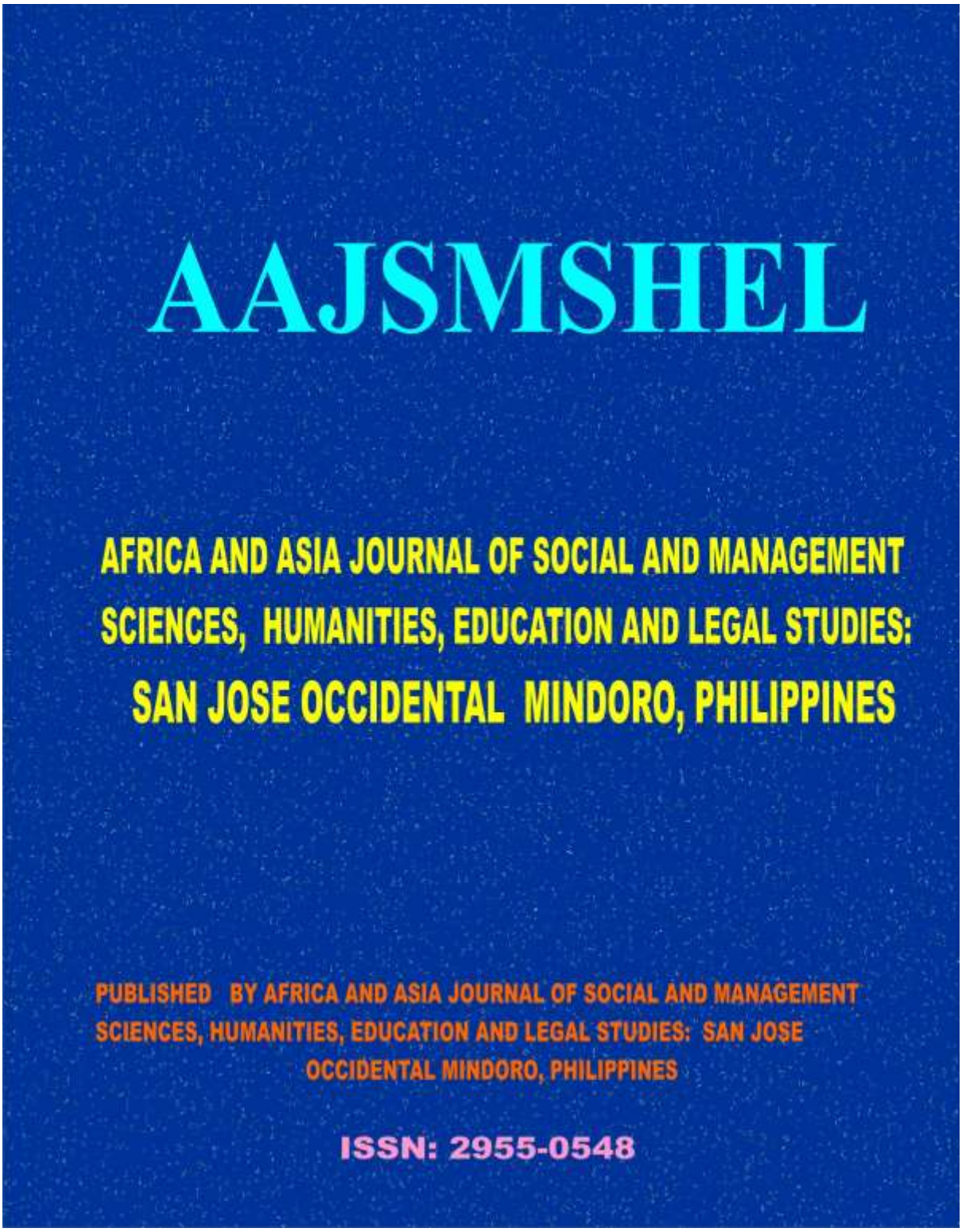
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WORKFORCE DIVERSITY AND ORGANIZATIONAL INNOVATION OF FOOD AND BEVERAGE FIRMS: THE STUDY OF RIVERS STATE

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ABSTRACT

The paper notes on the relationship between workforce diversity and organizational innovation of manufacturing firms in Rivers State, Nigeria. Cross-sectional research design was adopted in studying thirteen (13) of these firms. Our respondents were managerial employees constituting the population of the study. From the field survey, we retrieved and analyzed forty eight (48) copies of the questionnaire from the participants; Structural Equation Modeling as a statistical tool from AMOS version 20.0 was used to determine the relationship existing between the variables while the p-value obtained was used to test hypotheses developed for the study. Findings revealed the existence of a significant relationship between the dimensions of workforce diversity namely; gender diversity, age diversity and marital status and organizational innovation. It was then concluded that practices directed at encouraging diversity and inclusion in the workplace are a healthy strategy to tap enormous benefits prevalent in the business environment as well as to remain innovative and competitive. This gave rise to our recommendations for the firms and other business organizations operating in this competitive business environment develop strategies directed at workforce diversity and inclusion to remain innovative satisfying their relevant stakeholder groups and competitive to survive the turbulence.

Keywords: Gender diversity, Age diversity, Marital Status diversity and Organizational Innovation

Introduction

In today's knowledge-based economies, businesses are increasingly aware of the importance of innovation as a source of competitive advantage. They are seeking strategies and structural changes that will improve their workforce and knowledge management capabilities and facilitate organizational innovation (Janz, Loof& Peter, 2003).

