IMPERATIVE OF EDUCATION DIVERSITY ON THE INNOVATIVENESS OF MANUFACTURING ENTITIES IN NIGERIA

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ABSTRACT

This study evaluates the effect of education diversity on the employees’ innovativeness of manufacturing entities in Nigeria. By adopting a descriptive survey design method and utilizing a self-administered closed-end questionnaire, data was collected from 5483 respondents’ population who were staff of twelve randomly selected manufacturing entities in south west, Nigeria. Sample size of 522 respondents was drawn from the study population. The finding revealed that education diversity had a positive effect on innovativeness of selected manufacturing entities in Nigeria. In lieu of the finding, the study recommended that the management of the Nigerian manufacturing firms should be resolute in observing the culture of establishing sound training and development among their employees. This will enable the organization to achieve continuous enhancement in employees’ productivity and hence leads to innovative capacity of such entities.

Keywords: Education; Diversity; Innovativeness; Manufacturing Entities

INTRODUCTION

Today’s business workplace is changing at an increased speed and the change in the employees’ demographics, increase of jobs in the economy, continuing growth due to globalization and requirement for effective collaboration have surfaced as significant forces driving the importance of diversity in organizations (Akpakip, 2017). Workforce diversity refers to those significant differences and similarities that are present among employees within an organization (Griffin et al., 2014). It represents some individual uniqueness which include individual’s personality, age, gender, ethnicity or race, religion, marital status, income and work experience etc. To be successful, it is imperative that organizational leaders understand just how the social environment has an effect on the individual employee beliefs about work and they must have effective communication skills to be able to develop the self esteem and confidence in individual (Griffin et al., 2014).

The Nigeria manufacturing industry has over the past decade undergone swift changes due to globalization and trade liberalization, with entrance of foreign firms thereby spurring up competitions (Obi-Anike et al., 2017). These circumstances have become a major concern for
professionals and management experts on how to achieve optimum employees’ performances in these manufacturing firms (Krishnan et al., 2017). For a wide assortment of employees to function effectively as an organization, human resource professionals and management need to deal effectively with issues such as communication, adaptability, and change (Deshpande, 2014). For this reason, the management of its human resources is also a crucial issue for organizational leaders (Saxena, 2014). Channer et al. (2001) posit that employee’s performance constitutes the life of any organization and as such there should be concerted effort at adequate training and development, motivation, maintenance and recognition of those employees. It is in line with this that scholars have sought to understand the ways in which the efficiency, effectiveness and satisfaction of employees towards enhanced performance can be bolstered overtime due to their germane nature (Olajide, 2014).

Nigeria is often regarded as one of the most populous industrially developing nation in the world and richly endowed with abundant human and natural resources, yet economic drawbacks of the nation is most times attributable to the apparent inability of the manufacturing sector to perform (Ugwuzor, 2014). It has been opined that many organizations have people of variegated cultural backgrounds working together as employees which may be a potential source of organizational outcome (Ukachukwu & Iherionhamma, 2013). With the present day realities in manufacturing organizations, workforce diversity may create opportunities as well as pose challenges for the functioning and behaviour of organizations, as diversity in personality and other dimensions of diversity could also affect employee behavioral outcomes (Afolabi & Omole, 2011; Ugwuzor, 2014).

Maximizing and capitalizing on workforce diversity is an important issue for management (Green et al., 2012). Diversity has multiple benefits to the workplace. One of the major principles of diversity says that a company that has diverse employees has a greater understanding of the global market place (Muriungi & Kepha, 2018). They further assert that most organizations in their own perspective, adopt diversity at their workplace to become more creative and open to change. For some business leaders and managers point of view, diversity is a big challenge to them although it knows no organizational boundary and has no limitations (Dike, 2013). Organization growth in future depends heavily on the ability of managing workforce diversity by improving innovative thoughts and new perception to workplace. Theoretically, the information and decision making theory which was propounded by Williams & O’Reilly in 1998 is essentially utilized to explains the relationship between educational diversity and manufacturing firms in Nigeria. Form the decision making perspective, more educationally diverse workforce is expected to take decision differently, as team members may bring together differing viewpoints.

