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Innovative Efforts and Employees' Involvement in Food and Beverage Companies in Southwestern Nigeria

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Abstract

This chapter examines the extent of manpower utilisation and innovative efforts in food and beverage companies in Southwestern Nigeria. Using a quantitative research approach, 229 employees of food and beverage companies were selected as respondents for the survey through random and snowballing sampling techniques. The study measurement model was assessed using exploratory and confirmatory factor analyses, and a structural equation model was subsequently estimated. Results show that only respondents' career-skills utilisation ($\beta = 0.235$; $p<0.01$) contribute positively to innovative efforts of employees, while job satisfaction ($\beta = -0.251$; $p<0.01$) and willingness to adopt new technologies and responsibilities ($\beta = -0.148$; $p<0.05$) have a negative influence on innovation capabilities of the employees. The study concludes that the level of employees' innovativeness is premised on the progress made in their professional career and level of skills utilisation in their present jobs..

Keywords: *Innovativeness; Manpower utilisation; Employees; Structural equation; Food and beverage companies*

1.0. Introduction

In recent years, the utilisation or employability of high-level manpower in Nigeria has attracted the attention of many concerned stakeholders, and this has further generated serious debate on various platforms. The notion of manpower utilisation or employability is described as a system that integrates various aspects relating to job competencies and requirements (McQuaid and Lindsay, 2005). For instance, Thijssen *et al*. (2008) describe employability as a process of identifying development within a society, organisation or in an individual. Thus, a decision to attend an institution of higher learning may be influenced by the general labour market opportunities and rewards system associated with the attainment of such qualifications. However, the non-utilisation of high-level manpower in certain sectors of the economy may discourage individuals from enrolling for higher qualifications. As a result, a shortage of qualified personnel may begin to impair the economic and social development of a nation.

Essentially, human capacity building has been identified as the centre point of innovation. Therefore, building an innovation-driven nation requires educating the populace as this provides resources and incentives for growth and development. To this end, one of the pertinent questions will be whether the present various categories of employees being employed by the Food and Beverage processing firms in Nigeria are the required human resources for the sector; and more importantly, whether these employees could absorb existing technologies and knowledge from industrialised countries with a view to generating new technologies (Jin and Zedtwitz, 2008). Indeed, the ability to generate new technologies from existing ones is crucial for building Nigeria's national-level technological capability which is the collection of individual firm-level technological capability (Sobanke, 2012).

2.0. Literature Review

2.1. Innovation Capability

Capability to innovate is described as the use of learning capabilities. These are assets that enable firms to transform and exploit their resources to develop product or process innovations (Amara *et al*., 2008). These capabilities include learning by searching, learning-by-training, learning-by-using, learning-by-doing, and learning-by-interacting (Sobanke, 2012). Similarly, the ability to innovate or to be innovative is described as using the technological ladder notion as proposed by Ogbimi (2007). Theoretically, the technological ladder begins with the two fundamental steps of theories and practices, collectively recognised as the learning stage.

The most significant capability to innovate is the knowledge accumulated by the firm, and this is mostly embedded in human resources (OECD (2005). In addition, successful innovation rests on the twin foundation of education and skills. For instance, the global innovation index reveals that an increase in the educational achievement of young people is crucial to a country's ability to generate new knowledge and to innovate (Dutta *et al*., 2014). Education is therefore important in order to equip potential manpower with the skills to participate in innovation and as well respond to the outcome of technological changes in a workplace. Hence, the most important condition is the presence of a large, well-educated stock of human capital, which helps countries accelerate technological catch-up. Poor innovative performance can therefore be a direct result of a large and poorly educated population, as a highly educated workforce is crucial in diffusing tacit knowledge which resides in individuals.

2.2. Career Success

Career success is a positive psychological, work-related outcome or achievement attained through work experiences (Judge *et al*., 1995). Career outcomes are classified as objective or subjective career successes (Gunz and Heslin 2005; Ng *et al*., 2005). Objective career success is characterised by elements that are directly observable and measurable. This includes income, grade level, status and responsibility (Judge *et al*., 2007).

On the other hand, subjective career success is an individual's perception and the understanding of what success connotes. This is an individual's perspective, interpretation and evaluation of their career

as one makes progress on the job (Heslin, 2005). Subjective career success is measured in terms of job satisfaction, work-life balance, perceived employability as well as opportunity to learn new skills and job security (De Vos and Soens, 2008).