In a general sense, the term 'organizational innovation' refers to the creation or adoption of an idea or behavior new to the organization (Damanpour, 1996). The existing literature on organizational innovation is indeed very diverse and not well integrated into a coherent theoretical framework. The phenomenon of 'organizational innovation' is subject to different interpretations within the different strands of literature. The trend of literature in this regards could be broadly categorized into three different streams, each with a different focus and a set of different questions which it addresses;

Firstly; classification into organizational design theories which focuses predominantly on the link between structural forms and the propensity of an organization to innovate (Burns & Stalker, 1961; Lawrence &Lorsch, 1967); here, the unit of analysis is the organization and the main research aim is to identify the structural characteristics of an innovative organization, or to determine the effects of organizational structural variables on product and process innovation. This strand of literature has been most influential and well integrated into the literature on technological innovation (e.g. Teece, 1998).

Secondly, there is the categorization into theories of organizational cognition and learning, by contrast, tend to focus on the micro-level process of how organizations develop new ideas for

problem solving; they emphasize the cognitive foundations of organizational innovation which is seen to relate to the learning and organizational knowledge creation process (Nonaka& Takeuchi, 1995). This camp of research provides a micro-lens for understanding the capacity of organizations to create and exploit new knowledge necessary for innovative activities.

A third strand of research concerns organizational change and adaptation, and the processes underlying the creation of new organizational forms. Its main focus is to understand whether organizations can overcome inertia and adapt in the face of radical environmental shifts and technological changes, and whether organizational change occurs principally at the population level through selection (Romanellie&Tushman, 1994). In this context, innovation is considered as a capacity to respond to changes in the external environment, and to influence and shape it (Burgleman 1991; Child 1997).

Description of the Issue

It is obvious to note that for any organization to be sustained in the competitive market and also retain its corporate image, it must always scan the environment in which it operates to identify the trends and to adjust its strategies appropriately so as to remain competitive and to survive.

The food and beverage firm is a highly competitive one that required a high level of innovation as the day goes by. Innovation as a business concept is not a process that is in build in the organizational system; it is rather a management conceptual framework for improvement and effectiveness in organizational development as a management tool to gain competitive advantage in the business world; organizations today need a strong and analytical diverse workforce with distinct talent and abilities that are capable of enhancing innovation in the workplace.

Most indigenous organizations in the manufacturing sector especially the food and beverages firms are faced with stiff competition from foreign goods; to this end, modern managers and corporate owners strive to ensure their corporate strategies are such that can grapple with the current realities beclouding them; some of these organizations lack the comprehension to create value and meet the needs of the external users, but more often than not, they fail to do that in a convincing way to their employees.

The inability of the manufacturing firms to justify adequate reasons for development and commercialization of new product poses a serious challenge to the firm's growth which in turn generates an important question for both employees and researchers who are interested in investigating into this area of research interest. The major risks envisaged here include experimentation and creative process of new ideas and new products with vast experience which can degenerate into poor performance of currently engaged employees and as such breeding poor productivity and low customer satisfaction.

From practical evidence, one major factor observed is lack of diversity of work force in these organizations; although a number of extant researches have studied organizational innovation using many other explanatory variables; but very few of them have related workforce diversity to innovativeness in the workplace; it is for this reason that this research exercise is embarked on to ascertain the relationship between workforce diversity and organizational innovation in food and beverage firms in Port Harcourt, Rivers State.

Goals and Purpose

The main aim of the study is to ascertain the relationship between workforce diversity and organizational innovation of food and beverage firms in Rivers State, other specific objectives are to;

i. Find out the relationship between gender diversity and organizational innovationof food and beverage firms in Rivers State
ii. Ascertain the relationship between age diversity and organizational innovation of food and beverage firms in Rivers State
iii. Examine the association between marital status diversity and organizational innovation of food and beverage firms in Rivers State

1.4 Hypotheses

The following null hypotheses are stated as tentative answers to the research questions; thus

$H0_1$: Gender diversity does not have significant relationship with organizational innovation of food and beverage firms in Rivers State

$H0_2$: There is no significant relationship between age diversity and organizational innovation of food and beverage firms in Rivers State

$H0_3$: Marital status diversity has no significant relationship with organizational innovation of food and beverage firms in Rivers State

2.0 Review of Literature

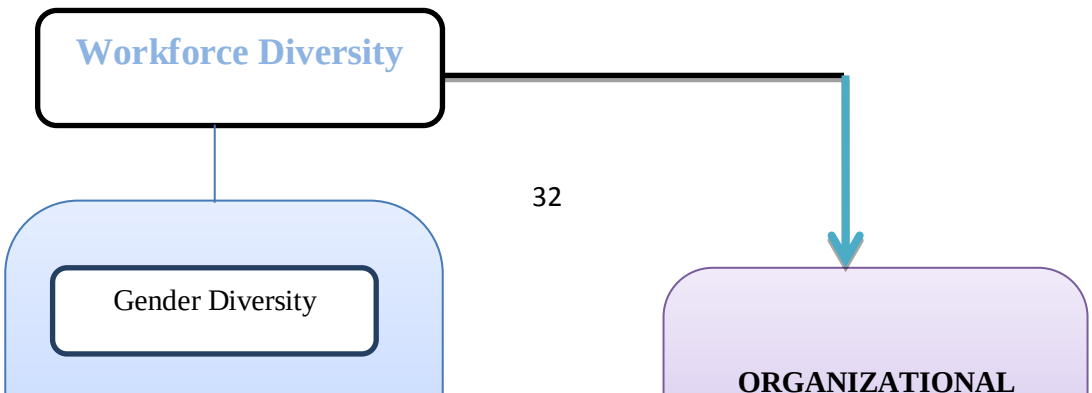

Figure 1.1 Conceptual framework

Source: Conceptual framework as adapted from Niebuhr (2006); Jaworki and Kohli (1997) and Gratton (2007) for the predictor and criterion variables respectively

2.1 Theoretical Framework

Social Identity Theory

This theory postulates that people tend to classify themselves into social categories that have meaning for them and this shapes the way individuals interact with others from their own identity groups and other groups (Tajfel and Turner, 1986). The central propositions of this theory include:

(i) People's desire to belong to groups that enjoy distinct and positive identities;(ii) Social identification with a certain group leads to activities that are congruent with the group's collective identity and foster the stereotypical perception of self and others;(iii) Through social comparisons between the in-group and out group. In-group members will make effort to maintain superiority over an out group member; (IV) mere categorization creates in-group favoritism and out-group discrimination. Based onTajfel (1978), Turner (1987), Social identity stems from the categorization of individual's distinctiveness and prestige of the group, the salience of our group and the factors that traditionally are associated with group formation.

