WORKERS MOTIVATION AND ORGANIZATIONAL PRODUCTIVITY IN CHEMICAL COMPANIES IN RIVERS STATE, NIGERIA.

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Abstract
This study examined workers motivation and organizational productivity in chemical companies Rivers State, Nigeria. The researcher selected three measures of workers motivation to determine their relationships on organizational productivity. Three specific objectives, research questions, and three hypotheses were formulated for the study. Notwithstanding the employees committed efforts, most chemical companies are not ready to practice sustainable motivation that may boost productivity. Survey design was exploited and population of the study comprises four hundred and sixty-two (462) selected employees from the designated ten chemical companies in Rivers State. The researcher also applied stratified sampling and the sample size was projected at 214 employees through Taro Yamane's formula. Instrument for data collection was developed through primary and secondary sources. Statistical tools used to analyze the data include descriptive analysis and spearman rank correlation. The findings unveiled a positive significant relationship between workers motivation and organizational productivity. The researcher concluded that workers motivation predicts organizational productivity and recommend that chemical companies should provide reasonable compensation and conducive work environment that could bring satisfaction and high productivity.
***Keywords**:* Workers, motivation, training, compensation, productivity, Rivers State, Nigeria.

Introduction

Employees have several needs that compel them to search for employment. When organizations offer job to individuals and they are not motivated to improve their standard of living they eventually become dissatisfied. The job of an employee becomes bitter when there is lack of motivation which affects the productivity level of the employee. Ordinarily, managerial responsibilities involve employee's efforts such as compensation, recruitment, motivation, performance management, training development, health and safety, benefits, necessary to accomplish productivity. Motivation is one of the most important factors affecting human behaviour that distinguishes one organization from the other (Maimuna&Rashad, 2013). Apparently, for chemical companiesand related firms to survive, remain relevant, competitive, it is essential for them to induce, maintain, and take care of employees inorder to enhance productivity (Sunia, 2014). Motivation does not only affect cognitive factors like perception and learning but influences job performance of employees in the organization. Indeed, Hellriegel (1996) viewed motivation as any influence that portrays, directs, or maintains people's goal directed behaviours. Similarly, motivation refers to the driving force that makes an individual to act in a specific way.

Motivation appears to be a condition for employee retention and stabilitywhich increases productivity. This may in turn aid in improving an organization's profitability and productivity levels. Nwinye (2022) asserted that employees experience motivation when they are recognized,

attain growth or achievement and the organization provides good conditions of services.Memmott and Growers (2012) concurred to this assumption that one of the ways to motivate employees is to give rewards and incentives for good performance.Workers are the integral part of the organization when employees in the chemical companiesare motivated there is the possibility that they may express positive feelings to their jobs such that performance and productivity increase to boost overall organizational goals (Aluko, 2014).This notion was accepted in Dobre (2013) who declared that employees with high motivation are supposed to have better work performance which result in a superior, more productive and effective company performance. However, Prasad (2005) emphasized that managers are obliged to give great attention to motivation in organization because lack of employee motivation leads to low productivity, absenteeism,turnover,which are harmful to organizational performance and continuous success.

James (2014) contended that extrinsic factors of motivation such as compensation, work environment, as well as training and development inspire employees to successfully discharge their duties and lack of it demoralized workers causing low performance and productivity levels.Organizational productivity refers to the level of effort put forth by the workforce of an organization towards achieving organizational goals (Jennifer & George, 2006).It is the effective method by which employees do their jobs to increase production and performance in the organization.This study therefore focuses on the relationship between workers motivation and organizational productivity in chemical companies Rivers State, Nigeria.

The work attitude of employees could be changed through motivation. When employees are motivated it increases their satisfaction and improve productivity in the organizations. Motivational level of an employee rises when the job enables him to satisfy his basic needs namely food, clothes,shelter, and growth.Ordinarily, if the workers in the chemical companies feel useful with their job they may be encouraged to put in more efforts to enhance productivity. Most businesses and organizations especially chemical companies that neglected employee motivationoften see warning signs of a demotivated workforce like quarrels, poor workplace atmosphere, low job standards, employee incivility, turnover, and decreased productivity. The rate in which employee productivity has relatively declined in chemical companies has continued to represent major managerial concerns.Few organizations tried to overlap by employing a motivation strategy such as employee wellbeing, favourable work environment, good relationships with co-workers, adequate compensation, training and development that improve employee performance as well as organizational productivity.Although,provision of reasonable compensation and work environment, promote job satisfaction which also give the employeessense of belonging and acceptance contributing to high employee performance and productivity.