2.3. Human Factors in Innovation

High-level manpower is an indispensable factor for good innovative efforts as education has been identified as a major tool for technological diffusion (Akhvlediani and Cieślik, 2020). This is because economic growth and development can only be achieved with a high calibre of human capital, which in turn affects a country's ability to innovate or catch up with more advanced technology. Also, growth differences among nations or regions have been attributed to the differences observed in the levels of human capital and the capacity to retain, attract, and expand these endogenously (Oyelaran-Oyeyinka and Barclay, 2003). Thus, this study agrees that the stock of human capacity plays an important role in innovation system, and this is essential for the design of policies that would help to reinforce the process that leads to higher economic development and richer innovation and friendly system (Dutta *et al*., 2014).

Work, employment and career success are essential for the happiness and fulfilment of an individual in life (Binder and Coad, 2013). Satisfaction resulting from one's workplace or duty can stimulate innovation. Shipton, West, Parkes, Dawson and Patterson (2006), revealed in their study that job satisfaction has a significant positive relationship with innovations in manufacturing firms in the United Kingdom. On the other hand, Zhou and George (2001) who examined job dissatisfaction as a condition for creativity, affirmed that employees in manufacturing firms who experienced job dissatisfaction but are still committed to doing their job, made some considerable improvements that lead to innovation.

Furthermore, Wang and Ahmed (2004) stressed that employees' innovativeness can be a direct result of their willingness to change. Such changes according to them may include the willingness to adopt sophisticated technologies for completion of assigned tasks; acquire advanced skills required for completing assignments, as well as additional responsibilities. Similarly, McGuirk, Lenihan and Hart (2015) found that willingness of managers to accept changes as well as firms' work practices are positively significant for innovation.

In the case of education and training, Leiponen (2005) found that technical skills are important determinants for innovation in Finnish manufacturing firms. Capozza and Divella (2019) further showed that employees who were educated with professional skills respond quickly to new tasks and technological changes. However, Schneider *et al*. (2010) showed that the proportion of professionals employed by the German manufacturing sector and manufacturing firms' innovativeness was insignificant. Furthermore, Khan and Chaudhry (2019) showed that only formal education is insufficient for building the human capacity of employees. However, Rogers (2004) revealed that formal training is positively contributing to the innovation capability of Australia's manufacturing firms.

2.4. Types of Innovation

Innovation is the creation of value, and a complex phenomenon (Armbruster *et al*., 2008). Also, innovation is an economic phenomenon that involves the use of new knowledge for commercial purposes. It is the link between knowledge and exploitation or commercialisation of knowledge (Khalil, 2000). Innovation cuts across different spheres of human life. Four types of innovation are identified namely product, process, organisational and marketing innovation as established in the literature (OECD, 2005).

Product innovation is the introduction of a good or service that is new or significantly improved with respect to its characteristics or intended uses. This includes significant improvements in technical specifications, components and materials, incorporated software, user-friendliness or other functional

characteristics. Similarly, process innovation is defined as the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Furthermore, organisational innovation is the implementation of a new organisational method in the firm's business practices, workplace organisation or external relations, while marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing (OECD, 2005).

Essentially, the degree of novelty of innovation indicates the intensity of the changes in the products or the production processes that have occurred from totally new to little modifications. Radical innovation is described as the introduction of a totally new concept. The capabilities that are conceived and developed in the new concept need not share previous technological knowledge and characteristics with those already existing in the industry (Garcia-Muina and Navas-Lopez, 2007). Radical innovation causes a significant change in an existing industry which sometimes results in the creation of new industries (Sobanke, Ilori and Adegbite, 2012) by seeking new opportunities, functions and possibilities Khalil, 2000). On the other hand, incremental innovation involves the refinement and improvement of the existing technologies (products, processes or systems) in achieving a better grade or newer version of the existing object of innovation. As observed by Sobanke *et al*. (2012), large firms prefer to focus on developing and exploiting this type of innovation by only reinforcing or extending current practices and competencies (Linton, 2009).