Similarity and Attraction Theory

This theory propounded by Byrne (1971) asserts similarity based on salient and non-salient attributes such as ethnic background, race and belief among others. It negatively affects diversity in work groups because people prefer similarity in their interaction (Schneider 1987; Tsui, Egan

and O' Reilly, 1992). This theory provides a parsimonious explanatory and predictive framework for examining how and why people are attracted and influenced by others in their social worlds. According to research carried out by Ellen and Elaine (1969); Dunn Byrne (1971) they found out that in general, people are most attracted to others who share similar attitudes. In addition to people's inclination to be attracted to others who share similar attitudes, people are easily attracted to others who manifest personality characteristics that are similar to theirs. Individuals in diverse groups feel less safe and trust each other less thereby increasing conflict among them.

Concept of Workforce Diversity

Workforce diversity is a complex, controversial and political phenomenon (Steyaert, 2003). Some preach that diversity based on race, ethnicity and gender cannot be understood in the same way as diversity based on organizational functions, abilities and cognitive orientations (Nkomo, 2005). Moreover, the key issues of diversity are issues that arise because of discrimination and the exclusion of cultural groups from traditional organizations (Cross *et al.,* 2004). Therefore, if diversity is a concept that is inclusive to all individuals; it will become very difficult to identify discrimination practices.

Scholars, who advocated a broad definition (e.g. Jackson, May & Whitney, 2005) argue that diversity encompasses all the possible ways people can differ. Individuals, according to this school of thought, do not only differ because of their race, gender, age and other demographic categories, but also because of their values, abilities, organizational function, tenure and personality. The content that an individual has multiple identities and that the manifold dimensions cannot be isolated in an organizational setting. Apart from bringing their race, age,

ethnicity, and gender, individuals also come with their particular knowledge, personality, and cognitive style to the workplace. Therefore, in order to understand the dynamics of a heterogeneous workforce, the interactive effects of multi-dimensional diversity have to be addressed. In addition, it is argued that a broadening of the concept of diversity has a potential positive effect on diversity management programs, as it will be more acceptable if it is all-inclusive; that is not only oriented towards specific demographic groups of employees (Thomas & Ely, 1996).

Gender Diversity and Organizational Innovation

The increase in workforce gender diversity in the workplace has attracted the attention of both researchers and practitioners. Scholars and practitioners were generally optimistic about the effects of workforce diversity on performance; Black and Lynch (1997) argued that diversity can result in workforce diversity and competitive advantage for organizations. However, theories and empirical research suggest that diversity can lead to either positive or negative outcomes. The resource-based view of the firm (Barney, 1991) suggests that there is a positive relationship between diversity and performance, whereas social identity theory.

Tajfel (1978) suggests that a negative diversity performance relationship, “that is” empirical research has found inconsistent results suggesting that diversity can be either good or bad for businesses (Svyantek&Bott, 2004).

According to Armstrong, Brodie and Parsons (2001), diversity produces contradictory results for practitioners and scholars about whether gender diversity is good for businesses. The mixed results suggest the value of focusing on competing predictions includes nonlinear predictions

(Ho, 2003). Gender-based inequities in organizations are reinforced and justified by stereotypes and biases that describe positive characteristics and therefore a higher status to the males (Leonard & Levine, 2003; Nkomo, 1992).

Wellian*get al*. (2012) posited that genders group and employee performance is positively linked. Ali *et al.* (2000) found that high levels of gender diversity are a source of competitive disadvantage, while moderate levels of gender diversity provide a competitive disadvantage.

$H0_1$: There is no significant relationship between gender diversity and organizational innovation of food and beverage firms in Port Harcourt.

Age Diversity and Organizational Innovation

According to Gellner and Veen (2009) age heterogeneity on its own has a negative effect on individual productivity. Moreover, in the case of routine tasks, there are no substantial gains from age heterogeneity that could offset the increasing costs resulting from greater age heterogeneity. Thus, in companies with routine types of work, increasing age heterogeneity overall leads to a decline in productivity. The researchers also stated the western findings suggested that the older and younger employees must come together to form coherent and viable corporate culture. These values possessed by different age groups can complement each other in companies and it tends to achieve better firm performance. In their study result showed that different age groups provide different values for companies and these values can complement each other which improve company's performance.

Winnie (2008) reviewed a literature on age and work it shows a clear theoretical emphasis on negative predictions (De Armod*et al.*, 2006; Maurer&Barbeite, 2003; Shore *et al.*, 2003).

Traditional age distributions within organizational structures "that is" younger at the bottom and older in the middle and top were derived from hiring employees at a young age and retaining them through most of their work. The research on age diversity is much less developed than that of gender, they suggested the need for new paradigms and new approaches to studying age in the work setting. Joshi and Roh (2007) proposed that age diversity has a negative relationship with performance.

$H0_2$: Age diversity has no significant relationship with the organizational innovation of food and beverage firms in Port Harcourt.

