Effect of Human Capital Training and Development on Performance of Paint Manufacturing Firms in South East Nigeria

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In the study we evaluated the effect of Human Capital training and development on performance of Paint manufacturing firms in South East, Nigeria. The specific objectives are to: Ascertain the effect of knowledge on product quality/standard and examine the effect of skills on promotion of innovation on Paint Manufacturing Firms in South East Nigeria. The population of the study consisted of three hundred and seventy two (372) staff of Paint manufacturing firms in south East, Nigeria. The whole population was used due to the small number. The study used the descriptive survey design approach. The primary source of data was the administration of questionnaire. Total of 288 staff returned the questionnaire and accurately filled. Data from the questionnaire were analyzed using simple percentages, mean and standard deviation, and the research hypotheses were tested using Z – test. The findings indicated that Knowledge had significant positive effect on product quality or standard of Paint Manufacturing Firms in South East Nigeria, Z (6.364 < 12.257, p < .05). Skills had significant positive effect on promotion of Paint Manufacturing Firms in South East Nigeria, Z (7.307 < 8.957, p < .05). The study concluded that Knowledge and Skills had significant positive effect on product quality/standard and promotion of Paint Manufacturing Firms in South East Nigeria. The study recommended among others that the management of the manufacturing firms should encourage Knowledge acquisitions through training and retraining of their employees, recruitment of experienced employees and creation of regulations that encourages human capital development.

ABSTRACT

Keywords: *Human Capital Training; Performance of Paint Manufacturing Firms; South East Nigeria*

Introduction

The concept of human capital development is quite recent. In the past, employers were not generally investing in widespread, formal employee training and development. Executive development was expected to be done in-house, either by rising slowly through the management ranks or by moving to another company. Certainly, it was not usually achieved via an executive training program or executive development program. Even the concept of "human capital" is relatively new. But rising demand for an increasingly skilled workforce, combined with a growing trend of people moving from company to company, has made corporate investment in human capital development more appealing (Ola, 2022).

Human capital empowers a company to service its clients, create its products, and innovate for new ways of doing things. Human capital can be made up of several factors, including: Hard skills and soft skills Higher education and training; Intelligence and emotional intelligence, Personality, Work experience, Employee well-being and Loyalty to the company (Eatough, 2021). Human capital management is an integrated effort to manage and develop human capabilities to achieve significantly high level of performance. Human capital management practices are set of practices that are perceives people as assets whose current value can be measured and whose future can be enhanced through investment. Gartner (2015) asserts that human capital is a set of practices related to people resource management, specifically in the categories of workforce acquisition, management and optimization. In addition to the traditional administrative tasks, it includes workforce planning and strategy, recruitment on boarding, employee training, reporting and analytics. Therefore, it is the purpose of working in an organization for optimum performance. Effective investment in human capital is a key component of long run economic growth and improved productivity. Hence, their quest for an important source of efficiency and competitive advantage associated with improved corporate performance directs them to develop their human resources. Human resources development is an age-old concept and the term human resources always referred to the human inputs in any production process. It is an important if not vital component of production which can be influenced, designed, shared and improved through learning, education, coaching, counseling, training and development activities to perform or function in any production or management process along with other factors such as land, labour and capital. Based on this, study evaluated Human Capital training and development on performance of Paint manufacturing firms in South East, Nigeria.

Statement of the Problem

Human capital enhances an economy to increase and grow. As human capital grows in areas such as science, education, and management, it leads to improved innovation, social well-being, equality, and improved productivity, high rates of participation, all of these contribute to economic growth. Human capital development enhances employee competence in their jobs, improves their knowledge, skills, abilities and other characteristics.

Within the last decade, the Nigerian manufacturing industry has witnessed several failures and distresses. These failures and distresses have been traced to lack of adequate human capital development such as lack of knowledge, skills, abilities and experience in the Manufacturing Firms in South East Nigeria. Cases are seen where unqualified candidates were giving jobs at the expense of qualified ones.

As a result of these, might lead to poor innovation, lack of capabilities on the part of the employed and it might also affect the quality of paint Manufactured by the firms. This has led to the study on Human Capital training and development on performance of Paint manufacturing firms in South East, Nigeria.

Objectives of the Study

The main objective of the study was to evaluate the effect of Human Capital training and development on performance of Paint manufacturing firms in South East, Nigeria. The specific objectives were to:

i. Ascertain the effect of knowledge acquisition on product quality/standard of Paint Manufacturing Firms in South East Nigeria.
ii. Examine the effect of technical skill on promotion of innovation of Paint Manufacturing Firms in South East Nigeria.

Research Question

The following research questions guided the study

i. What is the effect of knowledge acquisition on product quality/ standard of Paint Manufacturing Firms in South East Nigeria?
ii. What is the effect of technical skills on promotion of innovation of Paint Manufacturing Firms in South East Nigeria?