3.0. Methodology

The study makes use of a primary data source, and the data were collected with the use of survey method (Fowler, 2001a). A questionnaire was used as a major survey instrument for data collection from respondents (Fowler, 2001b). The survey targeted individual respondents working within randomly selected micro-, small-, medium- and large-scale Food and Beverages processing firms. The Food and Beverages processing firms were selected due to their high rate of contribution to the gross domestic product (GDP) of Nigeria. Also, the study covers all the states in the southwest geopolitical zone of Nigeria. Three (3) representative states namely Lagos, Ogun and Oyo were however purposively selected due to their large industrial activities compared to other states in the region. Data for this study were analysed using quantitative methods. These includes the use of descriptive and inferential statistics. The inferential statistics make use of multivariate regression model with the help of structural equation modelling using SPSS Amos 22.0.0 and SmartPLS v. 3.2.8 for evaluating the relationships, contributions and paths of the studied variables. The reliability tests for the research instrument were analysed the Cronbach's Alpha. Values above the recommended threshold of 0.7 were obtained.

3.1. Conceptual Framework

The conceptual framework for this study is presented in Figure 3.1. The framework describes the relationship and interactions among all the variables in the study. The human capacity utilisation influences the manpower innovative capability of the firm while controlling for the effect of the presence of age and experience of the employee.

3.2. Study Variables and Measurement

The study's dependent variable is the innovation capability of manpower which was captured using two proxies that assessed individual employee's contribution to innovation carried out by firms as well as the newness of such innovation to market. Innovativeness (η) is an aggregate of the object of innovation and newness to market (new to the firm, new nationwide or new worldwide), and was

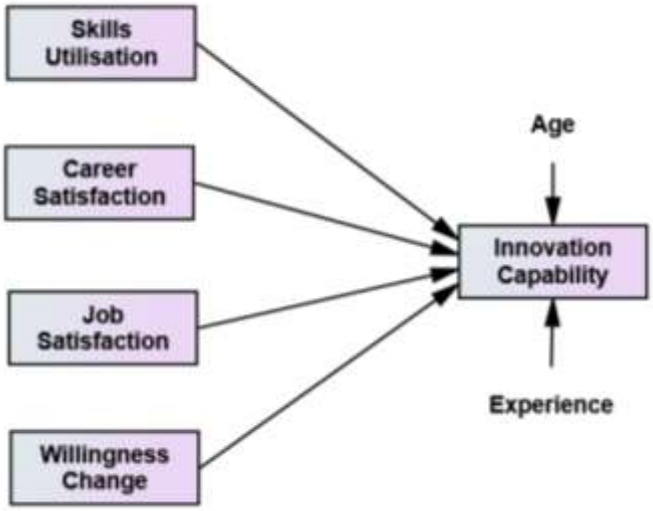

Figure 1: Hypothesised Research Model of Employees' Utilisation and Innovativeness
Source: Adapted from Wang *et al*. (2011)

measured using the binary variable "1/0". 1 if respondent contributed to the introduction of a new or significantly improved innovation, and 0 if otherwise.

i. Product innovation: respondents were asked to indicate whether or not they have been involved in the introduction of a new or significantly improved product of the company in the last three years.
ii. Process innovation: respondents were asked to specify whether or not they have been involved in the introduction of a new or significantly improved method of manufacturing products; logistics, delivery, or distribution methods for inputs, products or service; and/or supporting activities for the processes of the company during the last three years.
iii. Marketing innovation: respondents were asked to indicate whether or not they have contributed to the introduction of new or significantly improved marketing methods involving product design, packaging, product placement, product promotion or pricing.
iv. Organisational innovation: respondents were asked to indicate whether or not they have been involved in the introduction of a new or significantly improved organisational structures or management practices.

The independent variable is human capacity utilisation and measured with questions on individual's skills utilisation, willingness to change, job satisfaction, and career satisfaction and these were assessed on eighteen (18) items using a 5-point Likert rating scale.

a. Skills utilisation (ξ_1): respondents were asked to indicate the level of utilisation of their skills on four (4) items used for measuring skills utilisation.
b. Career satisfaction (ξ_2): respondents were asked to indicate their level of satisfaction on five (5) items used for measuring career satisfaction.
c. Job satisfaction (ξ_3): respondents were asked to indicate their level of agreement on six (6) items used for measuring job satisfaction.
d. Willingness to change (ξ_4): respondents were asked to indicate their level of readiness to adapt to changes in the workplace over the next 3 years on the three (3) items used for measuring willingness to change.