Marital Status Diversity and Organizational Innovation

Marital status refers to the lawful recognition of the relationship or agreement between a man and a woman, to be husband and wife (Allen, Ciambrone& Welch, 2000).

A large literature has emerged on the relationship between marital status and well-being, as measured by a variety of indicators including morale, depression, happiness, life satisfaction, and so forth (Allen et al., 2000; Holicky&Charlifue, 1999; Hong & Duff, 1997; Kehn, 1995; Morris, 1997; Ryff& Keyes, 1995). Overwhelmingly, the literature points to a positive association between having a marriage partner, workload and being satisfied with life (e.g., Hong & Duff, 1997; Kehn, 1995). Much of the past work has focused exclusively on women (Bennett & Morgan, 1992; Day & Day, 1993; Kousha&Mohseni, 1997; Mookherjee, 1997), in part because they generally outlive men and have a greater likelihood of being widowed. Reinhardt and Fisher (1989), for example, compared reports of life satisfaction among women who were married and

those who were widowed and found significantly higher life satisfaction among those who were married.

Connidis and McMullin (1993) have directly examined gender differences, comparing married and widowed men and women; for example, found that divorced men and women were less satisfied than their married counterparts. Moreover, in their extensive search of the literature, Stroebe and Stroebe (1983) reported that 'married females were more depressed than married males and widowed males were more depressed than widowed females'

$H0_3$: There is no significant relationship between marital status diversity and organizational innovation of food and beverage firms in Port Harcourt.

Empirical Review

There is empirical evidence indicating that diversity in the workforce contributes to innovation; Mushtaq, Haider and Khan (2015) reviewed workforce diversity as a source of innovation in the context of the Telecom sector in Pakistan. The study explored the impact of gender, age, and education background on innovation in the Pakistani Telecom sector which is renowned to employ a highly diversified workforce. The study sample was 30 all-level management positions. Data were collected via self-administered copies of the questionnaire methodology. The results indicated that only two variables, gender and educational background, were significant in explaining the variance in employee performance when different workforces work together, while surprisingly, age diversity does not. The research investigated the effect of employee diversity in terms of gender, age, ethnicity and education on the firm's likelihood of introducing

an innovation. The analysis draws on data from a recent innovation survey. This data is merged with a linked employer-employee dataset that allows us to identify the employee composition of each firm. We test the hypothesis that employee diversity is associated with better innovative performance. The research portrays some limitations that there is small scale research required a broad spectrum for future research and more diverse MOB in future will more attractive results.

Velten and Lashley (2017) asserted from their research undertaking among employees of Park Hyatt Hamburg that recent trends in increasing ethnic diversity in Park Hyatt Hamburg brought up the question of how cultural diversity is linked to employees' motivation. Their study focused on the relationship between cultural diversity and employees' motivation. The research is based on twelve, forty-five-minute, semi-structured interviews with a front office and housekeeping employees of Park Hyatt Hamburg. It revealed that cultural diversity plays an important role in the motivation of employees as most employees mention atmosphere and teamwork including cultural diversity as the most motivating factors. It was observed that most of the employees responded positively to cultural diversity. However, deep-level dissimilarities including different standards and values can lead to negative outcomes; they stated. Their findings were consistent with published research and literature on the subject. An important factor concerning the perception of cultural diversity is the cultural competence of the employees. Therefore, they recommended that the employment of culturally diverse employees is favorable, though attention has to be paid when employees have a very different culture from other employees, as it can lead to conflict.

Bassett-Jones (2005) in a conceptual and discursive paper argued that diversity is a recognizable source of creativity and innovation that can provide a basis for competitive advantage. On the other hand, diversity is also a cause of misunderstanding, suspicion and conflict in the workplace that can result in absenteeism, poor quality, low morale and loss of competitiveness. Firms seeking competitive advantage therefore face a paradoxical situation. If they embrace diversity, they risk workplace conflict, and if they avoid diversity, they risk the loss of competitiveness. The advantages and disadvantages associated with workforce diversity put organizations in a position of managing a paradoxical situation. To give support to this assertion, the paper considered what is meant by diversity, how it is best managed, what its relationship with creativity and innovation might be and how the problems created by the management of diversity, creativity and innovation might be resolved.

Lee and Nathan (2010) in their study conducted in London observed that London is one of the world's major cities and one of its most culturally diverse; the paper used the 2007 London Annual Business Survey to investigate, exploiting the survey's unique coverage of both workforce composition and innovation outcomes. From a cross-section of over 2300 firms, they found significant positive relationships between workforce and ownership diversity, and product and process innovation. These provide some support for claims that London's cultural diversity is a source of economic strength.

Ilmakunnas and Ilmakunnas (2011) stated that in economics there are no unambiguous results on the direction of diversity and productivity; the effects of diversity can be modeled through preferences, strategies, or the production function. Diversity may have negative consequences on

productivity, if an employee's utility and work performance depends negatively on the share of employees who are different from him in terms of ethnicity, age, gender etc.

In fact, Richard (2000, 2003) and Hoffman's (1985) studies indicated that there is a direct correlation between diversity and innovation. This is based on the outcome of top financial performing companies, which have demonstrated their diverse make-up is linked to innovation.

Gomez-Mejia *et al.* (2006) reports that employee diversity can be a major contributing factor within organizations for stimulating creativity, problem-solving and flexibility, which in turn directly contributes to innovative approaches of the organization.

Other authors, for example, Skarzynski and Gibson (2008) are convinced diversity is a blueprint for innovation, while Pinto and Pinto (2011) agree that diversity in the workforce directly contributes to and affects creativity.