Statement of Hypotheses

The following alternate hypotheses guided the study

i. Knowledge acquisition has positive effect on product quality/standard on the Paint Manufacturing Firms in South East Nigeria.
ii. technical skills has positive effect on promotion of innovation of Paint Manufacturing Firms in South East Nigeria.

Significance of the Study

The study would help the following people

Government and Shareholders: The study would help the government, shareholders and manufacturers to formulating policies that will encourage human capital development in the manufacturing sector, ensuring its implementation and creating enabling environment for completion.

Managers: It would enable managers understand the role human capital development management tools and how to gain completing advantage through successfully planned and implement human capital development strategies.

The study will serve as a reference material for future research.

The Scope of the Study

The study was on Paint manufacturing firms in South East Nigeria. The management issues were knowledge on product quality/standard and skills on promotion of innovation on Paint Manufacturing Firms in South East Nigeria. Time scope 2019 – 2022.

Limitation of Study

Within the course of the research the researcher was initially limited by the attitude of the respondents, who are indifferent and are not eager to divulge necessary information. The researcher solved the problem by meeting the management of the organizations who facilitated the distribution of the questionnaire and by her personal interaction with the respondents. She was able to inform them that the exercise was only for academic purposes

and this helped to calm their suspicion. All limitations notwithstanding adequate effort were made to conduct the research in an atmosphere that can generate empirical valid limitation.

Review of Related Literature

Conceptual Review

Human Capital

Human capital is basically a way that is attached to education, training, and other professional initiatives to enhance the levels of knowledge, skill, abilities and social assets of an employee. This eventually leads to the satisfaction and performance of employees and resulting on firm performance. Thus, the definition of human capital is referred to as the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being. Human capital is an amalgamation of genetic inheritance, attitude, education and people experience in their life and business. The most valuable asset in any business is human resources as compared to other capitals or equipment. However, it was also believed to be the most ignored asset by the firms. Human can be considered valuable asset or liability to an organization (Khan, Farooq & Hussain, 2010).

Development

Development means "improvement in country's economic and social conditions". More specially, it refers to improvements in way of managing an area's natural and human resources. Development is both a vision to create new, much-improved conditions of life and a program to transform economic, political, and socio cultural conditions to correspond to the envisioned vision. A well-conceived strategy that defines the goals society seeks to accomplish identifies the obstacles it faces, and acknowledges the sacrifices society has to make must be articulated before any work is done (Rabie, 2016).

Components of Human Capital Training and Developments used in the Studies

Human capital refers to experts or employees skills, knowledge and experience shared with their organization in order to add value (Baron, 2011).

Knowledge

Knowledge as an important source for value creation in an organization which needs to be managed carefully, Massa and Testa (2009). It is a vibrant force in the rapidly changing global economy and society. Kidwell (2000) aver that information which generates knowledge starts from the basic facts called data, which covers only raw data or facts or numbers. The information generated is captured in various documents and databases and made available for researchers which can be visible in books or electronic technologies. Information can only become knowledge when it is applied in a manner that can add value. Knowledge also includes insight and wisdom of employee and could be used for decision making. It is also embedded in work processes, teams and exists in all core functions of an organization as well as its systems and infrastructure (Dhamdhere 2015).

Skills

Skill is thought of as a quality of performance which does not depend solely upon a person's fundamental, innate capacities but must be developed through training, practice and experience. Although, skill depends essentially on learning, it also includes the concepts of efficiency and economy in performance (Welford, 2017). Skill as basic ability is the means by which a person adjusts to life. A person's aptitude and work functions are required and necessary as antidotes suggesting the sui-table skills performance and acquisition of same by going through a given work sample. In the work place, skill is what the workers give in exchange for remuneration. The idea of skill acquisition is aimed for battling and decreasing poverty level in Nigeria. (Okolocha, John-Akamelu and Muogbo, 2019).

Performance

Performance refers to how well an entity completes a task. Basic measures of organisation success are profitability, lower turnover and absenteeism, customer satisfaction, productivity, market growth, effectiveness, efficiency and attaining a competitive advantage. Performance related to input/output relationship, and effectiveness measures, focusing on business growth and employees' satisfaction (Adedoyin, Apansile, Okere and Okafor, 2018).

Components of Performance used in the Study

Product Quality

Product quality is the extent to which a good service or combination thereof solves a problem or meets a need. For a product to have any real value, it has to have some kind of quality or, hopefully, a high level of quality. In other words it needs to actually solve a problem for the consumer or meet a need. By doing that our product can be a source of value. Just being different or being new does not make a product. It does not give a product quality, so we really have to focus on solving a problem or meeting a need for our product to deliver value and to have some high level of quality (Jason, 2022).

Promotion of Innovation

Innovation is an activity that involves new ideas that have a positive impact to a new product and service. Innovation in business concept is all about conducting market research into customer needs, behaviors and trends develop a prototype or changes within product designing, launching a new product in a unique place, pricing the product in a unique way, promoting products in an unconventional way (Umar, 2022).