The manufacturing industry in recent times have faced many challenges ranging from contracting market share, vagaries of global economic conditions, government policies and influx of immigrant into the north central region of Nigeria thereby necessitating manufacturing firms to grapple with the increasing diversity of workforce and the need for diversity management as an added strain on resources. Hence management of organizations are faced with the big challenges of managing its diverse workforce and making sure that conflict of interest in policies and practice implementation are minimized, especially in the manufacturing industry in terms of tribe, age, background, experience and pooled skills. Nonetheless, the rapid growth of the manufacturing sector, increase in environmental variability and degree of compatibility as
well as increase in turnover, operation efficiency due to increase in information and communication technology, cost of employee replacement, have made manufacturing firms to go for best hands. Observations are that, so long as individuals with differences work in the same environment, diversity in the workplace will always be an issue and, that though individual difference can foster creativity and increase satisfaction at work it can also be the root of conflict. It is on this basis that the researcher seeks to explore the big challenge of investigating the effect workforce diversity has on employees’ performance in the Nigerian manufacturing industries in Nigeria. The study specifically examines the effect education diversity on employee innovativeness in manufacturing firms in Nigeria. Further structure of the paper included the review of literature, methodology, analysis and findings. The paper cap it all with key conclusion and recommendations.

**LITERATURE REVIEW**

**Understanding the Concept of Educational Diversity**

Educational background could be viewed as a type of formal training or education acquired over a period of time by an individual, which could be to enhance career pursuit or skills and knowledge. Hoff, (2014) found that employee commonly reject hiring employees whose training, experience, or education is judged to be inadequate. This means that educational background is critical to employees’ employability level across several job setting. Kyalo & Garchunja (2015), note that employees cannot find a job and perform well without adequate education background. Akpakip (2017) avers that it is a common perception that people who are educated can perform certain tasks easily, effectively and efficiently than those who are not; which means an individual who is knowledgeable can perform better at tasks that require skills and knowledge. Daniel (2009) found that different types of educational levels expect different mobility rate; that is, there are various occupations that are available for different set of people. Based on Daniel findings, a person’s productivity depends on the level of education he/she has acquired.

To Emiko & Eunmi (2009), an individual will be more productive depending on the level of their education. Kyalo & Garchunga, (2015) explored this idea and found that cities with higher percentage of tertiary education level workers will enable individuals of all education level have higher wages. Dahlin et al. (2005) also found that employees suffer rejection from employers when they possess insufficient education and training for the job. Besides that, Emiko & Eunmi (2009) also found that various levels and types of education might expect different mobility rates. For example, the occupation available to those with working experience but does not possess a certified tertiary paper may differ from those who posses such education level. Mobility may differ across these occupations, causing the mobility of individuals without working experience to be different from those with non working experience but possess a degree certificate (Kyalo & Garchunja, 2015). Tracy & David (2011) discovered that organizations and employees usually refuse to employ whom they perceive lack the adequate education, training, knowledge, skills, experience or expertise to fill a position with the organization, hence, signifying the necessity of education to both employers and employees towards enhancing performance.
The Benefits of Diversity and its Management

Research indicates that when diversity is accepted and valued, it boosts employee effectiveness, organizations productivity, and ensures competitiveness on a continuous basis; as well as invariably attracting and retaining valuable workforce and enhancing the loyalty of customers (Akpakip, 2017). Hence, Akpakip (2017) suggested these benefits of diversity; they are:

(1) Work team: in most organizations, employees are sometimes grouped into teams made up of people from different background. When this occurs, it encourages an atmosphere of creativity, effective problem solving techniques and quick decision making.

(2) Business organization: as a bottom line strategy, diversity can be used to improve employees’ relationship and increase their productivity. Organizations that create time and put aside resources to cultivate or harness and take advantage of diversity, will experience less discrimination law suits, less union conflict and fewer government regulatory actions.

(3) Customers: dynamism in customers taste and preferences have necessitated organizations to have specialized products and services that will always satisfy their needs at all times. Having employees from different background provides organizations with array of skills and experiences in recommending ideas that are flexible in adjusting to changing customer demands.

(4) Increased productivity: when employees feel respected, included and valued in the organization, they become committed to its goal and hence work towards achieving the goals.

(5) Fewer law suits: there will be fewer law suits since both management and employees have been trained on how to respect and value differences and treat everyone equally without discrimination.