Sohail *et al.* (2011) findings also support this by indicating that diversity did contribute to innovation within the workforce. Okoro and Washington (2012) contended that the best way to ensure a steady flow of innovation and meeting objectives is by hiring and retaining employees from diverse backgrounds, races, and nationalities.

Although Carrell*et al.* longitudinal studies (1992 and 2004) of diversity programs showed some positive results in innovation, they also indicated that there were negative results in the form of training costs, tardiness and absenteeism, productivity and employee turnover.

Relationship between Workforce Diversity and Organizational Innovation

Managing a diverse or multicultural organization is a broad and complex issue. Leaders face formidable challenges in building a multicultural organization that truly values diversity. This is

because not all people in organizations value diversity. As a rule, people are most comfortable with those like themselves and emphasizing diversity may undermine that comfort level. Diversity tends to breed new approaches to old practices and long-standing problems (Thomas, 1991).

Managing diversity is a comprehensive managerial process for developing an environment that works for all employees. Diversity management is an inclusive process since all employees belong to a culture, including those from the organization's traditionally dominant cultural group. Thomas (1991) indicated that diversity management must not be viewed as an "us/them kind of problem to be solved but as a resource to be managed.

According to Laursen*et al.* (2005), Workforce diversity is often measured by an individual's demographic attributes that are used as a proxy for different attitudes knowledge bases and cognitive models, the individual employee's knowledge structures as also affected by group membership, social interactions and organization of the firm (Walsh, 2005; Williams & O'Reilly, 1998). In their review on demography and diversity in organization has both direct and indirect effects on processes and performance of groups; however some results point towards a positive effect or diversity while others stress the negative effect on increased diversity and thus diversity has two potential effects. They argue that the difficulties of finding significant positive effects of diversity might stem from differences defining performance indicators and the lack of separating the creativity.

Fagerberg (2005) described the difference between invention and innovation as; invention is the first occurrence of an idea for a new product or process while innovation is the first attempt to

carry it out into practice. Thus innovation is visualized as being two-stage process with the idea phase being separate from the implementation phase. This distinction has also been supported by research within cognitive psychology.

West (2002) suggests that the innovation should be split out into creative stage and implementation stage. Therefore an innovation often depends on groups of individuals in the organization, Woodman *et al.* (2003) defines organizational innovation as "the creation of a valuable, useful new product, service, idea, procedure or process by individuals working together in a complex social system". It is in the context of a complex social system in an organization where the different types of individual knowledge come into play to generate new knowledge or ideas. Therefore the composition of individuals within the firm is an important factor for understanding innovation since diversity in the composition of a firm employee contributes to diversity in the knowledge base.

Penrose (2009) describes a firm as a collection of productive resources and it is the services these resources possess that provide the input for the productive processes of a firm, subsequently, workforce diversity becomes important for the performance of firms since the heterogeneity of these productive services provide firms with different characteristics. Barney (2010) made a distinction between three categories of resources a firm would possess and out of which a unique character could arise. These three categories are: Physical capital resources, human capital resources and organizational capital resources. However, in the knowledge-based economy a firm relies less on its tangible and more on its intangible resources (Teece*et al.*, 2007).

Methodology

This study adopted a cross sectional survey research design in studying thirteen (13) food and beverages which forms our accessible population, however our study units include the managerial employees of the firms having that our unit of analysis is organizational and such employees are to stand in proxy for the organization. The human resource department provided us the data on functional departments within the organization. Out of eighty-eight (88) managers, we retrieved and analyzed forty-eight (48) copies from managers who were our study objects. The instrument with which we elicited data from the respondents is the questionnaire and was analyzed using the Structural Equation Modeling statistical tool from AMOS version 20.00.

Operational Measures of Variables

Workforce diversity was measured using three items as developed by Niebuhr (2006) and they include gender diversity, age diversity and marital status diversity.

Gender diversity has 4 items; e.g. (my gender would affect my innovative potential). Age diversity has 4 items (e.g. my age would affect my innovative potentials); Marital status diversity has 4 items (e.g.I think my marital status would affect my innovative potentials); and organizational innovation by Jaworki and Kohli (1997) (e.g. my firm works with customers and others to identify and create potentially useful innovation)

Results and Discussion

Table 1.1 Demographics of Respondents

	FOOD and BEVERAGE FIRMS	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Air Liquide Nigeria Plc	2	4.2	4.2	4.2
	Eastern Enamelware Factory Ltd	3	6.3	6.3	10.4
	Rivers vegetable Oil Co. Ltd	3	6.3	6.3	16.7
	General Agro Ind. Limited	4	8.3	8.3	25.0
	First Aluminum Nig. Ltd	5	10.4	10.4	35.4
	Nigeria Bottling Co. Plc	4	8.3	8.3	43.8
	Nigerian Engineering Work Ltd	5	10.4	10.4	54.2
	Sun Flower Company Ltd	3	6.3	6.3	60.4
	Galba Limited	3	6.3	6.3	66.7
	Oil &Industrial Services Ltd	2	4.2	4.2	70.8
	Eastern Wrought Iron Limited	3	6.3	6.3	77.1
	Dufil prima Foods Ltd.	7	14.6	14.6	91.7
	Far East Paint Lustre Ind. Ltd	4	8.3	8.3	100.0
	Total	48	100.0	100.0	
	AGE				
	18-25 years	3	6.3	6.3	6.3
	26-35 years	14	29.2	29.2	35.4
	36-45 years	21	43.8	43.8	79.2
	Above 45 years	10	20.8	20.8	100.0
	Total	48	100.0	100.0	
	GENDER				
	Male	20	41.7	41.7	41.7
	Female	28	58.3	58.3	100.0
	Total	48	100.0	100.0	
	EDUCATIONAL QUAL				
	WASCE	1	2.1	2.1	2.1