Theoretical Framework

The study reviewed two theories which include Resource Base Theory (Barney, 1986) and Contingency Theory (Fred Edward Fieldler, 1964) in line with the study objectives. However, the study is anchored on the human capital theory since it properly emphasizes the importance of human capital to the growth and development.

Resource Base Theory

The resource base theory was proposed by Barney in 1986. It analyzes and interprets resources of the organizations to understand how organizations achieve sustainable competitive advantage. The RBV focuses on the concept of difficult-to-imitate attributes of the firm as sources of superior performance and competitive advantage (Barney, 1986). Honda, the world's largest engine manufacturer is following a RBV strategy. Honda built its business strategy around the firm's strength, capability and expertise in building petrol-based engines. Honda initially started with small clip-on engines for bicycles then moved to two wheelers such as scooters and motorbikes, marine engines, generators, lawn and garden equipment, and cars (Honda and Acura automobiles) and even jet planes. Each of these products competes in quite different product verticals, but leverages a unique resource and capability of Honda to build world class petrol-based engines (Madhani, 2014).

Contingency Theory

The contingency theory was proposed by Fred Edward Fiedler 1964. Fiedler's contingency model of leadership focuses on the interaction of leadership style and the situation. He identified three relevant aspects of the situation; the quality of the leaders relationships with others, how well structured their tasks were and the leaders amount of formal authority. The theory indicated that task-oriented leaders were more effective when the situation was either highly favourable or highly unfavourable, but that person-oriented leaders were more effective in the moderately favourable or unfavourable situation. The theory did not necessarily propose that leaders could adapt their leadership style to different situation, but that leaders with different leadership style would be more effective when placed in situations that matched their preferred style.

Empirical Review

Effect of Knowledge on Product Quality on the Performance of Manufacturing Firms

Mbah, Aga and Onyia (2018) conducted a study on the effect of human capital development in organizational performance in manufacturing industries in south-east Nigeria. The study was to evaluate the effect of human capital development in organizational performance in manufacturing industries in South-East Nigeria. The specific objective includes to; ascertain the effect of knowledge on product quality and ascertain the relationship between skills and promoting of innovation. The study was to evaluate the effect of human capital development in organizational performance in manufacturing industries in South-East Nigeria. The population consists of 6230 staff of selected manufacturing firms from South-East, Nigeria. The study used the survey approach. The primary sources used were the administration of questionnaire to staff and distributors. The sample size of 358 was determined using Ferund and Williams formula. 306 copies of the questionnaire were returned and accurately filled. The validity of the instrument was tested using content analysis and the result was good. The reliability was tested using the Pearson correlation coefficient (r). It gave a reliability co-efficient of 0.88 which was also good. The hypotheses were analyzed using f-statistics (ANOVA) tool. The findings indicated that Knowledge has positive significant effect on product quality $F(95, n=358)= 2181, P<0.05$; Skills have positive significant relationship on promoting of innovations $F(95, n=358)= 381.631, P<0.05$; The study concluded that any organization that does not learn continuously and is not able to continuously list, develop, share, distribute, mobilize, cultivate, put to practice review and spread knowledge will not be able to compete effectively in the global market.

Manukaji, Osisioma and Okoye (2019) conducted a study on the Effect of Human Resource Development on Performance of Quoted Companies in Nigeria. This work examined the effect of human resources development on the performance of quoted companies in Nigeria. The study is anchored on resources-based view theory by Barney (1991). The study adopted ex post facto research design. A total of five companies quoted on the Nigerian Stock Exchange were examined using their 2014 to 2018 annual reports and accounts. Data were sourced on employee remuneration, training and development cost, size of the employee, and return on assets a proxy for performance. The data generated were analyzed using descriptive statistics, correlation test and ordinary least square estimation technique. The study found that employee remuneration and training and development cost have significant effect on performance of quoted companies in Nigeria. Size of employees was found to have insignificant effect on performance of quoted companies in Nigeria. The study concludes that human resources development has significant effect on performance of quoted companies in Nigeria.

Akabike (2020) conducted a study on the functional competencies and the performance of manufacturing companies in South-East, Nigeria. The study examined the effect of functional competencies on the performances of manufacturing companies in the South-East, Nigeria. The main objective of the study was to investigate the effect of production competency, marketing competency, time management competency on the performance of manufacturing firms South-East. The related literature was reviewed. The study is anchored on competence theory. The study adopted a cross-sectional survey design. The study was carried out in South-East of Nigeria. The population for this study consists of 5,394 employee of manufacturing firms located in the South-East States of Nigeria. The sample size for the study is 1036 employees of the selected manufacturing firms in the South-East States of Nigeria determined through the application of a formula developed by Borg and Gall. A structured instrument questionnaire was designed to reflect the popular five (5) point Likert scale. Face and content validated was adopted. The reliability of the instrument was achieved through the application of test re-rest method and Spearman rank order correlation coefficient. The analysis was carried out with the application of summary statistics of percentages, Ordinary Least Squares (OLS) multiple regression analysis. Preliminary results from the analysis showed absence of multicollinearity or orthogonal in the model. The F-Statistic with a value of 18.624 showed that the model is statistically significant, valid and fit for predictions. The regression coefficient of 0.857 showed that 85.7 percent relationship exists between the dependent and independent variables. The study concludes that functional competency had a significant positive influence on the performance of manufacturing in South-East, Nigerian.

