THE ROLE OF WORKFORCE DIVERSITY IN IMPROVING ORGANIZATIONAL SUSTAINABILITY AND INNOVATION OF THE MANUFACTURING INDUSTRY IN NIGERIA

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ABSTRACT

Objectives: The goal of this study was to see how worker diversity affected organisational sustainability and innovation in a specific manufacturing industry in Nigeria. Specifically the study determine the impact of gender, age diversity, ethnic diversity and educational diversity on the sustainability and innovation of organisations.

Theoretical Framework: The management research, functional categories, social categories, and psychological research where explored in this study. These categories serve as illustrative examples within the broader context of understanding various dimensions of research in the field of management.

Method: The study included a descriptive research design. Individual survey questionnaire were distributed to a sample of 20 companies and 81 participants from the indicated industrial industries. CVR=1 was obtained by using Lawshe's template to test the questionnaire's validity, while Cronbach Alpha was used and supplied a coefficient alpha of 0.86 to establish the questionnaire's homogeneity. Data was collected on-site and analysed using frequency counts and percentages. At p.01 and .05, the Spearman rank correlation coefficient was utilized to evaluate statistical significance.

Findings: Gender, age, and educational background are all substantially connected with organizational sustainability and innovation, workforce diversity characteristics have been identified as major predictors of organizational sustainability and innovation, but ethnic diversity has been found to be negatively related to organisational sustainability and innovation. The implication is that the chosen manufacturing firm has an outstanding age, gender, and educational diversity composition, and that it must be handled properly to fully profit from the diversity.

Conclusion: The selected manufacturing company must supply various skill maximization training to enhance the employees' current inventive capacity and ensure ethnic variable is handled the positive way to ensure organizational sustainability.

Keywords: Diversity, Gender, Age, Educational Background, Ethnicity, Organizational Sustainability, Innovation.

O PAPEL DA DIVERSIDADE DA FORÇA DE TRABALHO NA MELHORIA DA SUSTENTABILIDADE ORGANIZACIONAL E DA INOVAÇÃO DA INDÚSTRIA DE MANUFATURA NA NIGÉRIA

RESUMO

Objetivos: O objectivo deste estudo foi ver como a diversidade dos trabalhadores afectava a sustentabilidade organizacional e a inovação numa indústria transformadora específica na Nigéria. Especificamente, o estudo determina o impacto do género, da diversidade etária, da diversidade étnica e da diversidade educativa na sustentabilidade e inovação das organizações.

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Referencial Teórico: A pesquisa gerencial, categorias funcionais, categorias sociais e pesquisa psicológica foram exploradas neste estudo. Essas categorias servem como exemplos ilustrativos no contexto mais amplo de compreensão das diversas dimensões da pesquisa no campo da gestão.

Método: O estudo incluiu um design de pesquisa descritivo. Questionários individuais da pesquisa foram distribuídos para uma amostra de 20 empresas e 81 participantes das indústrias indicadas. O CVR=1 foi obtido utilizando o modelo de Lawshe para testar a validade do questionário, enquanto o Alfa de Cronbach foi utilizado e forneciu um coeficiente alfa de 0,86 para estabelecer a homogeneidade do questionário. Os dados foram coletados no local e analisados por meio de contagens de frequência e porcentagens. Em p.01 e .05, o coeficiente de correlação de Spearman foi utilizado para avaliar a significância estatística.

Constataciones: O género, a idade e a formação académica estão todos substancialmente ligados à sustentabilidade organizacional e à inovação, as características da diversidade da força de trabalho foram identificadas como principais preditores da sustentabilidade organizacional e da inovação, mas descobriu-se que a diversidade étnica está negativamente relacionada com a sustentabilidade organizacional e a inovação. A implicação é que a empresa de produção escolhida tem uma excelente composição em termos de idade, género e diversidade educacional, e que deve ser gerida de forma adequada para tirar pleno partido da diversidade.

Conclusión: A empresa manufacturera selecionada deve fornecer vários treinamentos de maximização de habilidades para aumentar a capacidade inventiva atual dos funcionários e garantir que a variável étnica seja tratada de maneira positiva para garantir a sustentabilidade organizacional.

1 INTRODUCTION

Due to the escalating phenomenon of globalisation, there is an imperative need for heightened intercultural engagement among individuals hailing from diverse origins. The reason for this phenomenon is that individuals no longer reside and engage in economic activities just inside small-scale communities. Rather, they have been integrated into the global economy, engaging in competition across various geographical regions (Patel, 2016). Organisations engage in diversification strategies with the aim of attaining a competitive edge through enhanced levels of innovation, creativity, and adaptability to beneficial transformations. The contemporary corporate environment is undergoing tremendous transformations, characterised by shifts in employee demographics, economic expansion, increasing global interconnectedness, and the growing necessity for streamlined and productive cooperation. These factors have emerged as influential drivers that underscore the significance of diversity management inside firms. The labour force in developed nations has experienced a significant increase in diversity due to the fast expansion of globalisation and intensified competition. The advancement of technology and the emergence of a global economy have facilitated increased interconnectedness among individuals worldwide.

