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**SKILL VARIETY AND ORGANIZATIONAL INNOVATION OF MANUFACTURING FIRMS IN RIVERS STATE**

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**ABSTRACT**

*This study examined the relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt. The study adopted the cross-sectional survey in its investigation of the variables. Primary data was generated through structured questionnaire. The population of this study covered 230 managers and supervisors of 23 of manufacturing companies in Port Harcourt. The sample size was 146 calculated using the Taro Yamane Sample size determination formula. The reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics with the aid of Statistical Package for Social Science. The tests were carried out at a 95% confidence interval and a 0.05 level of significance. The findings revealed that there is a significant relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt. The study recommended that manufacturing companies should use job rotation to increase the variety of skills that every employee possesses which is a form of motivation. Job rotation would create some level of inclusivity where employees' jobs are linked to the overall goal of the organization. Some level of freedom in making decisions may be adopted for performance to increase.*

**Keywords:** Skill Variety, Organizational Innovation, Product Innovation, Process Innovation, Administrative Innovation

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## INTRODUCTION

Every employee aspires or hopes to maximize satisfaction from their jobs while giving their best to the organization and managers want the employees to deploy their skills and special abilities in performing their jobs in order to achieve the goals and objectives of the organization. The job designed method is crucial to achieving employees' fulfillment. Magaji (2014) noted that managers for decades have been trying to devise better means to ensure employees get fulfillment from their current jobs. Enriching an employee's job is one of the various means managers have devised to ensure employees get the desired fulfillment and satisfaction from their jobs. The concept of skill variety is now a vital tool for management of organizations in improving workers' motivation and organizational innovation. Jobs are enriched to motivate employees by adding to their responsibilities with a higher need for skill varieties in their jobs. Due to rapid environmental changes and competitive rivalry, business organizations are now turning from the traditional ideology of seeing monetary reward as the highest motivating element to a situation where employees will continue to value their job, have more control in scheduling their job, and deciding the best way to do their job and to be regarded for the work they perform (Bratton, 2007 & Hover, 2008).

Skill Variety, according to Hackman and Oldham (1975) is the instance where a job requires various tasks in order to carry out a complete piece of work and involves using various skills and abilities by the employee. Just as the job characteristics model indicates, the different skills that are required to complete a task often lead to desired performance by the intervening psychological state of experienced importance of a job. Garg and Rastogi (2005) indicated that skill variety involves the degree of utilization of different skills and abilities. A variety of Skills variety is one factor in the JCM which affects the meaningfulness of a job. A job that is high in the level

of skill variety always requires a wide array of skills and abilities (Hackman & Oldham, 1975). Jobs that are complicated have shown substantial but positive relatedness with job satisfaction, internal employee motivation and employee output (Spector, 2012; Jassen, 2001). Chandler (2007) stated that a wide range of skills are required for employees to grow and a vast range of skills is also necessary for the purpose of being flexible at work. Chandler (2007) further suggests that to be effective, employees must break their alliance on a contracted assortment of job competencies created when working on a particular task. Work which needs the input of various skills will allow for workers to complete a meaningful piece of a job as opposed to just repeating simple tasks are viewed to have an impression on other people and also seen as worthwhile and meaningful the employees in these jobs. Skill Variety could also incorporate the influence of task difficulty. Work that involves too much repetition of an exercise and requires less skills and talent is seen to be of low task difficulty while the work that involves varying tasks, activities and skills are considered to have high task difficulty (Spector, 2012).

Organizations are embracing innovation to succeed and remain competitive in the face of technological and environmental challenges because competition is critical in achieving competitive advantage (Noefer, Subair & Sebina, 2009). Without innovation, organizations will not succeed in creating the condition necessary for sustainable growth. Therefore, it is highly valued and requires organizations to prioritize innovation for success in the long-run (Anderson, Potocnik & Zhou, 2014). Organizations cannot be accidentally or occasionally innovative; they require a range of initiatives needed for innovative working at all levels of the organization that will eventually contribute to the effectiveness of the organization.