OND/HND/NCE	11	22.9	22.9	25.0
Bsc/BA	16	33.3	33.3	58.3
Msc/ MBA/PhD	11	22.9	22.9	81.3
Others	9	18.8	18.8	100.0
Total	48	100.0	100.0	
JOB DESIGNATION				
Senior Management Staff	18	37.5	37.5	37.5
Middle Management Staff	22	45.8	45.8	83.3
Junior Management Staff	8	16.7	16.7	100.0
Total	48	100.0	100.0	
DURATION AT WORK				
Below 10 years	5	10.4	10.4	10.4
11-15 years	23	47.9	47.9	58.3
Above 15 years	20	41.7	41.7	100.0
Total	48	100.0	100.0	

SPSS output, Version 20 – Field Survey, 2022

From Table 1.1; a total number of thirteen (13) firms were studied and forty-eight (48) copies of the questionnaire were distributed to the employees of the firms(food and beverage) in Rivers State; forty-eight (48) copies were valid and usable, and were analyzed. Thus, the demographic distribution of respondents was reported in Table 1.1.

Model Specifications

Regression/Structural Model

The functional models for the relationship between workforce diversity and organizational innovation are given as follows

$$OI = f(WD) \quad (1.1)$$

$$OI = f(GD, AD, MD) \quad (1.2)$$

Where;

WD = Workforce Diversity

GD = Gender Diversity

AD =Age Diversity

MD =Marital Status Diversity

OI = Organizational Innovation

OIC = (Mean composite of Organizational Innovation)

WDC = Workforce Diversity Composite (Mean composite of Gender Diversity, Age Diversity and Marital Status Diversity)

The statistical (empirical) models for these relationships are given as follows:

$$OI_i = \beta_0 + \beta_1 GD_i + \beta_2 AD_i + \beta_3 MD_i + \epsilon_i \quad (1.3)$$

Where β_0, λ_0 and ϕ_0 in models are regression intercepts; $\beta's, \lambda's$ and $\phi's$are the slope parameters capturing the effects of *GD*, *AD*, *MD* and ϵ_{it}, u_{it} and e_{it} are the error terms representing all unmodelled factors. The results of models 1.1,1.2 and 1.3 would be used to test hypotheses 1, 2and 3.

Where γ_0 is the model intercept, γ_1 is the slope parameter that captures the effect of Gender Diversity composite and Organizational Innovation, γ_2 is the slope parameter that captures the

effect of Age Diversity composite and Organizational Innovation and γ_3 is the slope parameter that captures the effect of the Marital Status Diversity composite and Organizational Innovation.

Table 1.2 Correlations, Composite Reliability, Degree of Freedom (Df)

Construct Convergent and Discriminant Validity.

Variable	GD	AD	MD	OI	CR	Df	AVE
GD	**1.0**	0.64	0.49	0.47	0.88	14	0.52
AD	0.64	**1.0**	0.50	0.54	0.78	2	0.51
MD	0.49	0.50	**1.0**	0.56	0.76	5	0.51
OI	0.47	0.54	0.56	**1.0**	0.78	35	0.56

Where:

GD= Gender Diversity, AD= Age Diversity, MD= Marital Status Diversity, OI= Organizational Innovation

CR= Composite Reliability, AVE= Average Variance Extracted, Df= Degree of freedom.

Source: Amos Version 22.0.output on research data, 2022

Structural Model

We used the recursive structural model approach to predict the dependent variable. Parameters of structural equation modeling when means are not analyzed include (1) direct effects on endogenous variables from other variables, either exogenous or endogenous; and (2) the variances and covariance of exogenous variables. This means that the model has a covariance

structure only, not also a mean structure. This model, adopted the multiple-indicator measurement approach, using the reflective indicators, reflective measurement model and recursive structural model. Thus, we assessed the direct relationship between the exogenous constructs and endogenous construct(s) (X→Y).

Interpretation of Results (Inferential Analysis):

This section gives attention to the interpretation of the results concerning the inferential data analysis. Three(3) hypotheses were analyzed in two clusters. The analysis was based on significance criteria of β>0.3 (Brown, 2015); r>0.7 (Hair *et al.*, 2014) and p<0.05. Results on each cluster of the hypotheses are summarized in table formats. These tables will serve as reference points for the interpretation of the results.