Riffin and Morehead (2014) argue that the establishment of a diverse workforce necessitates managerial recognition and management of the many mindsets held by employees, with the ultimate goal of enhancing the long-term viability and innovative capacity of the organisation. Consequently, many entities such as enterprises, educational institutions, and other organisations are actively seeking strategies to enhance their customer service in order to recruit highly talented individuals (Gupta, 2013). In the contemporary global economy, an increasing number of organisations are adopting equitable employment practises as a strategic approach to recruit highly skilled individuals. This consistently results in the formation of a workforce characterised by a wide range of values, attitudes, and perspectives. Improperly addressing the issue may lead to the generation of tension among employees, so negatively affecting their performance and morale (Gupta, 2013).

However, the presence of a varied workforce might potentially lead to substantial outcomes in terms of organisational sustainability and creativity, provided that effective
management strategies are used. Consequently, the concept of diversity has transitioned from a mere pursuit of aesthetic representation to a strategic need for organisational viability. The concept of managing diversity extends beyond the mere acceptance of individuals with diverse racial backgrounds, genders, or value systems. It is widely acknowledged that every individual possesses unique views, and that these convictions have significant value for the organisation. The establishment of an inclusive atmosphere is crucial in attracting a diverse workforce and ensuring equitable treatment of all employees. The long-term success of any organisation is significantly contingent upon the calibre and commitment of its workforce. Individuals who possess positive attitudes and have a high level of dedication towards their respective occupations are valuable resources for an organisation, and ensuring their continued presence is crucial for its overall prosperity. Firstly, they attract and retain a loyal consumer base. In light of the significance attributed to employees who exhibit loyalty, it is imperative for employers to possess the capability to both identify and keep such individuals (Homan, 2014). Consequently, a majority of organisations place significant importance on cultivating a workforce that encompasses a wide range of demographic characteristics and backgrounds. Organisations, conversely, are now compelled to engage in the recruitment of a heterogeneous workforce. Concurrently, enterprises that possess a workforce characterised by growing diversity have encountered difficulties in harnessing the advantages of such diversity while concurrently managing the possible disruptive outcomes (Kreitz, 2008; Saxana, 2014).

In order to effectively pursue sustainability and innovation objectives, it is imperative for an organisation to consistently enhance the skills, attitudes, and efforts of its staff. This ongoing development is crucial for maximising performance and equipping individuals to effectively address the mounting challenges they encounter. Organisations are comprised of persons, and the absence of these individuals hinders the accomplishment of organisational objectives (Mullins, 2010). Consequently, the management of human resources is a significant challenge for leaders inside organisations (Saxena, 2014).

In order to promote self-esteem and confidence in all of its members, an organization's management must understand how the social work environment influences communication abilities. As a result, in order to gain and maintain a competitive advantage over competitors, managers must be able to target their most valuable resource, namely their employees' competency. Managers must extend their viewpoints and adopt suitable methods to achieve success as the world of employees becomes more diverse. To gain a competitive advantage, organisations must widen their view on workforce diversity management, organisational sustainability, and innovation, and management must commit to making diversity management
a daily operation. Nigerians are known as Africa's colossi, with a population of more than 200 million people, more than half of them are of working age. As a result, there is a large pool of talent from which an organisation may draw to achieve its goals. In order to manage the workforce, managers have created diversity policies that are in accordance with the Labour Act and other legislation that have been put in place to protect all sorts of employees from discrimination based on their socioeconomic categories. Most businesses today do not manage diversity, which leads to bad employee attitudes and a lack of long-term, profitable ideas. Certain businesses constantly put on a public show that provides them a favourable corporate image in order to avoid lawsuit or other legal action.

There have been cases of tribalism, regional identities, nepotism, and discrimination in public sector organisations in Nigeria. Cases of racial bias and other forms of discrimination continue to occur in the workplace, including during hiring, promotion, and other elements of employer-employee relations. As a result, management has the substantial challenge of managing its diverse workforce while minimising conflicts of interest in policies and processes. Even when employers educate new employees on job-related issues, people continue to make judgements and display attitudes and behaviours that violate diversity goals. One reason might be that by introducing diversity rules, employees are forced to collaborate with people who are not like them. This form of forced inclusion can create a discordant environment among employees' perspectives on work, discrimination, and other diversity issues. Most managers are unaware of how employees connect with one another as individuals and in groups, and how an employee's attitude influences both the individual and the organization's performance. In light of the foregoing, the goal of this essay is to look into the role of worker diversity in boosting organisational sustainability and creativity in a specific manufacturing industry in Nigeria.

The primary aim of this study is to investigate the impact of workforce diversity on the enhancement of organisational sustainability and innovation within certain industrial sectors in Nigeria. The specific objectives are to:

1. Determine the impact of gender diversity on sustainability and innovation of organizations;
2. Examine the influence of age diversity on sustainability and innovative capacity of organizations;
3. Investigate the influence of ethnic diversity on the sustainability and innovation of organizations;
4. Assess the degree to which educational diversity influences the sustainability and innovation of organisations.
1.1 JUSTIFICATION OF THE STUDY

In order to effectively promote self-esteem and confidence among all members, it is crucial for an organization's management to have a deep understanding of how the social work environment influences communication abilities. In order to gain and maintain a competitive advantage over competitors, managers must effectively target their most valuable resource: their employees’ competency. They should also adopt suitable methods to achieve success. In order to stay ahead in an increasingly diverse and competitive world, organisations need to expand their focus on workforce diversity management, sustainability, and innovation. This research aims to explore the reasons behind this necessity.