Employees who enjoy such rewards and benefits within the work environment tend to be more effective and very productive in discharging their duties. Several employees have complained and express dissatisfaction over their working conditions or lack of motivation. However, even when an organization provides the motivational factors to pacify the workers, most of them also cause a decline in productivity through poor strategic and structural changes in decisions, executions, lack of infrastructure, leadership styles, and organizational culture. Performance and productivity are based on employee job behaviour which is normally affected by motivation. Most managersdo not see the relevance of adopting motivation as an integral part of organizational culture and policy, hence there is boredom and resistance to embrace the concept completely and to apply it to their

daily activities. Therefore, this study tends to investigate the relationship between workers motivation and organizational productivity in chemical companies Rivers State, Nigeria.

The primary objective of this study is to examine the relationship between workers motivation and organizational productivity in chemical companies Rivers State, Nigeria. The specific objectives are to: examine the relationship between compensation and the level of effectiveness of the workers in chemical companies in Rivers State, Nigeria; investigate the relationship between training and development and the level of efficiency of the workers in chemical companies in Rivers State, Nigeria. and determine the relationship between work environment and organizational productivity in chemical companies in Rivers State, Nigeria.

Hypotheses

$H0_1$: There is no significant relationship between compensation and the level of effectiveness of the workers in chemical companies Rivers State, Nigeria.

$H0_2$: There is no significant relationship between training and development and the level of efficiency of the workers in chemical companies Rivers State, Nigeria.

$H0_3$: There is no significant relationship betweenwork environment and organizational productivity in chemical companies Rivers State, Nigeria.

Review of Related Literature

Concept of Workers Motivation

Jennifer and George (2006) defined workers motivation as a mental force that governs the direction of an individual's behaviour in an organization, an individual's level of effort, and an individual's level of determination when faced with obstacles.James and Stoner (2009) noted that motivationcould be seen as those psychological characteristics of humans that contribute to an individual's level of commitment towards a goal. Workers motivation comprises several elements that causes, directs, and sustains an individual's behavior in a specific way. Consequently, Nwinye (2022) revealed that motivation signifies intervening variables that activate satisfaction among the workforce which encourages people to express loyalty and commitment for accomplishing desired goals.In addition, even with appropriate strategies and administrative structures in place, a chemical company could only be productive if its employees are sufficiently motivated to perform at higher levels. Motivation refers to factors that enable employees to improve on their skills and knowledge so that they may contribute to the success and productivity of the organization.Hellriegel (1996) viewed motivation as any impact that brings out, guides, and sustains individual goal-directed behaviours. Similarly, Ivancevich (1994) advocated that motivation refers to those set of forces that activates certain behaviours and regulates its form, course, intensity and duration. Obikeze (2005) viewed motivation as the process of guiding an employee's actions towards a particular end via the manipulation of rewards. Motivation signifies the mental process giving behaviors the will-power, drive, and tendency to act in a certain way in order to attain certain unsatisfied needs(Kreitner, 1995).

Motivation relates to inducement forces that control the directions and behavioral patterns of the employees in an organization taking into account their levels of commitment and enthusiasm towards the successful achievement of organizational productivity (George & Jones, 2012).In addition, motivation entails what benefits a person that causes certain behaviours (Davies, 2005). When employees are not motivated it makes the workers to bediscourage from the work. Organizations that practice motivation inspire the employees to have enthusiasm and happiness in performing their duties.Furthermore, if chemical companiescreate a work environment in which suitable motivation is sustainedit may attract workers to expend energy towards accomplishingbetter job performance and organizational productivity. Ordinarily, motivation is concerned with factors that trigger certain employee's actions or behaviors which appears as the core of the consequences of an organization's reputation and productivity level.