Educational Background Diversity and Employee Innovativeness

Cohen & Bailey (2001) gave the differences in educational background of employees can bring about a significant effect on group performance just like their different capabilities since it promotes a wide range of talent. Most organizations implement educational diversity initiatives to motivate and encourage employees to work effectively with others so that organizational goals are achieved (Tracy & David, 2011). Furthermore, choice of a specific educational major may reflect one’s cognitive strength and personality (Daniel, 2009). Though, studies showed negative correlation of educational diversity and the ability of top management to come to an agreement in decision making. Hence dissimilarities in the educational level of members were connected with the turnover intention of individuals (Weilling, 2011). John et al. (2007) posit that when there is a big gap between educational backgrounds of group members, it can result in improved task related deliberations. The absorptive capacity of the organization is likely to increase with variety of knowledge structures as reflected in diverse educational major. Informational diversity such as education were positively related to actual work group performance. However, Peretz et al. (2015) argue that educational diversity can also negatively affect team performance and social integration in teams. John et al. (2007) says where there is a big gap between the educational backgrounds of group members, it can result to improved task related performance. As cited in Rizwan et al. (2016), that an individual will be more beneficial, innovative and imaginative based upon the level of its training and education. As Rizwan et al. (2016) concur that the advanced education the individual specialist acquires, the more innovative/creative the worker will be. Educational background diversity can be a source of market insight, creativity,
innovation and improved problem solving which is an asset to any organization enhancing and sustaining performance. Going by the foregoing, we hypothesized that:

H1: Education diversity has a significant positive effect on employees’ innovativeness in manufacturing firms in Nigeria

Theoretical Underpinning: Information and Decision Making Theory

The information and decision making theory developed by Williams & O’Reilly (1998) is used to examine the impact of distribution and expertise on work teams. From the decision making perspective, more diverse workforce is expected to take decision differently, as team members may bring together differing viewpoints (Williams & O’Reilly, 1998; Cox & Nkomo, 1993). This in turn is expected to lead to more creativity and increased performance (Nasim, 2017). This theory can be used to explain diversity in terms of educational background and work experience as the foundation of this theory is on the premise that diverse groups own an extensive range of task related knowledge, expertise, abilities as well as members with various perspective and opinions.

Looking at diversity from the aspect of information and decision making theory, it is assumed that heterogeneous groups carry an exceptional potential when it comes to information. With this theory, it is expected that each individual should have and contribute various ideas, opinions, abilities and knowledge (Stegmann et al., 2012). That is, everyone at one time or another is expected to have diverse life experience, have gain access to various formal and informal channels of information, and also move in social networks that make them also acquire information (O’Flynn et al., 2001). Education diversity brings in new skills, knowledge, information and unique perspective to the organization and enhances effective problem solving and decision making process. This boost the employees performance by reasons of the information exchanged among themselves, the various alternative solution they reflect on, and different perspective they analyze, which at the end lead to higher, better and more effective decision making, creativity and innovation (O’Flynn, et al., 2001).

Griffin & Van fleet (2014) outlined three factors that contributed to organizations becoming more diverse: globalization, government legislation and labour force.

Globalization: Globalization is viewed as that process whereby organizations start operating in an interactional scale. Globalization has resulted in the removal of barriers between markets thereby allowing a free flow of goods and services, skills, technologies and ideas. As these barriers were eliminated, organizations saw an opportunity to enlarge their operations worldwide and increase their market share in order to gain competitive advantage. Also, when organization open offices and branches abroad, it must learn to deal with the different customs and social norms of the country where it is operating the branch. As the managers and employees move from one job assignment to another across the national boundaries, organizations and their subsidiaries become more diverse.

Government legislation and judicial regulation: The government legislation and judicial decision have forced a lot of organization to explain its recruitment strategy and hire more broadly. Unlike before where organizations were allowed to hire as they wish, women were very disadvantaged and were hardly seen in office jobs or manufacturing organizations not to mention being among executives. These were issues of stereotype and prejudice that resulted in
discrimination against women and other minorities. Today, organization by regulation and law must employ people based on their qualification.

Composition of the labour force: The composition of the labour force becoming more and more diverse; Organizations are recognizing that by hiring a diverse workforce, they promote the most talented people available which will improve the overall quality of their workforce and increase effectiveness. By spreading a wider net or recruiting and looking beyond the traditional sources for new employees, organizations are discovering more largely qualified and better qualified employees from different segments of the society.