3.3. Model Specification:

Structural equation modelling (SEM) describes the interrelationship among constructs as well as their relationships to the items used in assessing them (Bollen, 1989a; Eboli and Mazzulla, 2012). The full structural model for both the endogenous and exogenous variables in the research model of manpower utilisation on innovation capability is given as:

$$\eta = B\eta + \Gamma_1\xi_1 + \Gamma_2\xi_2 + \Gamma_3\xi_3 + \Gamma_4\xi_4 + \Gamma_5\xi_5 + \zeta \quad (1)$$

where:

η	-	Innovation capability
ξ_1	-	Skills utilisation
ξ_2	-	Career satisfaction
ξ_3	-	Job satisfaction
ξ_4	-	Willingness to change
ξ_5	-	Control variables
ζ	-	Residual error
B	-	Standardised regression coefficients of the endogenous variable
Γ_1 - Γ_5	-	Standardised regression coefficients of respective exogenous variables

4.0. Results and Discussion

4.1. Breakdown of Respondents' Skill Utilisation

Table 1 presents the breakdown of skills utilisation of respondents in the study. Results show that most of the respondents believed that their current skills could cope with more demanding duties than what is required in performing present tasks (2.95). In other words, respondents believed they were being under-utilized in their current jobs. Similarly, some of the respondents believed that their skills were well utilized in their present job (2.85) while others believed that their skills could be better utilized in another type of job than the current one (2.31). In contrast, the majority of the respondents disagreed with a statement on whether they require more education or training to cope with their present schedule of duties (1.80).

Table 1: Skill Utilisation of Employees in the Food and Beverage Companies

Skill Utilisation	Not at all (0)	Low extent (1)	Some extent (2)	High extent (3)	Very high extent (4)	Weighted average
Skills well utilised in present job	12(5.2)	28(12.2)	35(15.3)	61(26.6)	93(40.6)	2.85
Skills better utilised in another job	26(11.4)	33(14.4)	63(27.5)	58(25.3)	49(21.4)	2.31
Skills demand more duties in present job	6(2.6)	23(10.0)	42(18.3)	64(27.9)	94(41.0)	2.95
Skills require training in present duties	47(20.5)	47(20.5)	65(28.4)	45(19.7)	25(10.9)	1.80

Source: Field Survey (2019) **Note:** *Figures in parentheses are row percentages*

4.2. Breakdown of Respondents' Career Satisfaction

The result from Table 2 shows that in the area of career satisfaction, some respondents generally believed they had achieved a considerable level of success in their career (2.69). Furthermore, some respondents were relatively satisfied with the level of progress made towards achieving their overall career goals (2.57) as well as in their quest for the development of new skills (2.56). Other areas where respondents believed they were doing well include achieving set goals for income (2.47) and promotion (2.41).

4.3. Breakdown of Respondents' Job Satisfaction

In terms of job satisfaction, respondents were asked to rate the level of satisfaction in their current job. The result from Table 3 shows that respondents were proud of their company (2.74). Respondents were also satisfied with their present job (2.39) though not as much as they should.

Table 2: Career Satisfaction of Employees in the Food and Beverage Companies

Career Satisfaction	Not at all (0)	Low extent (1)	Some extent (2)	High extent (3)	Very high extent (4)	Weighted average
The success achieved in career	8(3.5)	19(8.3)	72(31.4)	66(28.8)	64(27.9)	2.69
Progress toward career goals	10(4.4)	11(4.8)	87(38.0)	81(35.4)	40(17.5)	2.57
Progress toward income goal	6(2.6)	33(14.4)	73(31.9)	81(35.4)	36(15.7)	2.47
Progress toward promotion goal	21(9.2)	28(12.2)	64(27.9)	68(29.7)	48(21.0)	2.41
Progress toward new skills goal	10(4.4)	24(10.5)	68(29.7)	81(35.4)	46(20.1)	2.56

Source: Field Survey (2019) **Note:** *Figures in parentheses are row percentages*