1.2 LITERATURE REVIEW

Sustainability, integrating and balancing a company's environmental, economic, and social aspects—has garnered attention recently (Epstein & Buhovac, 2014). Supply chain sustainability requires economic, social, and environmental frameworks, but these often conflict (Cetinkaya et al., 2011). Bansal and DesJardine (2014) define business sustainability as an enterprise's capacity to address short-term financial demands without compromising long-term needs. Time is essential to sustainability. Most managers want their company's profitability to remain high and grow, according to the authors. Company environmental, labour, and social factors must be considered for long-term supply chain sustainability (Cetinkaya et al., 2011).

Analysts characterised organisational innovation differently. Organisational innovation is a group of people who are interdependent in their tasks, share accountability for outcomes, see themselves and are seen by others as an intact social entity embedded in one or larger social systems (such as a business unit or corporation), and manage their relationships across organisational boundaries (Sun et al. 2017). Page (2007) found that heterogeneous groups solve creative problems better than comparable groups. Diversity management boosts productivity, efficiency, and competitiveness. Great workplace management attracts and retains top talent and boosts customer loyalty (Cox, 1994). Reskin (2003) states that poor workforce diversity management causes attrition, wage disparities, job satisfaction, and inequity. Companies like variety because it motivates top talent and boosts competitiveness, according to Cadrain (2008).

Mushtaq et al. (2015) studied Pakistan's telecom industry's workforce diversity and innovation. The study uses a self-administered questionnaire and non-probability sampling to
examine how gender, age, and education affect creativity among 30 workers from two Pakistani telecoms businesses. When diverse workforces collaborated, gender and education predicted employee performance, but age did not. In Nigeria, Isiaka and Ibitomi (2019) recruited 301 participants from the general population and used a self-administered questionnaire to evaluate workforce diversity and product innovation in manufacturing. The study found that employees with diverse educational backgrounds bring new skills, knowledge, information, and perspectives to the organisation and improve problem solving and decision-making, which leads to greater innovation and creativity.

Ozgen, Nijkamp, and Poot (2011) examined how cultural diversity affects creativity using Dutch firm-level data. The study created and evaluated a unique link employer-employee micro-data set of 4582 enterprises using Dutch statistics survey and administrative data. The study excluded hotels and other companies that employed low-skilled migrants. Companies with more foreign workers are less inventive. There is strong evidence that companies with a more diversified international staff are more creative, especially in product invention. Employee participation and workplace diversity affect organisational creativity, according to Yang and Konrad (2011). The study found a three-way interaction between employee engagement, participation variation, and racial and cultural diversity on creativity in 182 big Canadian companies. The study found that racial and ethnic minorities in high-involvement companies had higher engagement variation, strengthening the relationship between diversity and creativity. Garca-Martinez et al. (2017) linked educational diversity in the workforce to radical and gradual innovation. Bolli et al. (2018) found that vertical educational variety boosts R&D and new product profitability. Researchers say gender-diverse companies have more conflict, lesser cohesiveness, and more turnover (Martinez, Zouaghi, & Marco 2017). This according to Somiartha, P. et al, (2024) opined that Performance factors are very important in maintaining the sustainability of an organization which will have an impact on improving the development performance of the work place.

2 THEORETICAL FRAMEWORK

The present study aims to explore the concept of workforce diversity, which has been widely discussed and observed across various geographical boundaries. This study explores the theoretical framework of management research, functional categories, social categories, and psychological research. These categories serve as illustrative examples within the broader context of understanding various dimensions of research in the field of management. By
examining these categories, this study aims to contribute to the existing body of knowledge and provide a comprehensive understanding of the theoretical underpinnings that guide research in these areas. The present study aims to explore the influence of diversity on individuals and collectives within organisational contexts, drawing upon the theoretical foundations of social psychology. By integrating the principles and findings of this well-established scientific discipline, diversity theorists seek to gain valuable insights into the intricate dynamics and effects of diversity in companies. The present study draws upon the theoretical framework of social psychology to explore the underlying mechanisms that contribute to the formation of social identity and intergroup connections. Additionally, it acknowledges the growing recognition among diversity academics that this established research tradition holds potential for informing novel workplace diversity concepts. The present study examines the various ideas put forth by researchers, highlighting their inconsistent and conflicting outcomes.

The concept of similarity-attraction refers to the tendency for individuals to be attracted to others who possess similar life values, perspectives, and experiences. The present study adopts a paradigmatic approach, which serves as the overarching theoretical framework for understanding and analysing the theoretical framework proposed by Byrne (1971) elucidates the concept utilised for the purpose of elucidating the process of group formation. The present conceptualization centres on the examination of individuals' inclination towards engaging with others who possess congruent life values, perspectives, and experiences. Theoretical Framework: The Influence of Common Attitude on Forecasting Future Behavior This theoretical framework explores the rationale behind the choice of considering the common attitude of another person or group of people as a means to predict their future behaviour. By examining the relationship between common attitude and forecasting, this framework aims to shed light on the potential benefits of utilising this information in decision-making processes. Understanding the influence of common attitude on behaviour prediction can provide valuable insights into the dynamics of interpersonal interactions and enhance individuals' ability to anticipate future actions. The present study is guided by the theoretical framework of similarity attraction, which posits that individuals are inclined to form social connections with others who they perceive to share similar demographic characteristics, including age, ethnicity, and other relevant traits. The present study posits that the aforementioned attraction is a key factor in facilitating team cohesiveness, communication, and collaboration within teams (Kunze, Boehm, & Bruch, 2011). Theoretical Framework: The Influence of Educational and Cultural Background on Employee Motivation This theoretical framework explores the potential impact of an employee's educational background and cultural background on their motivation within the workplace. It posits that these two elements may
serve as influential factors that shape an individual's level of motivation and engagement in their professional role. The educational background of an employee is considered a crucial determinant of their motivation. It is hypothesised that individuals with a higher level of education may exhibit greater motivation due to the acquisition of specialised knowledge and skills. This theoretical framework suggests that employees with advanced degrees or extensive educational qualifications may possess a heightened sense of self-efficacy and confidence, leading to increased motivation to perform well in The fulfilment of these requirements can potentially be achieved by establishing and maintaining strong social and interpersonal connections with colleagues (Aswathappa, 2007).