Ozoko and Ede (2020) conducted a study on the Effect of Learning on the Product Quality of Chemical and Pharmaceutical Firms in Enugu State, Nigeria. The study evaluated the effect of learning on the product quality of

chemical and pharmaceutical firms in Enugu State, Nigeria. The specific objectives were to: examine the effect of employee absorbed knowledge on the standard product of manufacturing firms in Enugu State, ascertain the effect of employee undergoing a process on the features of manufacturing firms in Enugu State, Nigeria and determine the effect of employee retention of knowledge on the reliability of the product of manufacturing firms in Enugu State. The study used the survey approach. The primary sources were personal interview and the administration of questionnaire. A population of 3,418 staff was used. The population of the study was drawn from the staff of these organizations under study using a stratified sampling method. To determine the adequate sample size of 346, using Freund and William's statistic formula. 326 staff returned the questionnaire and accurately filled. That gave 94 percent response rate. The hypotheses were analyzed using Z- test statistics tool. The findings indicated that employee absorbed knowledge has positive effect on standard product of manufacturing firms in Enugu State Z (95, n = 346) = 5.635, p > 0.05, Employee undergoing a process has positive effect on the features of manufacturing firms in Enugu State, Z (95, n = 346) = 5.819, p > 0.05, employee retention of knowledge has positive effect on the reliability of products of manufacturing firms in Enugu State. Z (95, n = 346) = 5.984, p > 0.05.

Nnabuife and Ohue (2021) conducted a study on the Six Sigma Manufacturing and Performance of Brewing Firms in South-South, Nigeria. The broad objective of this paper is to determine the type of relationship that exists between Six Sigma Manufacturing and Performance of brewing firms in South-South, Nigeria. Specifically, this study seeks to ascertain the type of relationship between quality input and profitability of brewing firms in South-South, Nigeria. The study was anchored on The Theory of Constraint (TOC) propounded by Goldraft (1984). Ex post-facto research design was adopted for the study. Secondary data extracted from the annual financial reports of the three studied brewing firms (Guinness Nigeria Plc, Champion Brewery and International Brewery Plc.) were used for the study with regression analysis applied on the collected data. Results obtained from the test of the hypothesis revealed that a significant positive relationship exists between quality input and profitability since (F-statistic = 57.11217; R-squared = 0.815; P <.05). Based on the findings, the researchers concluded that there exists a strong significant positive relationship between Six Sigma Manufacturing and Performance of brewing firms in South-South, Nigeria.

Effect of Skills on Promotion of Innovation on the Performance of Manufacturing Firms

Omisore, Akinbami, Temitope and Obisanya (2017) Conducted a study on the Assessment of the Impact of Innovation on the Entrepreneurial Performance of Manufacturing Firms in Osun State, Nigeria. Entrepreneurship enhances and leads to Sustainable economic development of any country because it encompasses innovation which is a driving force for competition in a chaotic environment. Innovation which involves introducing new products and services or rebranding an existing product has become the basis for economic growth and development. This study therefore investigates how innovation affects business performances of the manufacturing firms in Osun State Nigeria and assesses the impact of innovation on the entrepreneurial development activities. Data were collected randomly from 30 firms within the three senatorial district in Osun State and analysed using SPSS package. The results showed that innovation is germane to entrepreneurship development in Osun State. The study also demonstrated that innovation was found to influence business performance within the manufacturing firms.

Adekunle and Adedeji (2020) conducted a study on the Effect of Technological Innovation on Personnel Skill of Selected Manufacturing Firms in Nigeria. Technology in any organization that has a significant influence on the quality and quantity of production of its goods or services. But despite this, technology is prone to constant change which organizations have to monitor, manage and cope with. Manufacturing firm that will like to be competitive and profitable should ensure that employees are trained and involved in the management of technological innovation for organizational survival. But most organization tends to undermine the contribution of employee in managing technological innovation, the outcome of which are low profitability and performance. This study examines how technological innovation influence personnel skill of manufacturing firms in Nigeria It also seeks to determine effective method of using technological innovation for improved performance in the Nigerian manufacturing firm. Two hypotheses were formulated to determine the relationship between technological innovation and personnel skill; and between technological innovation and performance. Question based on the hypotheses were formulated and 300 questionnaires were distributed to select 10 manufacturing firms in foods and beverages firms in Nigeria. Findings reveal that personnel skill do not have significant relationship with technological innovation. The study

recommends that personnel skill should be considered in the management technological innovation for profitability, competitiveness and survival of the Nigerian Manufacturing firm.

Green (2021) conducted a study on the Skill Variety and Organizational Innovation of Manufacturing Firms in Rivers State. 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.