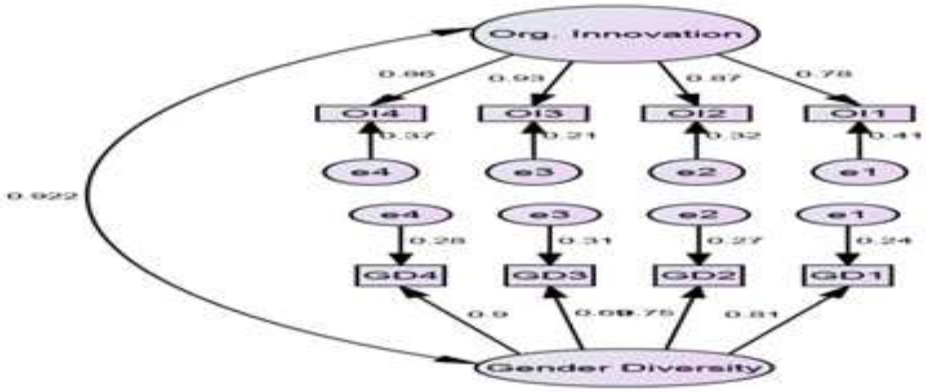

Figure 1.2: Structural Model Correlating Hypotheses 1

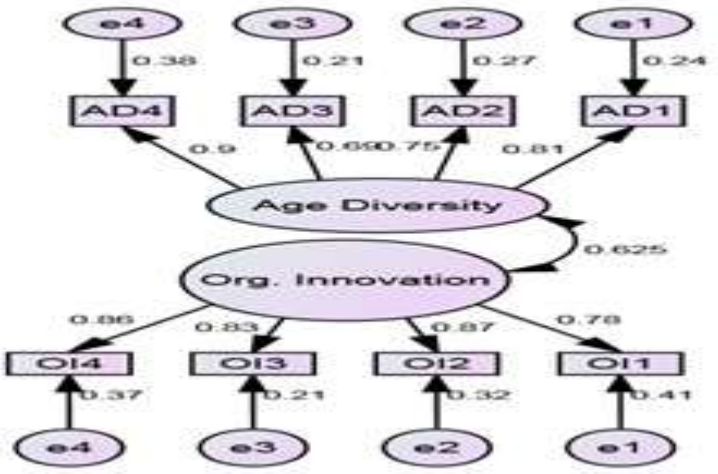

Figure 1.3: Structural Model Correlating Hypotheses 2

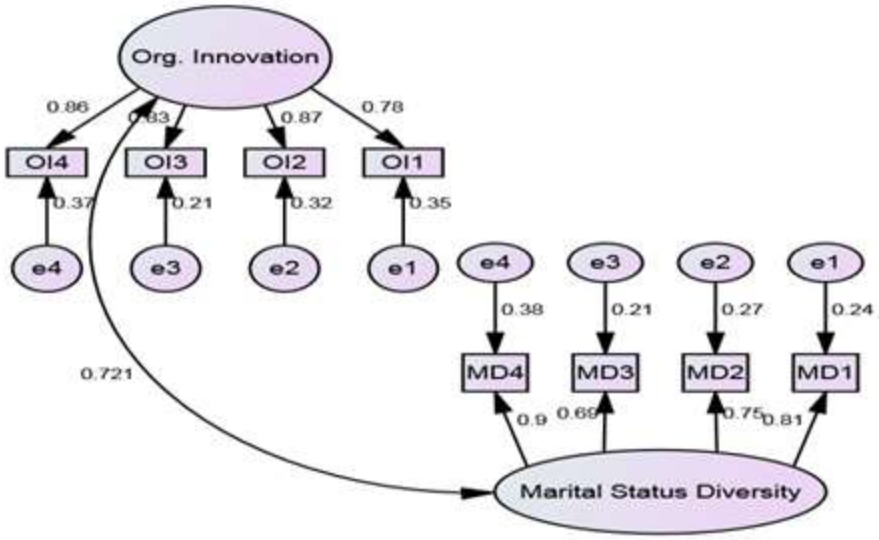

Figure 1.4: Structural Model Correlating Hypotheses 3

S/N	Moderation Stage	Relationship	Std. Beta	Actual Beta	S.E	C.R	P	Remark

1	GD→OI (Hypothesis 1)	Gender diversity and Organizational Innovation	0.922	0.035	0.28	2.04	0.000	Not Supported
2	AD →OI (Hypothesis 2)	Age diversity and Organizational Innovation	0.625	0.032	0.27	3.62	0.000	Not Supported
3	MD →OI (Hypothesis 3)	Marital status diversity and Organizational Innovation	0.721	0.023	0.22	4.15	0.000	Not Supported

Table 1.3: Result of Standardized and Unstandardized Regression Estimate of the Model

Source: Amos Version 22.0 output on research data, 2022

Discussion of Findings

The study examined the relationship between workforce diversity and organizational innovation of food and beverages firms in Port Harcourt, Rivers State; three hypotheses were formulated as tentative answers to research questions raised and were tested to find support for the propositions, thus;

The result of the tested $H0_{1-3}$ reported the existence of a significant relationship between the dimensions of workforce diversity (gender diversity, age diversity and marital status diversity) and organizational innovation; ((where $\beta = 0.922$, $r= 0.035$, $p = < 0.05$;$\beta = 0.625$, $r= 0.032$, $p = < 0.05$;$\beta = 0.721$, $r= 0.023$, $p = < 0.05$); Blake (1991) argued that diversity can result to workforce diversity and competitive advantage for organizations even as it concerns product innovation.In the same vein, Leonard and Levine (2003) posited that gender-based inequities in

organizations are reinforced and justified by stereotypes and biases that describe positive characteristics; Wellian*get al.* (2012) posited that gender diversity in groups help promote performance levels.

De Armod*et al.* (2006) are of the position that traditional age distributions within organizational structures "that is" younger at the bottom and older in the middle and top were derived from hiring employees at a young age and retaining them through most of their working in the institutions; thus with that distribution innovativeness is elicited from varying age groups to match what is trending in the market, however, Joshi and Roh (2007) proposed that age diversity has a negative relationship with performance.

Conclusion

Empirical findings from the data analyzed predicate the following conclusions relative to the scope of our study;

Gender diversity directly relates with organizational innovation; there are product and service offerings that are categorized under gender differences; and as such when there is a perfect mix of gender in the workplace, the system tends to leverage on the benefits of the two to promote innovativeness.

Accordingly, age diversity in the workplace is significantly related to organizational innovation; as it concerns age, experience and resources of the organization, the older generation of workers tend to possess the age-long cultural practices and to pass it on that it does not, while the younger

generations ensure the organization remain refreshed with the trends in the business environment with the intent of upholding innovativeness in the organization.

Similarly, workplace diversity in the area of marital statuses had significantly reported a strong influence on organizational innovation; this is as a result of work life balance issues; organizations who encourage employees to get married when they want to, will evidently have more reports of satisfaction among workers because every individual worker is both an economic being and a social animal.