3 METHODOLOGY

3.1 SOURCES OF DATA

The study examined two key data sources, namely the deployment of on-site questionnaires to get first-hand data from participants in order to provide a detailed explanation of the topics being investigated. In addition to primary sources, secondary sources of data were utilised in this study, including scholarly publications, textbooks, both print and online periodicals, as well as survey results.

3.2 METHOD

The research design employed in this study was a survey research design. The survey research methodology was used since it provided the researcher with the opportunity to gather data through the administration of a questionnaire and the testing of hypotheses. The population of this study consisted of the 21 manufacturing businesses that were listed on the floor of the Nigerian Stock Exchange. The study utilised a convenience sampling strategy to choose a sample of 81 individuals from the target industries. A questionnaire was employed as the primary tool for data collection, and its validity was ensured through the involvement of a panel of experts in the relevant field. The content validity of the questionnaire was established using Lawshe's template, resulting in a Content Validity Ratio (CVR) of 1. The high CVR score indicates that the instrument is valid and capable of accurately measuring the intended constructs. In order to ascertain the uniformity of the instrument, the researchers utilised Cronbach Alpha to analyse the first data that was gathered. The apparatus demonstrated a high
level of dependability for data collecting, as evidenced by the obtained reliability coefficient index of 0.86. The survey was promptly administered and afterwards collected from participants, organised, and documented for the purpose of data analysis. The data acquired from respondents was analysed using frequency counts and percentages to summarise the replies. Additionally, the Spearman rank correlation test was employed to determine the statistical significance of the results. The findings were displayed in tabular format.

4 RESULTS AND DISCUSSIONS

4.1 GENDER DIVERSITY AND ORGANIZATIONAL SUSTAINABILITY AND INNOVATION

Gender diversity refers to the equitable inclusion of persons from various genders within an organisation, without any kind of discrimination. The phrase is predominantly employed to denote the principle of ensuring equal representation of both genders in the professional sphere. However, within its broader scope, it encompasses those who identify as non-binary genders. The survey performed on the subject issue yielded the below findings.

Table 1

Gender Diversity and Organizational Sustainability and Innovation

<table>
<thead>
<tr>
<th>Items</th>
<th>Responses n=81</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>Freq.</td>
</tr>
<tr>
<td>In my organization, women are afforded equal opportunities for career growth and promotion</td>
<td>2</td>
</tr>
<tr>
<td>Individuals of the opposite gender have demonstrated commendable performance, and I derive satisfaction from collaborating with them</td>
<td>2</td>
</tr>
<tr>
<td>There is no evidence to suggest that employees have experienced any form of gender-based discrimination by employer in relation to promotional possibilities</td>
<td>2</td>
</tr>
<tr>
<td>The presence of gender dissimilarity is associated with a decline in employee work attitudes</td>
<td>11</td>
</tr>
</tbody>
</table>
Employees who have the same gender may easily form working groups.

<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>3.7</th>
<th>16</th>
<th>19.8</th>
<th>18</th>
<th>22.2</th>
<th>40</th>
<th>49.4</th>
<th>4</th>
<th>4.9</th>
</tr>
</thead>
</table>

Rho = .981, n = 81, p = .000. The result is significant at .01.

The findings presented in Table 1 demonstrate that a lesser proportion of participants (2.5% and 11.1%) expressed complete disagreement, whereas 6.2% were unclear and unable to offer an opinion on item 1. In contrast, a significant proportion of respondents (49.4% and 30.9%) expressed strong agreement with the notion that their respective organisations provide women with equitable possibilities for professional advancement and promotion. In addition, it is worth noting that there was a relatively low degree of disagreement among the participants about item 2, with just 2.5% and 4.9% expressing disagreement. Furthermore, a notable proportion of participants, namely 16.0%, did not provide a response to this particular item. A higher percentage of respondents (40.7% and 35.8% respectively) indicated that persons of the opposite gender had exhibited impressive performance, and they receive enjoyment from engaging in collaborative efforts with them. The answers obtained from question 3 were 2.5% and 6.2% respectively, which were found to be comparatively low in contrast to the statement.

Additionally, 12.3% of participants did not provide a response to this particular question. A significant proportion of the respondents (43.2% and 35.8%) expressed strong agreement with the notion that there is a lack of substantiated evidence indicating that employees have encountered any type of gender-related discrimination from their employers in terms of opportunities for advancement. A significant proportion of the participants (13.6% and 35.8%) expressed dissatisfaction with the statement presented in item 4, while an additional 13.6% refrained from providing an opinion on the matter. In contrast, a notable proportion of 27.2% and 9.9% respectively said that the existence of gender dissimilarity is linked to a decrease in employee work attitudes. The findings of Item 5 indicate that 3.7% and 19.8% of respondents held a divergent viewpoint about the statement, while 22.2% expressed uncertainty.