Agadah and Nwuche (2021) conducted a study on the Knowledge Management and Firm Innovativeness of Manufacturing Firms in the South-South of Nigeria. The purpose of this study was to investigate the relationship between knowledge management and firm innovativeness of manufacturing firms in the south-south of Nigeria. The study offers an empirical assessment of the relationship as based on its operational framework 3bivariate null hypothetical statements are put forward. The research design adopted was the cross-sectional survey and data for this study was generated from managers and key personnel of the target organizations using structured questionnaire. The study adopted the Spearman's rank order correlation in its assessment for bivariate correlations between knowledge management and measures of firm innovativeness (propensity to create new products, propensity to create new business system and propensity to create new processes). The findings reveal significant relationships between knowledge management and the measures of firm innovativeness. In conclusion, it was stated that knowledge management, offers the necessary support, orientation and knowledge control for enhancing firm innovativeness.

Ofuoma, et al. (2021) examined the relationship between human capital development and organizational performance in the Nigeria aluminium manufacturing sector. This study examined the relationship between Human Capital Development and Organizational Performance in the Nigeria Aluminium Manufacturing Sector, but targeting Whictech Aluminium Limited and Flight Aluminium Plc in Asaba, Delta State, Nigeria as the case study; this is done in respect of measures of human capital development [Talent Development (TD), Training & Development (T&D), Knowledge Management (KM) and Career Development (CD)] on Organizational Performance (ORGP) and responses from the respondents were collected with the aid of five (5) likert scale questionnaire. The type of research design used in this work is the survey research design and the simple random sampling is a method used to cull a smaller sample size from a larger population of the study. A total of ninety-nine (99) questionnaires were administered staffs of Whictech Aluminium Limited and Flight Aluminium Plc in Asaba, Delta State. Out of the ninety-nine (99) questionnaires, ninety (90)90.91% where retrieved and properly filled while nine (9)9.09% were not returned. Thus, the sample to be used for the study will be the total of ninety (90) respondents. The questionnaire was code with the aid of excel spread sheet, the respondents' profile was analyzed with manual simple percentage, the research questions was analyzed with the aid of descriptive statistics which comprises of the minimum, maximum, mean and standard deviation and correlation matrix. The hypotheses of the study were tested using the multiple regression statistical tools with the aid of SPSS version 23 as the basis of testing hypotheses. The findings revealed that there is significant negative relationship between [Talent Development (TD), Training & Development (T&D), Knowledge Management (KM) and Career Development (CD) has a significant relationship with Organizational Performance (ORGP).

Research Design

The study employed survey research design. The survey research is one in which a group of people or items is studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The Survey design was adopted because the researcher had no control over variables of the study. It was also economical.

Source of Data

Data are classified as either primary or secondary data. The classification was based on the two possible sources: primary source and secondary source.

Primary Source

The primary source was made up of the staff of various departments of the paint manufacturing firms under study. A primary data source is the one which the data is collected directly (usually first-hand) by the researcher.

Sources of Secondary Data

Secondary data source is the one which the data is obtained from published materials, internet websites, reports, dailies, text books and so on. Sources of secondary can be split into two parts internal and external sources.

Area of Study

The area of the study was South East, Nigeria. The major ethnic group had various traditional values which of course could be found in their culture, food, dressing and religion. The selected SMEs consisted of the following; Saclux Ind. Nig. Ltd, 10 Lock up-shop Warri Street Umuahia, Abia State, Auxano Chemical company, 5 Amiyi Road, Mgbakwu, Awka, Anambra state, Ebonyi State Fertilizer and Chemical Company Ltd**,** 2, Ogoja-Expressway, Onu Izzi, Ebonyi, Abakaliki; Sharon Paints & Chemical Co. Nig. Ltd; Sharon Pints Close 9th Mile Corner Enugu; Harryluxugoz Enterprises**,** Umuogida Emeke, Owerri.

Population of the Study

The population of the study consisted of Paint manufacturing firms in South East, Nigeria with minimum capital base of 10 million and minimum of fifty (50) employees. The employees were made up of junior and senior employees. These made up the population of study of three hundred and seventy-two (372) of Junior and senior staff of organizations under study as shown in the table 3.1.

Table 1: Population Distribution

	Firms	Staff Categories		
		Senior	Junior	Total
1.	Saclux Ind. Nig. Ltd,	13	71	84
2.	Auxano Chemical co	16	78	94
3.	Ebonyi State Fert and Chemcial	19	47	66
4.	Sharon Paints & Chemical	11	54	65
5.	Harryluxugoz Enterprises	15	48	63
	Total	**74**	**298**	**372**

Source: Administrative desk office, 2022.

Table 1 study shows that five (5) firms which were selected from South East, Nigeria which the researcher deemed to be representative of the Paint manufacturing companies.

Sample Size Determination

The whole sample size was used due to small number of staff.

Sampling Technique

The stratified random sampling with a random start was adopted so as to give every unit of the population under study equal opportunity of being selected into sample. The secondary data were collected from firms, journals, publication, textbooks and the internet. Fifteen questions (15) in the questionnaire were ranged.