Table 3: Job Satisfaction of Employees in the Food and Beverage Companies

Job Satisfaction	Not at all (0)	Low extent (1)	Some extent (2)	High extent (3)	Very high extent (4)	Weighted average
Satisfied with present job	14(6.1)	30(13.1)	80(34.9)	62(27.1)	43(18.8)	2.39
Satisfied with work hours	27(11.8)	29(12.7)	70(30.6)	60(26.2)	43(18.8)	2.28
Satisfied with job earnings	32(14.0)	57(24.9)	81(35.4)	41(17.9)	18(7.9)	1.81
Proud working for organisation	6(2.6)	20(8.7)	59(25.8)	83(36.2)	60(26.2)	2.74
I feel burned-out on job	32(14.0)	52(22.7)	64(27.9)	50(21.8)	31(13.5)	1.98
I feel working too hard on job	28(12.2)	42(18.3)	71(31.0)	56(24.5)	32(14.0)	2.10

Source: Field Survey (2019) **Note:** *Figures in parentheses are row percentages*

They were however proud of working for the same company. Furthermore, the result shows that some respondents were relatively satisfied with their work hours (2.28), but strongly believed they were possibly working too hard on their job (2.10).

4.4. Breakdown of Respondents' Willingness to Change

On whether an increase in the level of skills, technologies or responsibility would be of grave concern for the respondents, results from Table 4 show that respondents would likely be concerned with an excessive increase in the level of skills required in performing their duties (2.62). This was followed by the effect of the unnecessary increase in the level of new technologies available for their jobs (2.55) as well as an endless increase in the level of responsibility they were saddled with (2.49). In general, this result relatively supports previous findings which showed that what translates into adequate utilisation of manpower is when employees are able to further develop their professional career within the job and as well as the ability to utilise professional skills on the job. In other words, there is a need for a match between using professional skills and professional development (Melink and Pavlin, 2012).

Table 4: Employees' Willingness to Change in the Food and Beverage Companies

Willingness to Change	Not at all (0)	Low extent (1)	Some extent (2)	High extent (3)	Very high extent (4)	Weighted average
Increase skills for job	21(9.2)	24(10.5)	50(21.8)	60(26.2)	74(32.3)	2.62
Increase technologies for job	19(8.3)	31(13.5)	45(19.7)	73(31.9)	61(26.6)	2.55
Increase responsibility for job	19(8.3)	28(12.2)	54(23.6)	78(34.1)	50(21.8)	2.49

Source: Field Survey (2019) **Note:** *Figures in parentheses are row percentages*

4.5. Respondents' Contribution to Innovation Output

The innovativeness of respondents was measured by assessing the contribution of respondents to the innovation activities of their company, and this is presented in Table 5. The result shows the information on the innovation types by the degree of respondents' innovativeness. The result from the Table shows that about 1.7% of the respondents participated in the introduction of a product that is radical in nature. On the other hand, 24% and 9.2% of the respondents participated in the production of products that already existed in the markets within Nigeria and outside Nigeria (incremental innovation) respectively. Similarly, in terms of process innovation which involves methods of manufacturing a company's products, only 0.9% of respondents participated in activities that led to the adoption of radical process innovation. In the area of marketing innovation, 1.3% of respondents were involved in the introduction of product promotion methods that can be categorised as radical innovation. In all, the majority of innovation activities that respondents participated in were adaptation of existing innovation efforts that were however new to their company. This result supports the findings of Baregheh *et al*. (2012) which shows that food and beverage processing companies perform better in incremental product and process innovations than in radical innovations.

Table 5: Types of Innovation

Innovation	Yes			No
	New to firm	New in the country	New in the world	
Products innovation	55(24.0)	21(9.2)	4(1.7)	148(64.6)
Process innovation (i)	49(21.4)	14(6.1)	2(0.9)	163(71.2)
Process innovation (ii)	31(13.5)	6(2.6)	1(0.4)	188(82.1)
Process innovation (iii)	47(20.5)	3(1.3)	1(0.4)	177(77.3)
Organisational innovation	29(12.7)	5(2.2)	2(0.9)	190(61.0)
Marketing innovation (i)	22(9.8)	8(3.5)	2(0.9)	194(84.7)
Marketing innovation (ii)	24(10.5)	8(3.5)	2(0.9)	192(83.3)
Marketing innovation (iii)	16(7.0)	8(3.5)	3(1.3)	202(88.2)

Source: Field Survey (2019) **Note:** *Figures in parentheses are row percentages*

4.6. Model Testing

In conducting the econometrics aspect for this study, two analytical models were used to assess the study measurements. The models are Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

4.6.1 Exploratory factor analytic model

Exploratory factor analysis (EFA) was employed for assessing the factor structure as well as to determine how variables in the dataset relate with one another based on their grouping using inter-variable correlations. The result from Table 6 shows that four (4) factors or constructs were extracted

from the dataset with Kaiser-Meyer-Olkin (KMO) value of 0.808, and Bartlett's test of sphericity (χ^2 = 2179.192; p<0.05) within the recommended limit (Costello and Osborne, 2005; Reio and Shuck, 2015).