The majority of participants, comprising 49.4% and 4.9% respectively, were in complete agreement that employees of the same gender are more likely to establish cohesive working groups. The statistical significance test produced the following outcomes: Rho (79) = 0.981, n = 81, p = 0.000. The obtained data exhibit statistical significance at a significance level of .01. Because the p-value of .000 is below the significance level of .01, there exists compelling evidence to reject the null hypothesis. Hence, a notable correlation exists between gender diversity and the sustainability and innovation of organisations.
4.2 AGE DIVERSITY AND ORGANIZATIONAL SUSTAINABILITY AND INNOVATION

The presence of individuals of various age groups inside an organization can offer a multitude of viewpoints, abilities, and life experiences that can prove advantageous in addressing intricate challenges. The inclusion of individuals from diverse age groups within a team helps foster an atmosphere conducive to mutual respect and open expression of ideas. The survey conducted on the topic matter produced the following results.

**Table 2**

*Age Diversity and organizational sustainability and innovation*

<table>
<thead>
<tr>
<th>Items</th>
<th>Responses n=81</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>Freq.</td>
</tr>
<tr>
<td>The team leader effectively incorporates individuals from diverse age groups in the process of problem-solving</td>
<td>2</td>
</tr>
<tr>
<td>The establishment of groups in the workplace is influenced by age differences</td>
<td>6</td>
</tr>
<tr>
<td>The variance in age has an impact on the process of consensus building among the employee population</td>
<td>8</td>
</tr>
<tr>
<td>The impact of age variations on group performance is a significant factor to consider</td>
<td>4</td>
</tr>
<tr>
<td>I do not have any difficulties while collaborating with individuals from diverse age groups</td>
<td>1</td>
</tr>
</tbody>
</table>

Spearman’s rho or ρ = .707, n= 81, p = .000. The result is significant at .01.

The results shown in Table 2 indicate that a proportion of 2.5% and 11.1% of the total participants expressed disagreement with the statement in item 1, while 3.7% expressed uncertainty. The findings indicate that a significant proportion of the participants (65.4% and 17.3%) expressed unanimous agreement with the team leaders' successful integration of individuals from various age groups in the problem-solving process. Furthermore, a total of 7.4% and 2.5% of respondents expressed disagreement with the assertion presented in item 2. Additionally, 11.1% of participants remained indecisive and refrained from providing an opinion. In contrast, it was found that 37.2% and 11.1% of the participants expressed complete agreement with the assertion made in item 2, which posits that the formation of workplace groups is impacted by disparities in age. The findings from item 3 indicate that 9.9% and 29.4%...
of the respondents strongly disagreed with the statement. Additionally, 11.1% of the participants did not express any opinion on the matter. In contrast, a significant majority (43.2% and 6.2%) of the entire sample fully affirmed that the variation in age significantly influences the process of consensus building among the employee population.

The results for item 4 yielded diverse replies. Specifically, 4.9% and 24.7% of participants expressed disagreement with the statement, while 14.8% remained unsure. On the other hand, the majority of respondents, including 40.7% and 14.8% respectively, agreed that age variations had a considerable influence on group performance, highlighting its importance as a factor to be taken into account. Furthermore, a small proportion of the participants, specifically 1.2% and 14.8%, expressed disagreement with the statement presented in item 5. Additionally, a similar percentage of participants, namely 1.2%, reported uncertainty regarding their stance on the statement. A significant proportion of the participants (40.0% and 40.7% respectively) expressed agreement with the notion that they encounter no challenges while engaging in collaborative efforts with persons from various age cohorts. The association test produced the following outcomes: rho (79) = .707, n = 81, p = .000. The obtained result has statistical significance at a significance level of .01. Considering that, the p-value of .000 is less than the significance level of .01. This finding suggests a significant association between age diversity and the sustainability and creativity of organisations. The null hypothesis was appropriately rejected in this instance, indicating a statistically significant association between age diversity and the sustainability and creativity of the organisation.

4.3 ETHNIC DIVERSITY AND ORGANIZATIONAL SUSTAINABILITY AND INNOVATION

Organizations and leadership teams that exhibit gender diversity tend to outperform their counterparts with less gender diversity. A significant majority of job searchers and workers express a preference for firms and co-workers who exhibit diversity. The survey conducted on the aforementioned produced the following results.
The Role of Workforce Diversity in Improving Organizational Sustainability and Innovation of the Manufacturing Industry in Nigeria

Table 3

Ethnic Diversity and Organizational Sustainability and Innovation

<table>
<thead>
<tr>
<th>Items</th>
<th>Responses n=81</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>Freq.</td>
</tr>
<tr>
<td>My ethnic background and contact with employees from varied ethnic backgrounds affect my productivity</td>
<td>33</td>
</tr>
<tr>
<td>Using many languages for company communication does not cause employee friction.</td>
<td>7</td>
</tr>
<tr>
<td>I effectively collaborate with colleagues from diverse ethnic backgrounds.</td>
<td>5</td>
</tr>
<tr>
<td>I experience a diminished sense of self-worth within the professional setting because of their ethnic heritage</td>
<td>15</td>
</tr>
<tr>
<td>Language differences among employees affect group formation and cohesion.</td>
<td>13</td>
</tr>
</tbody>
</table>

Spearman’s rho = .011, n= 81, p = .925. The result is not significant at .05.