Instrument for Data Collection

The Questionnaire was used for data collection. The secondary data were collected from firms, journals, publication, textbooks and the internet. Fifteen questions (15) in the questionnaire were ranged.

Validity of the Instrument

The instrument was given to two experts from the industry and academia to measure face and content validity. To make sure that the research instruments applied in the work are valid, the research ensured that the instrument measure the concept they are supposed to measure. Proper structuring of the questionnaire and a conduct of a pre-test of every question contained in the questionnaire were carried out to ensure that they are valid.

Reliability of the Research Instrument

Internal consistency test was used to test the reliability of the instrument. This was done by administering 20 copies of the prepared questionnaire to the sample of the study. Cronbah's Alpha was used in determining the extent of consistency of the reliability. The formula is as follows:

$$= \frac{K\,(Cov/Var)}{1-(k-1)\,(Cov/Var)}$$

Where

K = number of items on the survey.

Cov = Average inter item covariance.

Var = Average item variance.

I = Constant.

A Cronbach's alpha value (∞) of greater 0.810 indicated very strong reliability.

Table 2: Reliability Statistics

Cronbach's Alpha	No. of Items
.87	10

Scale reliabilities were calculated using Cronbach's Alpha; the result obtained was 0.810. This shows that the internal consistency of the scale is good for the purpose of this study because it is greater than 0.87 which was good.

Method of Data Analyses

Data from the questionnaire were analyzed with the aid of SPSS version 23 using simple, percentages. Data from the questionnaire were further analyzed using simple percentages, mean and standard deviation. For the 5-point Likert scale questions, the scale and decision rule stated below were used in analysing the findings. Z- statistic was adopted in the test of hypotheses.

Scale

Strongly Agree (SA) -5, Agree (A) - 4, Neutral(N) -3, Disagree (D) -2, Strongly Disagree(SD),1

Decision Rule

If Mean $\geq$ 3.0, the respondents agree

If mean $\leq$3.0, the respondents disagree and

The decision rule is to accept the null hypothesis, if the computed Z is less than the tabulated Z otherwise reject the null hypothesis.

Distribution and Returned Questionnaire

The section presents and analyzes the data collected for the study. The presentation and interpretation of data were based on the questionnaire administrated to the staff of the selected Paint manufacturing companies in south east, Nigeria.

Table 3: Distribution and Return of the Questionnaire

Firms	Distributed	No Returned	percent	No not Returned	Percent
1. Saclux Ind. Nig.Ltd,	84	60	16	24	7
2. Auxano Chemical co.	94	78	21	16	4
3. Ebonyi State Fert and Chemcial	66	46	12	20	5
4. Sharon Paints & Chemical	65	49	13	16	4
5. Harryluxugoz Enterprises	63	55	16	8	2
Total	**372**	**288**	**78**	**84**	**22**

Source: From the questionnaire administration, 2022

Three hundred and seventy two (372) copies of the questionnaire were distributed to the respondents and two hundred and forty (240) copies were returned representing seventy eight (78%) percent, while eighty four(84) copies of the questionnaire were not returned representing twenty two percent (22 %). This shows a high rate of the respondents.

Data Presentation and Analysis

The effect of knowledge on product quality of Paint Manufacturing Firms in South East Nigeria

Table 4: Responses on the effect of knowledge on product quality of Paint Manufacturing Firms in South East Nigeria

		5 SA	4 A	3 N	2 DA	1 SD	∑FX	-X	SD	Decision
1	The development of abilities enhances reliability of the products	1040 208 72.2	96 24 8.3	84 28 9.7	16 8 2.8	20 20 6.9	1256 288 100%	4.36	1.196	Agree
2	Having the right attitudes increases customer's loyalty of the products	1040 208 72.2	64 16 5.6	90 20 6.9	48 24 8.3	20 20 6.9	1262 288 100%	4.28	1.296	Agree
3	Experience reduces inferential errors of the products	220 44 15.3	656 164 56.9	108 36 12.5	48 24 8.3	20 20 6.9	1050 288 100%	3.65	1.058	Agree
4	Education empowers and improves continues development in the organisation	40 108 37.5	356 72 25.0	15 48 16.7	60 40 13.9	21 20 6.9	492 288 100%	3.72	1.285	Agree
5	Share of collective knowledge increases the standards of the products	500 100 34.7	496 124 43.1	84 28 9.7	32 16 5.6	20 20 6.9	1132 288 100%	3.93	1.136	Agree
	Grand mean and standard deviation							**3.988**	**1.1942**	

Source: Field Survey, 2021

In Table 4, 232 respondents out of 288 representing 80.5 percent agreed that the development of abilities enhances reliability of the products 4.36 and standard deviation of with mean score of 1.196. Having the right attitudes increases customer's loyalty of the products 22.4 respondents representing 77.8 percent agreed with mean score of 4.28 and standard deviation of 1.296. Experience reduces inferential errors of the products 208 respondents representing 72.2 percent agreed with mean score of 3.65 and standard deviation of 1.058. Education empowers and improves continues development in the organisation 180 respondents representing 62.4 percent agreed with mean score of 3.72 and 1.285. Share of collective knowledge increases the standards of the products 224 respondents representing 77.8 percent agreed with a mean score of 3.93 and standard deviation 1.136.