Innovation on the other hand, is an inherent aspect of human activity. Chen and Sawhney (2010) argued

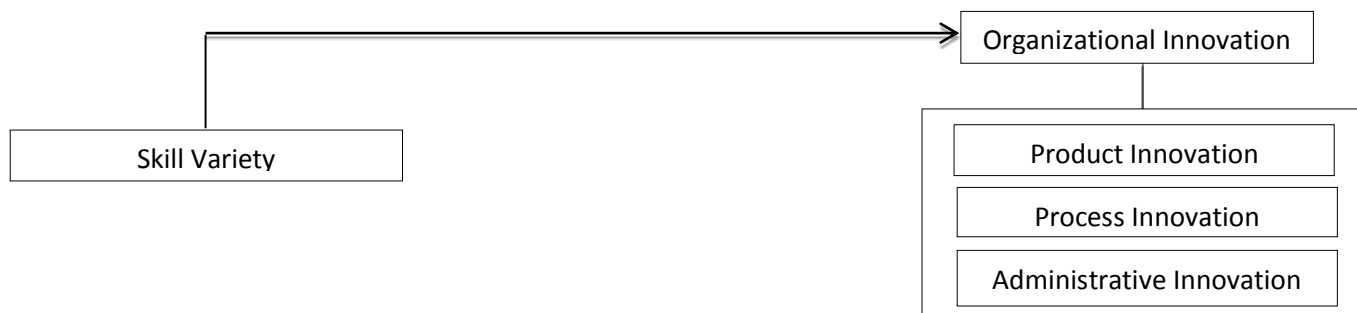
that innovation comes in different forms: some may have little to do with technology or research and development (R&D). The employees within the organization are the most crucial ingredient in the innovation success formula. The foundation of innovation is ideas and it is the employees who through enriching their jobs develop, carry, react to and modify ideas (Van de Ven, 1986). According to Woodman, Sawyer and Griffin (1993), organizational innovation is dependent on the creativity of the group, which in turn is dependent on individual employee's creativity. Innovation is the reflection of the creative efforts of the workers. Therefore, it is the workers who build, promote and breathe life into an innovative culture, because the innovative potential of any organization resides in the knowledge, skills

and abilities of its human resources (Patterson, Kerrin & Gatto, 2009).

This study therefore examined the relationship between skill variety and organizational innovation of manufacturing firms in Rivers State.

Furthermore, this study was guided by the following research questions:

- What is the relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt?
- What is the relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt?
- What is the relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt?



**Figure 1: Conceptual Framework for the relationship skill variety and organizational innovation**

**Source: Author's Desk Research, 2019**

## LITERATURE REVIEW

### The Job Characteristics Model (JCM)

This study was based on the job characteristics theory developed by Hackman and Oldham (1976). An important view on factors affecting jobs and motivation is provided by Hackman and Oldham (1976) in the job characteristics model. Hackman and Oldham's framework distinguished five key components of a job that are useful in making jobs more satisfying for staff. Crucial elements of employments are specifically; skill variety, task identity, task significance, autonomy and feedback.

This study is based on this model which is the lead model. The JCM model is one of the primary endeavours to configure occupations or jobs with expanded motivational properties. The model proposed by Hackman and Oldham (1976) portrays five center employment measurements prompting three basic mental states, bringing about business related results. The proximity of these five main occupation measurements drives workers to interact with three mental states. They see their work as significant, they feel responsible for the results of their job, and they achieve knowledge of outcomes.

Garg and Rastogi (2006) noted that, this theory was built on the previous knowledge and research from other theories such as Hierarchy of Need Theory, Expectancy Theory, and Frederick Herzberg Two-Factor Theory. According to Hackman and Oldham (1976), job enrichment is based on job characteristics that offer motivation, satisfaction, commitment, involvement and performance quality.