The findings suggest that 40.7% and 24.7% of respondents expressed disagreement on the impact of ethnic background and interaction with colleagues from diverse ethnic origins on their job performance. Additionally, 16.0% of participants indicated uncertainty in their stance on this matter. However, a percentage of 16.0% and 2.5% hold the viewpoint that ethnic origin does really have an impact on their productivity. In a similar vein, it was found that 8.6% and 23.5% of respondents, respectively, strongly disagreed with the notion that utilising many languages for organisational communication did not result in employee conflict. A proportion of 6.2% of individuals expressed uncertainty or indecision. A significant proportion of the participants (56.8% and 4.9% respectively) exhibited a consensus, expressing strong agreement with the notion that the use of many languages for organisational communication did not lead to any kind of discord among employees. The findings of the research indicate that a proportion of 6.2% and 7.4% of the participants expressed disagreement on their ability to effectively engage in collaborative efforts with colleagues from varied ethnic origins. Additionally, a small percentage of 1.2% remained uncertain about their stance on this matter. A significant proportion of the participants (40.7% and 44.4% respectively) expressed agreement with their successful collaboration with coworkers from varied ethnic origins. Furthermore, a percentage of 18.5 and 45.7, respectively, expressed disagreement on the occurrence of a reduced feeling of self-esteem in the workplace due to their ethnic background. Additionally, a proportion of
11.1% did not provide a response to this particular inquiry. A notable percentage of the participants (17.3% and 7.4% respectively) expressed agreement with the notion that their ethnic background has led to a reduced feeling of self-esteem in their working environment. The data further demonstrates that 16.0% and 28.4% of participants expressed complete disagreement on the impact of linguistic disparities among employees on group formation and cohesiveness. Furthermore, 18.5% of participants remained indecisive on this matter. A significant proportion of participants (32.1% and 4.9% correspondingly) expressed agreement with the notion that linguistic disparities among employees have an impact on the creation and cohesiveness of groups.

The results of the association test yielded the following findings: the correlation coefficient (rho) was .011, with a sample size (n) of 81, and a p-value of .925. The result obtained does not exhibit statistical significance at a significance level of .01. Given the fact that the p-value of .925 exceeds the predetermined significance limit of .05. This discovery indicates that there is no statistically significant correlation between the level of ethnic diversity within organisations and their capacity to maintain themselves and foster creativity. In this particular case, the null hypothesis was upheld, suggesting that there is no statistically significant correlation between ethnic diversity and the sustainability of organisations and innovation.

4.4 EDUCATIONAL DIVERSITY AND ORGANIZATIONAL SUSTAINABILITY AND INNOVATION

Educational variety is especially beneficial in groups with a high level of task complexity, a short organizational tenure, or a low mean level of education. This is due to the need of vast knowledge pools and information sharing inside an enterprise. The following are the findings of the survey on the issue.

<table>
<thead>
<tr>
<th>Items</th>
<th>Responses n=81</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td></td>
<td>Freq.</td>
</tr>
<tr>
<td>My educational attainment has a direct impact on my capacity</td>
<td>11</td>
</tr>
</tbody>
</table>
The Role of Workforce Diversity in Improving Organizational Sustainability and Innovation of the Manufacturing Industry in Nigeria

<table>
<thead>
<tr>
<th>Statement</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>The presence of disparities in employees' educational backgrounds does not foster disputes</td>
<td>5</td>
</tr>
<tr>
<td>At my workplace, I encounter a deficiency of self-assurance stemming from my education background</td>
<td>16</td>
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<tr>
<td>The presence of colleagues with diverse educational backgrounds has a significant impact on my capacity for problem solving and decision-making</td>
<td>7</td>
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<tr>
<td>I am able to effectively perform my professional duties when collaborating with a diverse group of colleagues possessing varying levels of educational attainment</td>
<td>1</td>
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<tr>
<td>The inclusion of diverse perspectives and experiences in educational settings fosters innovation and strengthens my fundamental abilities in effectively accomplishing tasks</td>
<td>0</td>
</tr>
<tr>
<td>The presence of personnel with similar educational backgrounds is associated with a heightened level of performance</td>
<td>1</td>
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Spearman’s rho = .251, n= 81, p = .024. The result is significant at .05.

According to the analysis results, a respective 13.6% and 23.5% expressed disagreement on the direct influence of educational attainment on their ability to effectively fulfil their major responsibilities. Additionally, 4.9% of respondents expressed uncertainty on this matter. A significant proportion of the participants, namely 43.2% and 13.6% respectively, expressed agreement on the direct influence of educational attainment on their ability to effectively fulfil their primary responsibilities. Likewise, a percentage of 6.2 and 24.7 expressed disagreement to the notion that discrepancies in employees' educational backgrounds do not contribute to conflicts, while 18.5% remained unclear on the matter. However, a significant proportion of the participants (43.2% and 7.4% respectively) indicated that the existence of discrepancies in employees' educational backgrounds did not contribute to conflicts. The findings of the study reveal that 19.8% and 48.1% of the respondents expressed disagreement on the presence of self-assurance inadequacies in the workplace due to their educational background. It is worth noting that a small proportion of participants (4.9%) did not provide a response to this particular question. However, a portion of the participants (21.0% and 6.2% respectively) expressed
agreement with the notion that they face a lack of self-confidence in the job due to their educational background.