Types of Motivation

Lin (2007) suggested that motivation may either be intrinsic or extrinsic.Intrinsic motivation motivation derived from personal commitment, effort, within the individual or from the activity itself. Intrinsic factors of motivation are elements that arise from employee hard work and dedicated to duty. It is internal and comes when the workers have demonstrated professional skills and experience. Employees earn it because of their success in completing a task.An employee isintrinsically motivated, inspired, and devoted to his job when he believes the job may satisfy his wants (George & Jones, 2012). Intrinsic motivation is driven by individual work conduct and action taken for one's own sake. The stimulus to work originates from the mind of the individual because the worker is motivated hence he derives happiness in doing the job. For example, a cleaner who earns little salary work effectively compared to other workers by cleaning the offices and the environment on regular basis. This kind of motivation emanates from rewards that are essential to a job like the pleasure the person derives in performing a particular activity. Intrinsic motivation includes promotion, training and development, recognition, growth, and achievement((Ryan &Deci, 2000).

Extrinsic motivation refers to factors that are external to the activity or work such as compensation, work environmentor conditions of work, salary, co-worker relationship, welfares, and safety (Ryan &Deci, 2000).Thisaspect of motivationis usually determined by the company where the employee works. Extrinsic behaviors are inspired by the additional benefits or awards attach to the job. Nevertheless, the worker may not like the task but he does his job to obtain substantial or social rewards and to evade punishment and begging to eat. For example, a receptionist that works in a hotel may not like the job but she knows that working hard and diligently could generate additional benefits and salary. The employee may not be happy putting in extra hours but the incentive inspires her to work harder.

Compensation

Compensation refers to the amount of money and incentives that an employee receives from his organization in return for his or her contributions to the organization (Hamidiet.al., 2014). Compensation is the reward and financial benefits that satisfy material, social and psychological

needs of the individual. Compensation or pay is linked with general satisfaction and more closely linked with pay satisfaction (Lumley et.al, 2011). Employees receive different categories of benefits in the form of wages, salaries and pay. When individuals with good education, relevant skills, and experience express displeasure over their job and salary packages it leads to high rates of turnover and low productivity. Most organizations develop compensation plans to motivate employees in a bid to minimize the turnover which also generate improve job performance and higher productivity levels. Compensation consists of fringe benefits which focus on maintaining the quality of life of workers by providing safety and financial security taking into consideration their family relations. Matthias and Jackson(2003) mentioned some common examples of fringe benefits which are;insurance, Christmas bonus, retirement or pension plans, medical, education reimbursement, and time off. Fringe benefits represent indirect compensation provided for a worker or group of employees based on their rank as members of the organization.

Overtime is a means of compensation where workers are paid for working additional hours (Tyson, 1999). Furthermore, company housing or house rent allowances is offered by organizations who feel appreciative to help their employees have access to reasonable accommodation.Andrews (2009) asserted that senior employees are provided with accommodation eitherowned by the organization or the organizations may compensate them with house rent allowances.The cost of compensating workers using payments, wages, and other benefits are expensive which forms increasing part of operational expenditures, if such payments and benefits are not given to workers productivity may decrease amongst employees (Allis & Ryan, 2008), Similarly, employees are more assiduous and productive when reasonable pay is attached to performance. Compensating workershave an effect on productivity because employees attach value to their job when they are appreciated with reasonable pay. An average employee wants to be recognized or compensated as a major asset of the organization. They want to control every aspect of operations so that their hopes and aspirations could be accomplished.

Training and Development

Training is viewed as the act of acquiring knowledge including the relevant skills and qualifications by the workers necessary for organizational growth and success (Bassanini, 2004). Training involves organizations formal relentless effort and commitment in frequently improving the job performance level of the workers through a number of skill acquisition andeducational programs. As an obligation to management, training denotes structural activities projected at increasing the performance as well as productivity levels of the workforce in an organization. Besides, Mathis (2003) stated that for workers in chemical firms to effectively carry out their responsibilities, there is need to constantly train and develop workers. This is dynamic because employees who have been adequately trained and developed with the right educational qualifications and skills are capable of paying back with loyalty, protection of companies properties, and improved productivity. The essence of training employees is to create robust opportunities where the trained employees could as well transfer the knowledge, information to new employees, contribute to overall stability, and future success of the firms. Indeed, training and development has become visible official corporate function, a vital strategic tool used in formulating policies that are useful in the achievement of an organization’s vision, mission, objectives, and goals.