The theory assumed that the job itself should be designed to possess certain characteristics that create conditions for high work motivation, satisfaction, performance involvement and commitment. The theory identifies the tasks condition in which an employee is predicted to prosper in his work. Job characteristics theory provides management with the insight that employee effectiveness can be enhanced by enriching their jobs with high levels of key characteristics and ensuring that those employees with appropriate individual qualities are assigned to those jobs (Garg and Rastogi, 2006). Organizations exist primarily to achieve their goals and expand business operations/objectives in terms large market share, high profitability, competitive advantage and employees' satisfaction among others. The main reason for adopting the Job Characteristics theory is that, it posit clearly that jobs should be design in such a way that provide autonomy, robust feedback mechanism and opportunity for skills variety development that encourage and support organizational innovation. Skill variety, task identity, task significance autonomy and feedback will not have uniform effects. The more of these characteristics a job has, the more motivating the job will be. The job characteristics model foresees that a person with such a job will be highly satisfied and will produce more and better work, which is better performance. This model will be very useful in the study as it contains and explains the main independent variables in the study, which are skill variety, task identity, task significance, autonomy and feedback. Furthermore, the particular characteristics

that should be subsume into the job design should able to create opportunities for work motivation, satisfaction, commitment and autonomy deploy individual skills and know-how that promotes organizational innovation.

**Demand-Control Model (DCM)** The Demand – Control Model considers the people in the working environment and considers the job environment as a fully one created by the people themselves and are able to change it to the best learning environment (Karasek, 1979, Karasek & Theorell, 1990). Jobs that have high demand and low control, which are also referred to high stress jobs, are usually the most unpleasant for an employee in terms of employee wellbeing or wellness. Similarly, work that consists of less overwhelming demands as well as higher levels of control provide the situation for employees to have some freedom regarding how and when to deal with current and new challenges. Job demand control model is among the few theories that predict how workers' health and well-being problems can nevertheless be avoided by enhancing workers control. The philosophy of the demand control model has captured the attention of many researchers and has dominated empirical research on job pressure and wellbeing and on job redesign research over the past fifteen years (Cordery, De Jonge & Kompier, 2009).

The job demand control model was used to describe how job demands affect employees and the effect of achieving proper control on the job. The model demonstrates huge amounts of experimental power, that has encouraged large scholarly work in epidemiology and different paradigms of job control as a major one in the work stress literature (Ganster & Perrewe, 2011). Lately, job control has been considered as one of the many resources which protects the outcomes of demands that may consists of high work load and contrast on the employee wellbeing or even have beneficial effects (Ganster & Perrewe, 2011).



Another related model to the DCM is the Job Demands - Resources (JD-R) model. According to Bakker and Demerouti (2007) the Job Demands - Resources JD-R model can be employed to predict employee burnout and engagement, and consequently the organizational performance. The first assumption in the JD-R model (Bakker & Demerouti, 2007) is that even though every profession may have its own combination of risk factors associated with job strain, these risk factors can either be categorized as job resources or job demands. Job resources or job demands signify aspects of the job that require prolonged physical and psychological effort and that are linked to physiological and psychological costs

### **Skill Variety**

Skill variety is the degree to which a job requires a variety of different activities and involves the use of a number of various skills and talents of the workers. Jobs that are high in skill variety are seen by workers as more challenging because of the range of skills involved; relieve monotony that results from repetitive activity, and gives employees a greater sense of competence. According to Bratton (2007), when a variety of skills are essential to complete a task and those skills are perceived to be of value to the organization, employees find their jobs to be more meaningful. The idea behind providing skill variety in job design is that it will reduce boredom, thereby increasing job satisfaction and motivation. It has been proven that one-skill jobs that lead to repetition and monotony could bring about boredom, fatigue and stress that may negatively affect performance and productivity. According to Derek and Laura (2000), movement of employees from one job-task to another job within the organization and allowing them to adopt a variety of tasks in their work helps in mitigating the effect of repetitiveness and boredom.

Skill Variety, according to Hackman and Oldham (1976) is the instance where a job requires various

tasks in order to carry out a complete piece of work and involves using various skills and abilities by the employee. Just as the job characteristics model indicates, the different skills that are required to complete a task often lead to desired performance by the intervening psychological state of experienced importance of a job. Garg and Rastogi (2006) indicated that skill variety involves the degree of utilization of different skills and abilities. A variety of Skills variety is one factor in the JCM which affects the meaningfulness of a job. A job that is high in the level of skill variety always requires a wide array of skills and abilities (Hackman & Oldham, 1976).