The effect of Skills has positive effect on promotion of innovation of Paint Manufacturing Firms in South East Nigeria

Table 5: Responses on the effect of Skills have positive effect on promotion of Paint Manufacturing Firms in South East Nigeria

		5 SA	4 A	3 N	2 DA	1 SD	∑FX	-X	SD	Decision
1	Employees with skills promotes creativity in the organization	420 84 29.2	464 116 40.3	168 56 19.4	24 12 4.2	20 20 6.9	1096 288 100%	3.81	1.115	Agree
2	There is promotion of output through skills	220 44 15.3	720 180 62.5	72 24 8.3	40 20 6.9	20 20 6.9	1072 288 100%	3.72	1.032	Agree
3	Competencies of the employee increases collective value of the organization	400 80 27.8	448 112 38.9	168 56 19.4	40 20 6,9	20 20 6.9	1076 288 100%	3.74	1.145	Agree
4	Well qualified workforce achieve higher standards of new products	540 108 37.5	416 104 36.1	60 20 6.9	72 36 12.5	20 20 6.9	1108 288 100%	3.85	1.246	Agree
5	The training culture reduces resistance to change	220 44 15.3	608 152 52.8	108 36 12.5	72 36 12.5	20 20 6.9	1028 288 100%	3.57	1.105	Agree
	Total Grand mean and standard deviation							**3.738**	**1.1286**	

Source: Field Survey, 2021

In Table 5, 200 respondents out of 288 representing 69.5 percent agreed that an employee with skills promotes creativity in the organisation with mean score of 3.81 and standard deviation of 1.115. There is promotion of output through skills 224 respondents representing 77.8 percent agreed with mean score of 3.72 and standard deviation of 1.032. Competencies of the employee increases collective value of the organisation 194 respondents representing 66.7 percent agreed with mean score of 3.74 and standard deviation of 1.145. Well qualified workforce achieves higher standards of new products 212 respondents representing 73.6 percent agreed with mean score of 3.85 and 1.246. The training culture reduces resistance to change 196 respondents representing 68.1 percent agreed with a mean score of 3.57 and standard deviation 1.105.

Test of Hypotheses

Hypothesis One: Knowledge Acquisition has positive effect on product quality/ standard of Paint Manufacturing Firms in South East Nigeria

Table 6: One-Sample Kolmogorov-Smirnov Test		The development of abilities enhances reliability of the products	Having the right attitudes increases customer's loyalty of the products	Experience rduces inferantial errors of the products	Education empoers and improves continous development in the organisation	Share of collective knowledge increases the standards of the products
N		288	288	288	288	288
Uniform Parameters[a,b]	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.722	.722	.472	.375	.528
	Positive	.069	.069	.097	.069	.069
	Negative	-.722	-.722	-.472	-.375	-.528
Kolmogorov-Smirnov Z		12.257	12.257	8.014	6.364	8.957
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000
a. Test distribution is Uniform.						
b. Calculated from data.						

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

With Kolmogorov-Smirnon Z – value ranges from 6.364 < 12.257 and on Asymp. Significance of 0.000, the responses from the respondents as displayed in the table was normally distributed. That affirmed the assertion of the most of the respondents that Knowledge had positive effect on product quality/standard of Paint Manufacturing Firms in South East Nigeria.

Decision

Furthermore, comparing the calculated Z- value ranges from 6.364 < 12.257 against the critical Z- value of .000 (2-tailed test at 95percent level of confidence) the null hypothesis was rejected. Thus, the alternate hypothesis was accepted which states that Knowledge Acquisition had significant positive effect on product quality/standard of Paint Manufacturing Firms in South East Nigeria.

Hypothesis Two: Technical Skills have positive effect on promotion of Paint Manufacturing Firms in South East Nigeria

Table 7: One-Sample Kolmogorov-Smirnov Test		Employees with skills promotes creativity in the organisation	There is promotion of output through skills	Competencies of the employee increases collective value of the organisation	Well qualified workforce achieve higher standards of new products	The training culture reduces resistance to chnage
N		288	288	288	288	288
Uniform Parameters[a,b]	Minimum	1	1	1	1	1
	Maximum	5	5	5	5	5
Most Extreme Differences	Absolute	.444	.528	.417	.486	.431
	Positive	.069	.097	.069	.069	.097
	Negative	-.444	-.528	-.417	-.486	-.431
Kolmogorov-Smirnov Z		7.542	8.957	7.071	8.250	7.307
Asymp. Sig. (2-tailed)		.000	.000	.000	.000	.000
a. Test distribution is Uniform.						
b. Calculated from data.						

