HSE manager and production manager were used for the study. This made it a total of 40 as the sample size. Data were collected through primary (questionnaire) and secondary (textbooks, journal articles and internet). A structured questionnaire titled "Human Capital Development and Exploration Index (HCDEI)". The questionnaire was designed in four point likert rating scale format with the following response options: Strongly Agreed (SA) 4, Agreed (A) 3, Disagreed (D) 2, and Strongly Disagreed (DS) 1. The instrument was validated by two organizational behaviour experts and one human resource management expert. The reliability coefficient of the instrument (0.72) was elicited using Crombach Alpha. Spearman Ranking (r) was used for the test of hypotheses. Out of 40 questionnaires administered, the researcher was able to retrieve 37 (93%) copies. A bivariate analysis (test of hypotheses) was done using SPSS Version 23 at 0.05 level of significance.

Results

Ho_1: There is no significant relationship between human capital development and risk taking among oil servicing firms in Rivers State.

Table 1 Consistency in Human Capital Development and Risk Taking

		Human Capital Development	Risk Taking
Human Capital Development	Correlation Coefficient	1.000	.347**
	Sig. (2-tailed)	.	.000
	N	37	37
Risk Taking	Correlation Coefficient	**.347****	1.000
	Sig. (2-tailed)	.000	.
	N	37	37

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

Source: Survey Data, 2024.

Table 1 above shows r value of 0.347 at a significance level of 0.00 which is less than the chosen alpha level of 0.05. Since the significance value 0.000 is less than the alpha level of 0.05, the null hypothesis (Ho_1) which states that there is no significant relationship between human capital development and risk taking among oil servicing firms in Rivers State was rejected and the alternate hypothesis (Ha_1) is accepted. This implies that there is a significant relationship between human capital development and risk taking among oil servicing firms in Rivers State.

Ho_2: There is no significant relationship between human capital development and flexibility among oil servicing firms in Rivers State

Table 2 Consistency in Human Capital Development and Flexibility

		Human Capital Development	Flexibility
Human Capital Development	Correlation Coefficient	1.000	.653**
	Sig. (2-tailed)	.	.000
	N	72	72
Flexibility	Correlation Coefficient	**.653****	1.000
	Sig. (2-tailed)	.000	.
	N	72	72

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

Source: Survey Data, 2024.

Table 2 above shows r value of 0.653 at a significance level of 0.00 which is less than the chosen alpha level of 0.05. Since the significance value 0.000 is less than the alpha level of 0.05, the null hypothesis (Ho_2) which states that there is no significant relationship between consistency in keeping to promises and pride of workers in fast food restaurants in Port Harcourt was rejected and the alternate hypothesis (Ha_2) is accepted. This implies that there is a significant relationship between consistency in keeping to promises and pride of workers in fast food restaurants in Port Harcourt.

Discussion of Findings

The test of analyses revealed that there is a significant relationship between human capital development and exploration (risk taking and flexibility) among oil servicing firms in Rivers State. These imply that employees who are well-trained are more likely to engage in calculated risk-taking because they possess a deeper understanding of potential outcomes and mitigation strategies. A workforce that is continuously developed tends to foster an innovative culture within organizations. This innovation is critical in the oil industry where exploration often involves venturing into uncharted territories or employing new technologies (Dawodu & Akintunde, 2023). When employees feel empowered through training and development programs, they are more inclined to propose novel solutions or explore unconventional methods for resource extraction, which inherently involves taking risks.

The oil industry is characterized by high levels of uncertainty due to fluctuating market conditions and environmental factors. Human capital development enhances decision-making capabilities by providing employees with analytical tools and frameworks that help them evaluate risks effectively. This ability to make informed decisions under uncertainty encourages companies to pursue exploratory projects that may have been deemed too risky without such expertise. The oil sector is subject to rapid changes due to technological advancements, regulatory shifts, and market dynamics. Companies that invest in human capital develop a workforce that is adaptable and capable of responding swiftly to these changes. Training programs that focus on developing soft skills such as problem-solving and critical thinking enable employees to pivot quickly when faced with new challenges or opportunities (Akpieyi, 2024; Abdow et al., 2018; Agbi et al., 2020). Human capital development often includes fostering teamwork across different departments (e.g., geology, engineering, finance). This cross-functional collaboration enhances flexibility as it allows for diverse perspectives when exploring new ventures or addressing operational challenges. Employees who understand various aspects of the business can contribute more effectively during exploratory phases, facilitating quicker adjustments based on real-time feedback from different functional areas. In a region like Rivers State, where local communities play a significant role in oil operations, human capital development also encompasses cultural awareness training. Employees who understand local customs and practices can navigate community relations more effectively during exploration

activities. This cultural competence not only reduces friction but also allows companies to be flexible in their approaches when engaging with local stakeholders.

CONCLUSIONS

Based on the analyses of data and discussion of findings, the study concluded that human capital development and exploration among oil servicing firms in Rivers State.

RECOMMENDATIONS

Based on the results and conclusions, the following recommendations were made:

1. Management of oil servicing firms in Rivers State should invest in training programs that focus on technical skills (such as drilling technologies, safety protocols, and environmental management), so as to empower their workforce to make informed decisions when faced with risks.
2. Management of oil servicing firms in Rivers State should create a workforce that is adaptable to changing operational demands through training programmes as such would enable its workforce to transition more smoothly to better exploratory operations with ease.

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