Jobs that are complicated have shown substantial but positive relatedness with job satisfaction, internal employee motivation and employee output (Spector, 2012; Jassen, 2001). Chandler (2007) stated that a wide range of skills are required for employees to grow and a vast range of skills is also necessary for the purpose of being flexible at In other studies, skill variety is considered as the number of various task elements that are necessary for the job fulfilment. Task Variety communicates clarity of knowledge (Pentland, 2003). According to the literature of careers, employees at the start of their careers make attempts to discover tasks from which they attain or achieve their goals (Feldman & Thomas, 2012). Inherent characteristics of a job including significance of a task and skill variety are usually mostly associated with low rates of absenteeism (Taber & Taylor, 1990).

### **Organizational Innovation**

In the face of fast changes in the economic, social, demographic and environmental conditions of business environment occasioned by technology advancement, organizations cannot afford not to improve its products, processes and administrative philosophy and practices in order to gain competitive edge over others. It is important to note unequivocally that organizations are embracing innovation to succeed and thriving Innovation is

critical in achieving competitive advantages (Noefer et al, 2009). Without innovation, organizations will fail to create the conditions for sustainable growth. Thus, it is highly valued and imperative for organizations to prioritize innovation for their long-term success (Anderson, Potocnik & Zhou, 2014).

Chen and Sawhney (2010) are of the opinion that Innovation comes in many forms, some of which may have little to do with technology or research and development (R&D). The human resources within an organization are the single most important ingredient in the innovation success formula. The foundation of innovation is ideas and it is employees who develop, carry, react to, and modify ideas (Van de Ven, 1986). Woodman, Sawyer and Griffin (1993) rightly argued that organizational innovation is dependent on the creativity of the employees, which in turn is dependent on individual creativity. Innovations reflect the creative efforts of employees. Thus, it is the employees who build, promote and breathe life into an innovative culture. The innovative potential of an organization resides in the knowledge, skills and abilities of its employees. (Patterson, Kerrin & Gatto, 2009). Innovation is not the enterprise of a single entrepreneur; instead, it is a network building effort that centers on the creation, adoption, and sustained implementation of a set of ideas among people who, through transactions, become sufficiently committed to these ideas to transform them into good currency (Van de Ven, 1986). Job enrichment and innovation reinforces each other. Enriched jobs are more likely to spur employees to be innovative and an innovative organization is more likely to motivate and engage its employees. According to Birkinshaw (1997) job enrichment is the sine qua non of innovation in modern practice.

### **Measures of Organizational Innovation**

#### **Product Innovation**

Product innovation might be the most commonly known form of innovation and it consists in the

creation or improvement of an existing product or service. We should note that not every business can improve product innovation as they do not interfere in the stages of new product development. From the creation of the insight through the commercialization of the product/service every stage shall be taken into consideration in order to create an innovation.

Product refers to a commodity that satisfies customers' need. The final conversion process of an organization is called product or service (Kotler & Armstrong, 2013). Human needs are the primary reason for why goods are produced. It is either for consumption or further production as the case might be. Product innovations involve the production of quality goods or products that satisfy the needs of customers. Kotler and Armstrong (2013) argued that product innovation starts with knowing what consumers want and initiating the process to satisfying those needs at affordable prices. According to Jeff (2012), he argued that product innovation is necessitated by the changing nature of customers' desire and the need to comply with best practices. There are different kinds of products that organization can offer ranging from consumable to capital good and others. Product innovation in organizations represents a crucial point for maintaining a sustainable competitive advantage and survival (Okwandu, 2008). In a world of continuous change, where customers are more demanding than ever, expecting better products at a lower price it become imperative for organizations to improve their products.

#### **Process Innovation**

Process innovation focuses on the processes by which the products/services are created or delivered. Therefore it consists in the implementation of new or improved ways of production and delivery services. In business, it can be based on the idea to achieve a sustainable competitive advantage, either a diversification or cost leadership strategy. Over the years we have seen how process innovation