Decision Rule

If the calculated Z-value is greater than the critical Z-value (i.e $Z_{cal} > Z_{critical}$), reject the null hypothesis and accept the alternative hypothesis accordingly.

Result

With Kolmogorov-Smirnon Z – value ranges from 7. 307 < 8.957 and on Asymp. Significance of 0.000, the responses from the respondents as displayed in the table was normally distributed. That affirmed the assertion of the most of the respondents that Skills had positive effect on promotion of innovation of Paint Manufacturing Firms in South East Nigeria.

Decision

Furthermore, comparing the calculated Z- value ranges from 7.307 < 8.957 against the critical Z- value of .000(2-tailed test at 95percent level of confidence) the null hypothesis were rejected. Thus, the alternate hypothesis was accepted which showed that technical skill had significant positive effect on promotion of innovation of Paint Manufacturing Firms in South East Nigeria.

Discussion of Findings

Effect of Knowledge on Product Quality of Paint Manufacturing Firms in South East Nigeria

Furthermore, comparing the calculated Z- value ranges from 6.364 < 12.257 against the critical Z- value of .000 which implies that Knowledge had positive effect on product quality/standard of Paint Manufacturing Firms in South East Nigeria. In the support of the result, Mbah, Aga and Onyia (2018) conducted a study on the Effect of Human Capital Development in Organizational Performance in Manufacturing Industries in South-East Nigeria. The findings indicated that Knowledge has positive significant effect on product quality $F_{(95, n=358)}= 2181, P<0.05$; Skills have positive significant relationship on promoting of innovations $F_{(95, n=358)}= 381.631, P<0.05$; The study concluded that any organization that does not learn continuously and is not able to continuously list, develop, share, distribute, mobilize, cultivate, put to practice review and spread knowledge will not be able to compete effectively in the global market. Agadah and Nwuche (2021) conducted a study on the Knowledge Management and Firm Innovativeness of Manufacturing Firms in the South-South of Nigeria. The findings reveal significant relationships between knowledge management and the measures of firm innovativeness. In conclusion, it was stated that knowledge management, offers the necessary support, orientation and knowledge control for enhancing firm innovativeness.

Effect of Skills on Promotion of Innovation of Paint Manufacturing Firms in South East Nigeria

From the result of the hypothesis two, the calculated Z- value ranges from 7.307 < 8.957 against the critical Z- value of .000 which implies that Skills had positive effect on promotion of Paint Manufacturing Firms in South East Nigeria. In the support of the result, Adekunle and Adedeji (2020) conducted a study on the Effect of Technological Innovation on Personnel Skill of Selected Manufacturing Firms in Nigeria. Findings reveal that personnel skill does not have significant relationship with technological innovation. The study recommends that personnel skill should be considered in the management technological innovation for profitability, competitiveness and survival of the Nigerian Manufacturing firm. Green (2021) conducted a study on the Skill Variety and Organizational Innovation of Manufacturing Firms in Rivers State. The findings revealed that there is a significant relationship between skill variety and organizational innovation of manufacturing companies in Port Harcourt.

Summary of the Findings

Based on the results the following findings were made:

i.   Knowledge acquisition had significant positive effect on product quality or standard of Paint Manufacturing Firms in South East Nigeria (6.364 < 12.257, $p < .05$).
ii.   Technical skills significant had positive effect on promotion of Paint Manufacturing Firms in South East Nigeria (7.307 < 8.957, $p < .05$).

Conclusion

The study concluded that knowledge acquisition and technical skills had significant positive effect on product quality/standard and promotion of Paint Manufacturing Firms in South East Nigeria. Effective investment in human capital is a key component of long run economic growth and improved productivity. Human capital empowers a company to service its clients, create its products, and innovate for new ways of doing things. Human capital can be made up of several factors, including: Hard skills and soft skills Higher education and training; Intelligence and emotional intelligence, personality, work experience, employee well-being and Loyalty to the company.

Recommendations

Based on the findings the following recommendations were made:

i. The management of the manufacturing firms should encourage Knowledge acquisitions through training and retraining of their employees, recruitment of experienced employees and creation of regulations that encourages human capital development.

ii. The manufacturing companies should enhance employee skills through the use job rotation to increase the variety of skills in the organizations and increase the morale of the employees.

Contribution to Knowledge

The studies done were carried outside Effect of Human Capital Training and development on Performance of Paint Manufacturing Firms in South East Nigeria and did not focus to best of my knowledge on the knowledge on Product Quality, the effect of skills on promotion of innovation on the Performance of Manufacturing Firms in South East Nigeria. Most of the studies reviewed analysed their data through Structural Equation Modeling (SEM), co-relational, One Way ANOVA on SPSS, Pearson Product Moment Correlation coefficient, and Regression Analysis respectively while the present study made use of Z test to test the hypotheses. Therefore, the study aimed at filling the research gap by evaluating the Effect of Human Capital Training and development on Performance of Paint Manufacturing Firms in South East Nigeria.

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