Companies of different sizes have embraced the importance of training with integrated continuous learning and other structures associated with training and development as a mode of supporting the advancement of their workers to secure highly skilled workers. Batram and Gibson(2000) emphasized that the value of workers and the continuous upgrade of their skills, qualifications through training is a marketing strategy for employees to have employment and negotiate for salary. If chemical companies do not provide training programs for their employees they may not have competent potential replacements for workers who may wish to leave or retire from active duty or elevated to assume a position with greater responsibilities. Training and development of employees are necessary for organizations to have the human capital required to sustain commercial growth and expansion. Most organizations particularly the prosperous companies have staff development which assists the employees to settle part or all expenses related to formal educational courses in tertiary institutions. This creates an avenue to improve the skills and talents of the staff while showing gratitude for their ambitions and the disruptive change they brought to the firm.An organization may also minimize the rate of incompetent workers,reduce the costs associated with turnover, by utilizing the funds planned for the training and development of fresh inexperienced workers to enhance retention and have more experienced workers.

Work Environment

Kohun (1992) described an organization's work environment as forces, activities including other significant elements that are presently or potentially challenging the worker's productivity and performance levels. Work environment symbolizes the nature of work in which the condition is perceived to be favourableor unfriendly to the employees (Akinyele, (2010).Work environment denotes the work condition that determines performance, retention, and employee turnover. The work environments in which salary earners operate also affect the levelof organization productivity.Akinyele (2010) noted that about 80% of productivity levels are as a result of the nature of a worker's environment in most organizations. Indeed, afavourable work setting guarantees the satisfaction of workers which customarily may encourage them to display their skills, responsibilities with a high level of morale thereby creating higher productivity (Akinyele, 2007).

Businesses are prone to risks and uncertainties as such the capacity of an organization to design a conducive work environment may to a large extent be determined by how well an organization could efficiently use the human capital at its disposal. Brenner (2004) admitted that the ability of an organization'sstaff to transfer information and knowledge throughout the system is subject to the state of their work environment. Workers are likely to be more productive in a well-structured work environment. Furthermore, the quality of comfort which varies in terms of the work environment also predicts the degree of gratification as well as productivity level of workforces. Consequently, the productivity levels of the workforce may not be optimal, if the state of their work environments is not conducive. Animproved work environments boost worker's productivity. However, unfavourablework environment could convert responsible and clever workers to be untrustworthy (Kyko, 2005). Several factors that constitute discomfortin work environment therefore causing a decrease in productivity of employees and the organization comprise administrative policies, interpersonal affiliations, lack of transparency in management, biased managers, policies, work conditions, and compensation. Yesufu (2000) claimed that the kind of conditions workers are subjected tophysically in the work place is significant to output and

managing sustainable work environment, demands making sure the surroundings areconducive, attractive, acceptable, resourceful, and motivating workers.

Organizational Productivity

Bhatti and Qureshi (2007) declared that productivity is a measure of performance that contains both efficiency and effectiveness.Productivity occurs when equal amount of output is generated using fewer inputs (ILO, 2005). Productivity signifies the quantity of work that is reached in a unit of time by means of the factors of production. These factors includeland, technology, capital, entrepreneurship, and labour. Ordinarily, organizational productivity relates to a measure that indicates how well essential resources are used to realize specified objectives in terms of quantity and quality within a specified time. Yesufu (2000) indicated that the wealth of a country as well as social and economic welfare of its citizens is determined by the level of effectiveness and efficiency of its various sub components. The existing economic uncertainties has made image of manufacturing industries to be tarnished by inadequate work environment, low wages, high labour turnover, poor performance and productivity (Githinji, 2014).