4.6.2 Confirmatory factor analytic model

Further assessment of the measurement model was carried out by using confirmatory factor analysis (CFA) to validate the relationship between the items (observed variables) and the factors/constructs (unobserved latent variables). CFA result established that the research organization model is a four-factor, first-order model (see Figure 4.1).

4.6.3 Assessment of measurement model-fit

Model-fitting was assessed with multiple criteria approach to consider the adequacy of the model in order to determine the goodness-of-fit of the model and the sample data (Shook *et al*., 2004; Murovec and Prodan, 2009). The first model-fit test presented is a minimum discrepancy (CMIN) which shows that the model which is a 4-factor structure yielded a Chi-square (χ^2) value of 169.343 with 47 parameters (NPAR), 124 degrees of freedom (DF), and probability value of p<0.004 that is associated with the Chi-square. The CMIN/DF value of 1.366 which is still within the acceptable threshold (<3), indicates that the model fit the sample data properly (Hu and Bentler, 1999). Secondly, the root mean square residual (RMR) which represents the average unstandardized residual value (0.066) is presented. Furthermore, the standardized root mean square residual (SRMR) value of 0.062 fell within the recommended threshold of less than 0.09. The result emphasizes the fitness of the sample data to the model (Hu and Bentler, 1999; Hair *et al*., 2010). The goodness-of-fit index (GFI) value of 0.922 is below the acceptable threshold of greater than 0.95. The adjusted goodness-of-fit index (AGFI) value of 0.893 is however estimated to be within the recommended range (>0.80).

Table 6: Summary of Factor Loadings

Items	**Constructs**			
	1	**2**	**3**	**4**
Skills utilisation1	0.716			
Career satisfaction1	0.765			
Career satisfaction2	0.612			
Career satisfaction3	0.632			
Career satisfaction4	0.553			
Career satisfaction5	0.617			
Job satisfaction1	0.772			
Job satisfaction3	0.588			
Job satisfaction5				0.672
Job satisfaction6				0.699
Willingness change1			0.824	
Willingness change2			0.851	
Willingness change3			0.760	
Innovation1		0.604		
Innovation2		0.597		
Innovation5		0.715		
Innovation6		0.867		
Innovation7		0.827		
Innovation8		0.785		
Cronbach's Alpha	***0.858***	***0.867***	***0.846***	***0.762***

Extraction Method: *Maximum Likelihood.*
Rotation Method: *Promax with Kaiser Normalization*.

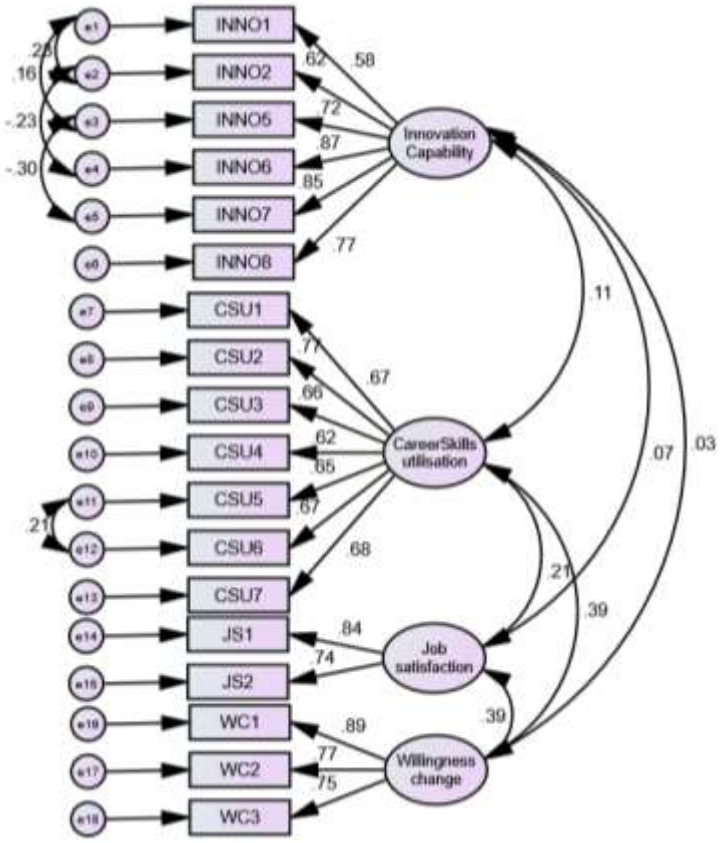

Figure 2: 4-Factor First-Order Confirmatory Factor Analysis Model of Utilisation and Innovativeness