influences business, for instance the famous term “Lean manufacturing” implemented by Toyota, the world’s largest automaker, and which consists in incrementing customer value by reducing their seven kinds of waste. Process innovation facilitates methods, procedures, designs and techniques to produce quality goods (output) from inputs resources. Norman (2012) noted that there is no product that is produce that will not follow an established standard. This standard could refer to the method, design or specification that the raw materials will go through before it finally comes out as products. We can say that the outcome of any product is determined by the process adopted to create or product such goods. Kotler (2011) argued the process that brings a product should be robust enough to ensure quality products at the final production stage. The ability of the organizations to produce goods that will appeal to customers remains a very fundamental challenge. Organizations can thrive or fail at this point should there be uncontrollable failure in the production process (Gabriel, 2015). A typical production process involves three elements of inputs, transformation and output. The inputs may comprise men, machine, materials, money and information. The transportation may comprise conversion methods, techniques and factory configuration and packaging (Gabriel, 2015). Finally the outputs may include quality goods of different shapes Process Innovation begins with planning, facility layout, instructions and controlling to ensure standards are comply with.

#### **Administrative Innovation**

Administrative Innovation relates to management oriented processes such as structure, human resources management and accounting systems. According to Sola (2014) management innovation refers to innovation in management principles, corporate practices and processes that will eventually influence the practice of what managers do and how they do it. Such innovation could mean a

fundamental shift in management philosophy and organizational goals and objectives that result in customer-focus approach to product manufacturing and distribution (Kotler, 2011). One could believe that this kind of innovation empowers the employees to be innovative by integrating organizational structures, policies and human resources systems to foster and induce innovation. Udhas (2013) opined that empowerment of workers is the center piece of a human resources management system that foster continuous improvement of existing structures and innovation. Management can adopt a three-pronged strategy for innovation: Initiatives that will impact in the long term, quick wins and continuous incremental improvement on existing products (Damanpour, 1991). Multinational organizations are becoming learner in terms of structure even in the pace of wider spread to different parts of the world with the use of technology to be able get a large market. Technology has revolutionized business operations and enhances link-ups of organizations all over for commercial purposes. The traditional methods of administration and distribution of goods have been replaced with technology driven methods in this 21<sup>st</sup> century. Management innovation is a must for organizations to survive and compete favourably in the industry.

#### **Skill Variety and Organizational Innovation**

Skill variety entails a number of different types of skills that are employed in performing a task. It focuses on the degree to which a task challenges the employee to use different kind of skills, abilities and capacities within and outside its environment. It is believed that when only one skill is adopted in performing tasks repetitively, it tends to bring fatigue, stress and boredom which will in turn affect their morale and productivity at workplace. Derek and Laura (2000), argued that movement of employees from one job to another within a particular organization and allowing them to adopt a variety of skills in their work helps in avoiding repetitiveness,



dullness and boredom. The use of skill variety serves as a means of retaining and motivating workers for higher performance. Bratton (2007), also pointed that when a variety of skills are necessary to complete a task and those skills are perceived to be of value to the organization, employees find their work to be more meaningful. Product innovations entails production of quality goods or products (the outputs of the organization), that satisfy the needs of customers. This products or goods could be physical goods or services that satisfy consumers' need. According to Kotler (2013), he argued that product innovation start with knowing what consumers want and initiating the process to satisfying those needs at affordable prices. Products are outcomes of organizational effort that is tailored to satisfy customers need at profit. Organization exists primarily to offer either product or service at a profit (Armstrong, 2012). Skill variety helps employee to reduce stress through training and development to acquire needed skills to be able handle more than one job. This reduces the risk of monotony and stress of repetitiveness. In view of the foregoing, we can opined that there is no direct relationship between skill variety and product innovation.

In other studies, skill variety is considered as the number of various task elements that are necessary for the job fulfilment. Task variety communicates clarity of knowledge (Pentland, 2003). According to the literature of careers, employees at the start of their careers make attempts to discover tasks from which they attain or achieve their goals (Feldman & David, 2012). Inherent characteristics of a job including significance of a task and skill variety are usually mostly associated with low rates of absenteeism (Taber & Taylor, 1990).

Some of the studies that have been done on the component of skill variety include those by Kemboi, Biwott, Chenuos and Rutto (2013) on skill variety, feedback and employee performance. Their research employed a descriptive design that provided a

description of related aspects of the areas of interest to the current researcher. This study sought to look at the design of the job and performance of employees who are nurses at the hospital. One thousand nine hundred and forty-five (1945) nurses were the target, mainly working at the Moi Teaching and Referral Hospital in Eldoret in Kenya. Three hundred and twenty nurses were then selected as the sample, using the simple random sampling. Questionnaires were used for data collection. Data was analyzed using descriptive statistics like the mean and standard deviation while inferential statistics involved Pearson correlation and multiple regression analysis.