METHODS

The study utilized survey design. The area of the study was south western, Nigeria. The population of the study involved five thousand four hundred and eighty three (5483) staff of staff of 12 selected manufacturing firms in the south west, Nigeria. A sample size of five hundred and twenty four (522) was drawn with a statistical formula of Trek. Data was collected using questionnaire structured on a five-point-Likert scale. Content validity was adopted in evaluating the validity of the instrument by two experts of management scientists from University of Nigeria. Cronbach’s Alpha was used in testing the reliability of the instrument, and a value of 0.814 was obtained. The hypothesis of the study was tested using ordinal logistic regression technique at 5% level of significance.

RESULTS AND DISCUSSION

A total of five hundred and twenty two (522) questionnaires were distributed to respondents in the selected manufacturing firms in south-west, Nigeria chosen for this study, out of which five hundred and nine (509) were successfully filled and returned.

Table 1 below shows the effect of education diversity on employee innovativeness in manufacturing firms in Nigeria.

<table>
<thead>
<tr>
<th>Items</th>
<th>SA(5) No. (%)</th>
<th>A(4) No. (%)</th>
<th>UD(3) No. (%)</th>
<th>D(2) No. (%)</th>
<th>SD(1) No. (%)</th>
<th>Total</th>
<th>Mean</th>
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</thead>
<tbody>
<tr>
<td>Opportunities for growth and advancement exist for employees who</td>
<td>145 (28.5%)</td>
<td>238 (46.8%)</td>
<td>18 (3.5%)</td>
<td>46 (9.0%)</td>
<td>62 (12.2%)</td>
<td>509</td>
<td>3.11</td>
</tr>
<tr>
<td>have lower qualification in education</td>
<td></td>
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<td>The organization gives equal treatment when it comes to the diversity</td>
<td>242 (47.5%)</td>
<td>187 (36.7%)</td>
<td>30 (5.9%)</td>
<td>34 (6.7%)</td>
<td>16 (3.2%)</td>
<td>509</td>
<td>3.24</td>
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<tr>
<td>of education background</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>The educational level and background affect employees ability to</td>
<td>255 (50.1%)</td>
<td>199 (39.1%)</td>
<td>13 (2.6%)</td>
<td>23 (4.5%)</td>
<td>19 (3.7%)</td>
<td>509</td>
<td>3.04</td>
</tr>
<tr>
<td>perform</td>
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<tr>
<td>The differences in educational background does not encourage conflict</td>
<td>114 (22.4%)</td>
<td>197 (38.7%)</td>
<td>46 (9.0%)</td>
<td>66 (13.0%)</td>
<td>86 (16.9%)</td>
<td>509</td>
<td>3.01</td>
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<td>among employees</td>
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</table>
Source: Field Survey, 2019

The above Table 1 showed that 145 respondents representing 28.5% and 238 respondents representing 46.8% consented to strongly agreed and agreed respectively that opportunities for growth and advancement exist for employees who have lower qualification in education while 18 respondents representing 3.5% were undecided, 46 respondents representing 9.0% and 62 respondents representing 12.2% disagreed and strongly disagreed respectively.

Two hundred and forty two (242) respondents representing (47.5%) and one hundred eighty seven (187) respondents representing (36.7%) of the manufacturing firm employees strongly agreed and agreed respectively that the organization gives equal treatment when it comes to the diversity of education background while 30 respondents representing (5.9%) were undecided, 34 respondents representing (6.7%) and 16 respondents representing (3.2%) disagreed and strongly disagreed respectively.

Two hundred and fifty five (255) respondents representing (50.1%) and one hundred ninety nine respondents (199) representing (39.1%) of manufacturing firm employees strongly agreed and agreed respectively that their educational level and background affect their ability to perform while 13 respondents representing (2.6%) were undecided, 23 respondents representing (4.5%) and 19 respondents representing (3.7%) disagreed and strongly disagreed.

The above Table 1 showed that 114 respondents representing (22.4%) and 197 respondents representing (38.7%) consented to strongly agree and agree that the differences in educational background do not encourage conflict among employees while 46 respondents representing (9.0%) were undecided, 66 respondents representing (13.0%) and 86 respondents representing (16.9%) disagree and strongly disagree.