Furthermore, baseline comparisons tests, which is comparative indices of fit (Hu and Bentler, 1995; Marsh *et al*., 1998) is presented. The values of incremental fit index (IFI), Tucker-Lewis index (TLI) and comparative fit index (CFI) of 0.974, 0.967, and 0.973 respectively were within the acceptable threshold (0.90). Hence, these tests suggest that the model adequately described the data collected for this study (Bollen, 1989b; Tucker and Lewis, 1973; Hu and Bentler, 1999; Byrne, 2016). Lastly, the estimated value of root mean square error of approximation (RMSEA) of the model is presented. The RMSEA value (0.040; $p>0.05$) which is non-significant were within the recommended thresholds, and this indicates that there is clear evidence to suggest that the model fits the data of this study (Joreskog and Sorbom, 1996a; Hu and Bentler, 1999).

4.7. Effects of Utilisation on Innovation

The relationship between the manpower utilisation in the food and beverage sector and their innovativeness was assessed through multivariate regression analysis using structural equation. Table 7 presents the result of standardised regression estimates of the hypothesised model. The standardised regression result shows the extent of career and skills utilisation of respondents (β= 0.235; $p<0.01$) contributes positively to the innovation capability of respondents. On the other hand, the innovation capability of respondents was negatively affected by their level of job satisfaction (β= -0.251; $p<0.01$) and their willingness to adopt new technologies and responsibilities (β= -0.148; $p<0.05$). In addition, the path between innovation capability and one of the two control variables in the model, experience

in years (β= -0.243) was negative and significant (p<0.001) while the path between the respondents' age (β= 0.091; *p*>0.05) and innovation capability returned a non-significant value.

The result further shows that about 12.9% of the variance observed in the innovation capability of respondents could be explained by respondents' career and skills utilisation, job satisfaction, willingness to change. The findings from previous studies, such as Wang and Ahmed (2004) and McGuirk *et al*., (2015) show that managers' willingness to accept changes contributed positively to service and product innovations among Irish firms. This study, however, shows that willingness to change had a negative effect on the innovativeness of employees in the food and beverage companies in Nigeria. This study also confirms that employees' job satisfaction (such as burnout and hard labour in the workplace) has a negative effect on innovation capability in the sector. However, the previous research by McGuirk *et al*. (2015) showed a non-significant relationship between innovation and job satisfaction.

Table 7: Regression Estimate of Significant Path in the Final Model

Dependent variables		**Independent variables**	**β**	**S.E.**	**C.R**	**R^2**
Innovation capability	←-	Career-Skills utilisation	0.235**	0.047	2.737	
Innovation capability	←-	Job satisfaction	-0.251**	0.054	-2.583	
Innovation capability	←-	Willingness to change	-0.148*	0.044	-1.960	0.129
Innovation capability	←-	Experience	-0.177**	0.054	-2.924	
Innovation Capability	←-	Age	0.091	0.004	1.222	

***p<0.001; **p<0.01; *p<0.05

β - Standardised regression weight **S.E** - Standard error
C.R. - Critical ratio **R^2** - Squared multiple correlation

5.1. Conclusion

This study showed that the extent of employees' career and skills utilisation contributes positively to employees' innovativeness while employees' ability to innovate was negatively affected by their level of job satisfaction and their willingness to adopt new technologies and responsibilities. To this end, the study concludes that the ability of employees to innovate or contribute to innovation activities in the selected food and beverages processing firms largely depends on their level of satisfaction derived from progress made in their professional career and the level of satisfaction they derived in the deployment of their skills. These must however be supported by flexible management practices that encourage teamwork among employees. It should be noted that the ability of employees to innovate in the food and beverage company was significantly affected by work fatigue, too much task, fear of new technologies and responsibilities.

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