Skill variety was found to significantly affect job performance. Similarly, skill variety was seen to provide the feelings of accomplishment, when the nurses who had a higher variety of skills increased their opportunities for the job and had higher chances of being promoted. However, feedback was found to have no influence on the job. It was also found that the nurses required more training in order to advance in their skills so as to improve their work performance. Their study was based on health sector and did not give a view of the same in other sectors or industries.

Bremner and Carrière (2011) studied on the effects of skill variety, autonomy, task significance and task identity on job-related work stress at the medical facility and the mediating effect of the importance of work. A survey was conducted on a sample of approximately 1100 workers from a Canadian hospital and was administered in the French language. The study established that skill variety was the most significant of all other job characteristics. The direct relationship between skill variety and cynicism suggests that having the opportunity to conduct complex and challenging work is engaging for those that work in the healthcare field. The four job characteristics examined in the study only helped to explain about twenty-four percent of the variance in meaningful work. This suggests that there are other

important variables that can explain incremental variance in meaningful work. It also implies that there are additional ways in which practitioners and managers can help to facilitate the emergence of meaning at work.

Therefore, going by the foregoing arguments, it was thus hypothesized that:

**Ho<sub>1</sub>:** There is no significant relationship between skill variety and product innovation of manufacturing companies in Port Harcourt.

**Ho<sub>2</sub>:** There is no significant relationship between skill variety and process innovation of manufacturing companies in Port Harcourt.

**Ho<sub>3</sub>:** There is no significant relationship between skill variety and administrative innovation of manufacturing companies in Port Harcourt.

### METHODOLOGY

The study adopted the cross-sectional survey in its investigation of the variables. Primary data was generated through self-administered questionnaire. The population of this study covered 230 managers

and supervisors of 23 of manufacturing companies in Port Harcourt. The sample size was 146 calculated using the Taro Yamane Sample size determination formula. The research instrument was validated through supervisor's vetting and approval while the reliability of the instrument was achieved by the use of the Cronbach Alpha coefficient with all the items scoring above 0.70. The hypotheses were tested using the Spearman's Rank Order Correlation Statistics with the aid of Statistical Package for Social Science. The tests were carried out at a 95% confidence interval and a 0.05 level of significance.

### DATA ANALYSIS AND RESULTS

Data analysis was carried out using the Spearman rank order correlation tool at a 95% confidence level. Specifically, the tests cover a Ho1 hypothesis that was declared in the null form. A level of significance 0.05 was adopted as a criterion for the probability of accepting the null hypothesis in ( $p > 0.05$ ) or rejecting the null hypothesis in ( $p < 0.05$ ). We began by presenting first a test of existing relationships.

**Table 1: correlation matrix for skill variety and measures of organizational innovation**

		Skill Variety	Product Innovation	Process Innovation	Administrative Innovation	
Spearman's rho	Skill Variety	Correlation Coefficient	1.000	.736**	.276**	.741**
		Sig. (2-tailed)	.	.000	.001	.000
		N	112	112	112	112
	Product Innovation	Correlation Coefficient	.736**	1.000	.342**	.741**
		Sig. (2-tailed)	.000	.	.000	.000
		N	112	112	112	112
	Process Innovation	Correlation Coefficient	.276**	.342**	1.000	.765**
		Sig. (2-tailed)	.001	.000	.	.000
		N	112	112	112	112
	Administrative Innovation	Correlation Coefficient	.741**	.741**	.765**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	112	112	112	112

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

*Source: Research Data 2019, (SPSS output version 21.0)*

***Ho<sub>1</sub>: There is no significant relationship between skill variety and product innovation of manufacturing companies in Port Harcourt.***

From the result in the table above, the correlation coefficient showed that there is a positive relationship between skill variety and product innovation. The *correlation coefficient* 0.736 confirmed the magnitude and strength of this relationship and it was statistically significant at  $p < 0.000 < 0.05$ . The correlation coefficient represents a high correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated was hereby rejected and the alternate accepted. Thus, there is a significant relationship between skill variety and product innovation of manufacturing companies in Port Harcourt.