5.3 Recommendations of the Study

The following recommendations come about as a result of prior findings and conclusions reached relative to the variables studied, thus;

i. It is not advisable to operate or function within this knowledge based economy and a technology-driven environment without encouraging a diverse workforce.

ii. Gender sensitivity is encouraged to ensure its balance as what the male employees will be limited, the female counterparts will offer so that the level of innovation in the organization is enhanced.

iii. It will be beneficial to modern organizations to include a diverse workforce as it concerns age of workers, the older generation of workers are present to uphold and pass on the values and cultures of the organization to the younger ones, and succession effectiveness can also be derived in that way.

iv. The modern organization is such that strives for work life balance of its employees; business institutions that encourage this, will unarguably derive the best from its workers because employees are also social as well as economic beings.

v. Organizations today are mostly filled with the young generation of workers; most times the experience needed is not found among them; to this end, there should be diversity in the workforce relative to age; then, other network practices to cross fertilize ideas should be welcomed to improve performance levels.

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Appendix A: Questionnaire Section

Part one: Demographics

Procedure: Please indicate with a (√), circle, underline or fill in, where appropriate the response option you consider approximately applicable to your firm in each question.

Section A: Respondents Demographics – General Questions

A1. What is the name of your firm? (Optional) .....

A2. Age: A. 18-25yrs ☐

B. 26-35yrs ☐

C. 36-45yrs ☐

D. 46yrs and Above ☐

A3. Sex: A. Male ☐

B. Female ☐

A4. Educational Qualifications:

A. WASCE ☐

B.ON/HND/NCE ☐

C. Bsc/BA ☐

D. Msc/ MBA/PhD ☐

E. Others Specify_____

A5. Please indicate your present official designation in the firm.

A). Senior Management Staff ☐

B). Middle Management Staff ☐

C). Junior Management Staff ☐

A6. How long have you worked in this firm? _____

Part Two: Workforce Diversity

Kindly use the rating scales provided below to indicate the extent to which your activities are carried out in your organization? You are please required to tick only the option that represents your opinion on each activity in the table.

1 = Strongly disagree, 2 = Disagree, 3 = Agree and 4 = Strongly Agree.

Section B: Gender as a Dimension of Workforce Diversity

S/N	B: Gender	Responses			
		1	2	3	4
B1:	My gender would affect my innovative potential				
B2:	My gender would predict the way I do my job				
B3:	I see myself as innovative as a result of my gender				
B4:	I think I am innovative due to my gender				

Section C: Age as a Dimension of Workforce Diversity

S/N	C: Age	Responses			
		1	2	3	4
C1:	My age would affect my innovative potential				
C2:	I think that my age would predict the way I do my job				
C3:	I see myself as being innovative due to my age				
C4:	I think my innovativeness is due to my age				

SECTION D: Marital Status as a Dimension of Workforce Diversity

S/N	D: Marital Status	Responses			
		1	2	3	4
D1:	I think my marital status would affect my innovative potential				

D2:	I think my marital status would predict the way I do my job				
D3:	I see myself as being innovative as a result of my marital status				
D4:	I see myself as not being innovative due to my marital status				

Part Three: Organizational Innovation

Kindly use the rating scales provided below to indicate the extent to which your activities are carried out in your organization? You are please required to tick only the option that represents your opinion on each activity in the table.

1 = Strongly disagree, 2 = Disagree, 3 = Agree and 4 = Strongly Agree.

S/N	E: Organizational Innovation	Responses			
		1	2	3	4
E1:	My firm works with customers and others to identify and create potentially useful innovation				
E2:	My firm makes the best use of the employee skills to develop better product/services				
E3:	Our firm always engages in administrative innovation				
E4:	My firm adequately involves the managerial workforce in identifying and creating of potentially useful innovation				

Appendix B: AMOS version 20.00 Output

Outer Loadings

	Gend.Diversity	Age.Diversity	Mar.Diversity	Org.Innovation
GD1	0.934167			
GD2	0.951825			
GD3	0.873755			
GD4	0.931667			
AD1		0.922308		
AD2		0.934167		
AD3		0.889757		
AD4		0.872235		
MD1			0.959911	
MD2			0.985290	
MD3			0.971181	
MD4			0.983273	
OI1				0.948287
OI2				0.908737
OI3				0.935235
OI4				0.887196

Latent Variable Correlations

	Gend.Diversity	Age.Diversity	Mar.Diversity	Org.Innovation
Gend.Diversity	1.000000			
Age.Diversity	0.960446	1.000000		
Mar.Diversity	0.819738	0.886600	1.000000	
Org.Innovation	0.940150	0.853767	0.963806	1.000000

Cross Loading

	Gend.Diversity	Age.Diversity	Mar.Diversity	Org.Innovation
GD1	0.954337	0.794897	0.61914	0.686511
GD2	0.951825	0.8152	0.854016	0.847729
GD3	0.873755	0.739556	0.865938	0.829551
GD4	0.931667	0.784022	0.636109	0.689407
AD1	0.772078	0.922308	0.683682	0.787196
AD2	0.825177	0.934167	0.664556	0.728176
AD3	0.714045	0.889757	0.661797	0.766235
AD4	0.804716	0.872235	0.881072	0.84414
MD1	0.843054	0.793304	0.959911	0.703446
MD2	0.807141	0.782058	0.98529	0.831727
MD3	0.756544	0.728528	0.971181	0.8489
MD4	0.78043	0.753933	0.983273	0.837378
OI1	0.808435	0.775815	0.869432	0.840547
OI2	0.706645	0.685045	0.830171	0.948287
OI3	0.771904	0.798191	0.758665	0.908737
OI4	0.772078	0.854337	0.683682	0.935235