The hypothesis on the effect of education diversity was tested using regression and the results shown in Table 2.

\[ H_{01}: \text{Education diversity has significant positive effect on employees’ innovativeness in manufacturing firms in Nigeria.} \]

Model: \[ EIN = \beta + \beta_1 EDD + \mu_1 \]

Where: \[ EDD = \text{Educational Diversity} \]
\[ EIN = \text{Employees Innovativeness} \]

<table>
<thead>
<tr>
<th>Table 2</th>
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<th>Stepwise Regression Analyses of education diversity on Outcome Variables</th>
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<tr>
<td><strong>Independent Variable</strong></td>
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<tr>
<td>Education diversity</td>
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Dependent Variable: employees’ innovativeness; \( R^2 = 0.7888; F = 8.76; \text{Sig} = 0.002; \) Source: Authors Computation, 2019 (Eview-9.0)

\[ EIN = 1.3 + 0.58 EDD \]

Where:

\[ \text{SEE} = 5.84; 0.24; t^* = 0.05 \times 2.99 \]

From Table 2, the calculated t-value for education diversity is 2.99 and the tabulated value is given as ± 1.96, under 95% confidence levels. Since the calculated t-value is greater than the tabulated value (2.99>1.96), therefore, we reject the null hypothesis ($H_0$). We conclude that education diversity has a positive and significant effect on employees’ innovativeness. Also, by examining the overall fit and significance of the education diversity model, it can be observed that the model does really have relevance, as indicated by the relatively high value of the $F$-statistic, 8.76 and it is significant at the 5.0% level. That is, the $F$-statistic value of 0.002 is less than 0.05 probability levels. More so, the (R-square) value of 0.7888 shows that the model does have a good fit too. It indicates that about 78.88% of the variation in employees’ innovativeness is explained by education diversity, while the remaining 21.12% is captured by the error term $2 R$.

The analysis of test above was to ascertain the effect of education diversity on employee innovativeness in selected manufacturing firms in Nigeria. From Table 2 the Adjusted (R2) statistic was 0.7670. This showed that 76.7% variance in employees’ innovativeness was explained by the education diversity as an independent variable in the model. Therefore, 23.3% of the variance in employees’ innovativeness was accounted for by other predictors not considered in the model. Taking into record the contribution of the explanatory variable to employees’ innovativeness in manufacturing firms in Nigeria, the beta value for education diversity was 0.58. The beta value apparently indicated that the predictor variable of education diversity had a positive effect on employees’ innovativeness in manufacturing firms in Nigeria.

The analysis of the postulated hypothesis was to ascertain if education diversity has a significant effect on employees’ diversity in manufacturing firms in Nigeria. The result from Table 2 demonstrated that the regression analysis of variance otherwise referred to as the $F$-ratio computed of 8.76 was greater than $F$-critical of 3.00 at 5% alpha ($F=8.76$, $p<.05$). This clearly showed that the regression analysis model had a good fit. Therefore, there was a significant relationship between education diversity and employee innovativeness. In order to investigate the statistically significant effect of education diversity on employee innovativeness in manufacturing firms in Nigeria, the t-test of significance was used. From Table 2, the results indicated education diversity had positive significant effect on employees’ innovativeness in manufacturing firms in Nigeria ($t$-computed $2.99>t$-critical $1.960$, $t=.99$, $p<0.05$).

This is in line with information and decision making theory which elaborates that with diverse work force, it is expected that differing perspectives and viewpoints could lead to more creativity and novelty and increased performance. It is on the premise that in terms of technology knowledge and educational background, these workforce own a pool of extensive range of task related knowledge, expertise, abilities as well as varieties of perspectives and opinions.

The finding of this study agreed with some earlier studies. The current results are consistent with previous studies (Ehimare & Ogaga-Oghene, 2011; Elsaid, 2012; Ogbo et al., 2014; Odita & Egbule, 2015; Rizwan et al., 2016; Manju, 2017), as they asserts that more or balanced educational types could easily increase the likelihood of an organization to benefit from increased creativity, innovation, ideas generation and enhanced employee performance.
CONCLUSION AND RECOMMENDATIONS

The study concludes that technology and educational diversity dimensions can be employed to achieve better employees’ innovativeness and performance in the manufacturing industry in Nigeria. Based on the findings and the conclusion of the study, the following recommendations were offered: First, the management of manufacturing firms should be resolute in observing the culture of establishing sound technological involvement among their employees. This will enable the organization to achieve continuous enhancement in employees’ productivity. In addition, the manufacturing organizations management should create enabling environment for their employees to improve their education diversity, this will improve sustained employees’ innovativeness. By doing these, employees work experience and diversity in manufacturing firms will guarantee sustainable improvement in employees’ commitment hence lowering turnover among the entities thereby stimulating growth.

REFERENCES