***Ho<sub>2</sub>: There is no significant relationship between skill variety and process innovation of manufacturing companies in Port Harcourt.***

From the result in the table above, the correlation coefficient showed that there is a positive relationship between skill variety and process innovation. The *correlation coefficient* 0.276 confirmed the magnitude and strength of this relationship and it was statistically significant at  $p < 0.000 < 0.05$ . The correlation coefficient represented a low correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated was hereby rejected and the alternate accepted. Thus, there is a significant relationship between skill variety and process innovation of manufacturing companies in Port Harcourt.

***Ho<sub>3</sub>: There is no significant relationship between skill variety and administrative innovation of manufacturing companies in Port Harcourt.***

From the result in the table above, the correlation coefficient showed that there is a positive relationship between skill variety and administrative innovation. The *correlation coefficient* 0.741 confirmed the magnitude and strength of this

relationship and it is statistically significant at  $p < 0.000 < 0.05$ . The correlation coefficient represents a high correlation between the variables. Therefore, based on empirical findings the null hypothesis earlier stated was hereby rejected and the alternate accepted. Thus, there is a significant relationship between skill variety and administrative innovation of manufacturing companies in Port Harcourt.

## **DISCUSSION OF FINDINGS**

The tests of hypotheses revealed that there is a significant positive relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt. This finding agreed with the assertions of Bremner and Carrière (2011) who studied on the effects of skill variety, autonomy, task significance and task identity on job-related work stress at the medical facility and the mediating effect of the importance of work. A survey was conducted on a sample of approximately 1100 workers from a Canadian hospital and was administered in the French language. The study established that skill variety was the most significant of all other job characteristics. The direct relationship between skill variety and cynicism suggests that having the opportunity to conduct complex and challenging work is engaging for those that work in the healthcare field. The four job characteristics examined in the study only helped to explain about twenty-four percent of the variance in meaningful work. This suggests that there are other important variables that can explain incremental variance in meaningful work. It also implies that there are additional ways in which practitioners and managers can help to facilitate the emergence of meaning at work.

## **CONCLUSION AND RECOMMENDATIONS**

Organizations are always in pursuit of finding ways to enhance their performance. One of the ways is to enhance employee performance by incorporating skill variety that contributes to employee motivation, satisfaction and commitment of the employees.

Based on the findings, this study concludes that job enrichment significantly influences organizational innovation of manufacturing companies in Port Harcourt.

The study recommended that manufacturing companies should use job rotation to increase the

variety of skills that every employee possesses which is a form of motivation. Job rotation will create some level of inclusivity where employees' jobs are linked to the overall goal of the organization. Some level of freedom in making decisions may be adopted for performance to increase.

## REFERENCES

- Anderson, H., Potocnik, A., & Zhou (2014). Job enrichment causes high level of employee commitment during the performance of their duties: Behavioural study. *Arabian Journal of Business Management*, 1(9), 95-104
- Armstrong, M. (2011). *A Handbook of Performance Management*. (4th ed.). New Delhi: Kogan Page Limited, London
- Bakker, B. & Demerouti, E. (2007). Job resources boost work engagement, particularly when job demands are high. Manuscript submitted for publication.
- Birkinshaw, J. (1997). Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. *Strategic Management Journal*, 18(3), 207-229.
- Bratton, J. (2007), *Work and Organizational Behavior*. New York: Paul Grave Mac Millan
- Bremner, N. & Carrière, J. (2011). The effects of skill variety, task significance, task identity and autonomy on occupational burnout in a hospital setting and the mediating effect of work meaningfulness. Telfer School of Management. US
- Chen, H., & Sawhney, I. (2010). Absorptive capacity: A new perspective on learning and innovation. *Asian Journal of Management*, 35: 103-115
- Cordery, J. L., De Jonge, W. S., & Kompier, L. M. (2009). Attitudinal and behavioral effects of autonomous group working: A longitudinal field study. *Academy of Management Journal*, 34, 464-476.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of determinants and moderators. *Academy of Management Journal*, 34(3), 555-590.
- Demerouti, E., Bakker, A. B., De Jonge, J., Janssen, M., & Schaufeli, W.B. (2001b). "Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment and Health*, 27, 279-86.
- Derek T. & Laura H. (2000). *Human Resource Management-The inside out*, 4th ed. England: Prentice Hall Publisher
- Feldman, D. C., & David, C. T. (2012). Career Man- agreement Issues Facing Expatriates. *Journal of International Business Studies*, 2(1), 271-293.
- Ganster, D. C., & Perrewé, P. L. 2011. Theories of occupational stress. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (2nd ed.): 37-53. Washington, DC: American Psychological Association.