The findings indicate that 8.6% and 17.3% of respondents, respectively, expressed the viewpoint that the presence of colleagues with varied educational backgrounds does not have a significant effect on their ability to engage in problem solving and decision-making. Additionally, 8.6% of respondents were uncertain or had no clear stance on the subject matter. Nevertheless, a large proportion of the respondents (55.6% and 9.9% correspondingly) concurred that the inclusion of coworkers with varied educational backgrounds exerts a noteworthy influence on their ability to engage in problem-solving activities and make informed decisions. Furthermore, a mere 1.2% and 6.2% of respondents expressed disagreement on their ability to effectively carry out their professional responsibilities while working with a varied group of colleagues with differing educational backgrounds. Additionally, a small proportion of participants (4.9%) remained uncertain and did not offer any discernible viewpoint. A significant proportion of the respondents (54.3% and 33.3% respectively) said that they possess the capability to efficiently carry out their occupational responsibilities when engaging in collaborative efforts with colleagues who have various educational backgrounds.

Subsequent examination revealed that a mere 4.9% expressed disagreement with the notion that the incorporation of other viewpoints and experiences in educational environments promotes creativity and enhances their core competencies in successfully completing tasks, and 3.7% remained uncertain or undecided. A significant proportion of the participants (42.0% and 49.4% respectively) expressed agreement with the notion that incorporating varied viewpoints and experiences in educational environments promotes innovation and enhances their core competencies in task completion. Furthermore, it was found that 1.2% and 18.5% of respondents, respectively, expressed disagreement with the correlation between the presence of employees with similar educational backgrounds and an increased level of performance. Additionally, 9.9% of participants chose not to provide a response. The findings indicate that a significant proportion of the participants (34.6% and 35.8% respectively) expressed agreement with the notion that the presence of individuals who have comparable educational backgrounds is linked to an increased level of performance.

The outcomes from the association test revealed that the correlation coefficient (rho) was .251, based on a sample size (n) of 81, and a p-value of .024. The result demonstrates statistical significance at a significance level of .05. Considering the observed p-value of .024, it is evident that it does not surpass the specified level of significance of .05. The findings of this study suggest that there exists a statistically significant association between the degree of
educational variety present in organisations and their ability to sustain themselves and cultivate innovation. In the present study, the null hypothesis was refuted, indicating a statistically significant association between educational diversity and the sustainability of organisations and creativity.

4.5 DISCUSSION

The results of the study demonstrate a statistically significant and positive correlation between gender diversity and organizational sustainability and innovation. The presence of gender diversity has been found to be a significant indicator of both organizational sustainability and innovation. Based on the findings of the survey, a significant proportion of participants said that the organization does not engage in gender-based discrimination during the recruitment process, and that women are afforded equitable opportunities for career advancement within the company. This demonstrates that the management of the selected manufacturing industries adheres to diversity policies and procedures. The findings of this study do not provide evidence in favour of Arokiasany's (2013) assertion that organizational leaders exhibit a preference for hiring male personnel over female employees due to the perceived greater effectiveness of males. The outcomes of the data analysis indicate a notable correlation between gender diversity and both organisational sustainability and creativity. This conclusion is consistent with the studies conducted by Weiliang, Mun, Fong, and Yuan (2011), Baligasima (2013), and Raaza-Naqvi, Ishtiaq, Kanwai, Butt, and Nawaz (2013). Nevertheless, unfavourable perceptions and biases directed towards individuals of the opposite gender, including but not limited to stereotyping, prejudice, discrimination, and sexual harassment, might potentially contribute to the adverse impact of gender diversity on employees’ work-related attitudes. This phenomenon may potentially elucidate variations in employee performance. Organisations that, conversely, establish an inclusive atmosphere for all workers, irrespective of gender, and enforce regulations that prohibit workplace discrimination might reap advantages from gender diversity (Milliken & Martins, 1996). The presence of a robust correlation between gender diversity and job performance may indicate a preference among individuals to collaborate with those of the opposite gender, if they are able to effectively fulfil their job responsibilities.

The study's findings indicate a notable positive correlation between age diversity and the sustainability and innovation of organizations. This observation aligns with the results reported by Wegge, Roth, Kanfer, Neubach, and Schmidt (2008). According to the responses
received, employees expressed a sense of ease and satisfaction in collaborating with colleagues from both older and younger age groups. Some individuals prefer being part of cross-generational teams since it enhances their overall performance. This observation contradicts the conclusions reported by Weiliang, Mun, Fong, and Yuan (2011). The concept that older personnel may experience decreased efficiency and productivity because of age-related physical limitations might potentially have adverse effects on the long-term viability and innovative capacity of organisations (Schlick, Frieling, & Wegge, 2013).