- Ganster, D. C., & Rosen G. (2013). Comparing group and individual level assessments of job characteristics in testing the job demand-control model: A multilevel approach. *Human Relations*, 52, 95–122.
- Garg, P & Rastogi. R. (2006). New model of job design: Motivating employees' performance. *Journal of Management Development*, 25(6), 572-587.
- Ganster, D. C., & Perrewé, P. L. 2011. Theories of occupational stress. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (2nd ed.): 37-53. Washington, DC: American Psychological Association
- Gabriel, J.M.O. (2015). Organizational citizenship behaviour (OCB) and corporate resilience in the domestic aviation sector in Nigeria. *Unpublished PhD Thesis*: Department of Management; Rivers State University of Science and Technology, Port Harcourt.
- Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology*, 60, 159-170.
- Hackman, J. R., & Oldham, R. G. (1976) Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250-279.
- Janssen, H. (2001). Fairness Perceptions as a Moderator in the Curvilinear Relationships Between Job Demands, Job performance and job satisfaction. *Academy of Management Journal*, 44(5), 1039–1050. <http://dx.doi.org/>
- Karasek R (1979). Job Content Questionnaire. Department of Industrial and Systems Engineering, University of Los Angeles, California.
- Karasek R, Theorell T (1990). Healthy work: Stress, productivity, and the reconstruction of working life. New York: Basic Books.
- Kemboi, A., Biwott, G., Chenuos, N., & Rutto, A. (2013). Skill Variety, Feedback and Employee Performance. *European Journal of Business and Management*. The International Institute for Science, Technology and Education (IISTE): US. 5(19)
- Kotler, P. & Armstrong, G. (2013). *Principles of marketing*: London; Pearson education limited
- Kotler, P. (2011). *Marketing management* (4<sup>th</sup> ed.): London; Pearson education limited
- Magali, N. (2014). Effect of job enrichment on employee motivation in selected private universities in South-West Nigeria. *Journal of Arts, Science & Commerce*, 6(2), 67-75.
- Noefer, O., Subair, S. K., & Sebina, N. V. (2009). Knowledge and utilization of job enrichment techniques among district agricultural officers in Botswana. *African Journal of Agricultural Research*, 5(21), 2918-2924.
- Pentland, B., T. (2003). Sequential Variety in Work Processes Author. Reviewed work(s) *Organization Science*, 14(5), 528–540. <http://dx.doi.org/>
- Patterson, G., Kerrin, P., & Gatto, V. (2009). Technology and human effectiveness: A review of the connectivity. *Administrative Science Journal*, 20: 487-497



- Sole, D. (2009). Communication and workers behavior in contemporary times: *Journal of Communication Studies* 2: 3-10
- Spector, P. E. (2012). Perceived control by employee: A meta-analysis of studies concerning autonomy and participation at work. *Human Relations*, 39, 1005-1016.
- Taber, T. D., & Taylor, E. (1990). A review and evaluation of the psychometric properties of the Job Diagnostic Survey. *Personnel Psychology*, 43, 467–497. <http://dx.doi.org>
- Udhas, P. (2013). Innovation in management; India, *Asian Journal of Management*. 3:89-97
- Van de Ven, A. (1986). Central problems in managing corporate innovation and entrepreneurship, *Advances in Entrepreneurship, Firm Emergence and Growth, Journal of Management* 7: 47-72.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). Toward a theory of organizational creativity. *The Academy of Management Review*, 18(2), 293–321.