Based on the findings of the study, it has been determined that there exists no statistically significant correlation between ethnic diversity and organisations sustainability and innovation. This implies that the impact of ethnic diversity on organization and sustainability innovation of the chosen industrial sectors is minimal. Nevertheless, a significant proportion of employees hold the belief that they maintain harmonious relationships with colleagues of diverse ethnic backgrounds. This finding demonstrates that the presence of personnel from diverse national backgrounds does not result in interpersonal conflicts, irrespective of variations in language proficiency. When employees are faced with instances of prejudice, stereotyping, and discrimination based on their ethnic background, it can have a detrimental impact on their performance. Oerlemans, Peeters, and Schaufeli (2001) identified many possible concerns in the workplace, including employee distrust, a dearth of communication, and a lack of collaboration. Therefore, the result presents a contrasting viewpoint to the research conducted by Weiliang, Mun, Fong, and Yuan (2011), Earley, and Mosakowski (2000), which suggest a significant correlation between ethnic diversity and employee work attitudes. However, it aligns with the perspective put forward by Ely (2004).

Based on the findings of the study, it is evident that the presence of educational variety exerts a substantial influence on the perceptions held by employees on their employment experiences. The results indicate that the manufacturing industries under investigation exhibit a commitment to fostering diversity within their workforce, particularly in relation to educational qualifications. Moreover, it is noteworthy that this diversity does not engender conflict among employees, but rather enhances their overall productivity. This can be attributed to the fact that individuals who join these organisations bring with them a wide range of experiences and expertise, thereby contributing to a more dynamic and effective work environment. Findings indicate a strong correlation between educational diversity and organizational sustainability and innovation. This aligned to findings of Weiliang, Mun, Fong, and Yuan (2011) as well as Baligasima (2013), who found a notable correlation between educational variety and the achievement of organisational success. The aforementioned
discovery aligns with the observation made by Cohen and Bailey (2001), which suggests that although instructional variety has a positive influence on productivity, it might have a detrimental effect on group cohesiveness. According to Knight, Pearce, Smith, Olian, Sims, and Smith (2009), employees possess diverse knowledge and experience that are essential for making effective decisions. However, the presence of educational diversity can lead to distress and disagreement among employees, resulting in difficulties in reaching a consensus and a potential reduction in workplace cohesion. Therefore, the characteristics of the different companies’ who tend to address more dimensions of sustainability and have a comprehensive attitude are most likely to adopt a comprehensive strategy in ensuring sustainability and innovations through workforce diversity (Albena, Todor & Arabadzhieva, 2023).

5 CONCLUSION

Based on the conceptual, theoretical, and empirical evidence, it has been observed that diversity management exerts a positive influence on the sustainability and creativity of organisations, particularly those operating in industrial sectors. The aims of the study were successfully achieved, and the analyses yielded thorough responses to the research inquiries. With the exception of ethnic diversity, the responses to the research inquiries are positive, indicating a significant correlation between diversity management (specifically in terms of gender, age, and educational diversity) and the sustainability and innovation of organisations. Consequently, the implementation of diversity management practices exerts a significant influence on the long-term viability and innovative capacity of organisations. In the context of educational variety, an individual's job performance can be impacted by the competences acquired via formal education, practical experience, and specialised training. Age variety within an organisation may significantly influence its long-term viability and innovation. A younger employee, due to their physical vigour and capabilities, may exhibit higher levels of productivity when it comes to job completion. In contrast, a more senior person is capable of effectively performing their work due to their acquired skills and aptitudes. Based on the research findings, it can be concluded that businesses that maintain a balanced representation of both male and female employees are more likely to achieve superior performance compared to organisations characterised by gender homogeneity. The promotion of gender diversity within a firm tacitly acknowledges the existence of distinct cognitive and behavioural patterns across both genders, hence embracing the unique perspectives and ideas that male and female employees may contribute. Theoretical, conceptual, and empirical research have indicated that
employee behaviour, capacity or ability, motivation, organisational commitment, and organisational culture are key factors that influence and elucidate the relationship between diversity management and employee work attitudes. In brief, the present study revealed that gender, age, and educational diversity exert significant positive effects on workers' work-related attitudes.

1. One of the primary obstacles encountered in the context of workplace diversity is to the domain of communication. Certain employees perceive that the presence of a language barrier has an impact on their overall job performance. In order to enhance employee trust, it is important to ensure that responsibilities are well conveyed, while businesses should make concerted efforts to establish a shared language;

2. Managers ought to establish adaptable work regulations in order to facilitate female employees in effectively managing their professional and domestic responsibilities, hence promoting a harmonious work-life balance devoid of any potential conflicts;

3. Management should actively promote the formation of teams with individuals from diverse age groups. Younger individuals have more proficiency in managing advanced corporate technologies, including webcasting and social networking platforms, among others. The sharing of these talents has the potential to enhance the performance of both employee groups and the business as a whole. By using such technologies, industries may effectively cater to their clientele, leading to improved outcomes;

4. Management should actively promote and foster social interactions among employees. Employees may apply this tool to get knowledge about the diverse cultural backgrounds of their colleagues. The provision of such information has the potential to enhance employee tolerance, while cultivating an understanding of other cultures can facilitate the successful completion of tasks that necessitate such knowledge, as and when the situation demands. The presence of ethnic diversity within the manufacturing business can also contribute to improved service coverage;

5. There is the need for management to offer training opportunities to employees who possess insufficient abilities for their respective job roles, consider the implementation of study leave as a means of fostering employee development and motivation, particularly for those individuals who express a desire to pursue further education. One potential approach that management might use is to offer financial assistance to support the professional development of its high-performing employees, namely by sponsoring them to obtain certifications that can enhance their productivity. This initiative has the potential to serve as a kind of extrinsic incentive for fellow employees.
REFERENCES


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