Productivity ratios show the degree at which organizational resources are effectively and efficiently used to produce desired outputs.Jennifer and George (2006) contended that the performance of employees add directly to an organization's level of effectiveness, efficiency and even towards the achievement of organizational goals. Antomioni (1999) proclaimed that a worker's level of productivity is subject to the extent at which workers believe that certain motivational desires could be satisfied but they become demoralized and produce low output when they perceive that their desires cannot be accomplished. Productivity could be evaluated in form of quality, quantity, cost, and time it takes an average employee to produce a specified level of output. Therefore, Bernardin (2007noted that effectiveness and efficiency are significant predictors of productivity.

Effectiveness

Effectiveness is referred to as the degree to which employees are able to achieve desired results that satisfy set goals (Yesufu, 2000).It is the estimated results that arise from individual efforts r performance. For example, an employee is said to be effective when he is able to attain desired results in line with organizational goals. Furthermore, a manager in chemical company is effective when he achieves set objectives and goals.

Efficiency

Efficiency connotes the degree to which outputs are produced while reducing manufacturing costs (Harris, 2001). Efficiency basically focuses on productivity without any form of waste. This encompasses workers abilities to work very well with minimum waste in terms of energy, time, and cost.However if a system or resources generate lesser than what it is estimated to generate it is said to be inefficient.Employee efficiency refers to the ability of an employee to do what is actually produced or performed with the same consumption of resources.It could be derived from the relationship between inputs and outputs.

Theoretical Framework

Frederick Herzberg Two-Factor Theory

This theory was formulated by Frederick Herzberg who classified the theory into two segments namely hygiene factors and motivators. Herzberg (2000) established that factors which relate to

employee's job satisfaction and connected to the job contents or the aspects of the job the employees put more efforts to achieveare called motivators, meanwhile, factors which cause employees dissatisfaction when they are not available are the hygiene factors. Besides, hygiene factors are attach to the job, workers do not necessarily struggle for it unlike the motivators.Hygiene factors are factors may jettison dissatisfaction when present; examples are company policy, compensation, interpersonal relation, basic needs, status, work environment,and supervision. Whereas motivators are those factors that result in demotivation and lack of interest in the job when not fulfilled and this could make employees to search for new employment. They are training and development, promotion, growth, achievement, recognition, responsibilities, and participation in decision making. The presence of hygiene factors brings reasonable level of satisfaction and their absence may cause dissatisfaction (Smerek& Peterson, 2007). Thus, it is crucial that managers make available hygiene factors in order to minimize employee dissatisfaction, however if the motivators are offered to employees it may eventually create satisfaction. Apparently, employees are likely to be productive and satisfied when they benefit from company motivators. This theory therefore cautions that managers should avoid making bad decisions that hinders satisfaction and motivation for optimum performance. Herzberg (1987) advanced that for employees to have job satisfaction and transfer their happiness to high productivity chemical manufacturing industries should provide motivators and hygiene factors. Like compensation, training and development, adequate working environment. Nevertheless, Nwinye (2022) criticized this theory by narrating that the theory did not consider lower level employees also neglected the size of organizations, individual interest, and human age.

Empirical Review

lin (2007) investigated the assessment of intrinsic and extrinsic motivation on employee productivity, The findings from the analysis revealed that there was a significant relationship between extrinsic motivation and the productivity level of the workers, whereas intrinsic motivation was statistically less significant than extrinsic even though a correlation also existed between intrinsic factors and workers' productivity levels. As a result, implications of the findings for future study were listed. The study reviewed in lin (2007) is associated with the existing study through measures of motivation, data collection and research design.

Centres and Bugental (2007) carried out a research on intrinsic and extrinsic motivations among different aspects of the working population. The researchers utilized a population of 692 participants to test the rationality of the theory on worker effectiveness and efficiency levels. It was revealed that at higher professional levels, motivators or Intrinsic job elements were more cherished, while at lower occupational levels hygiene factors or extrinsic job elements were more valued.They concluded that organizations that fulfill both intrinsic and extrinsic elements influencing employees' behavior are able to gain high productivity.The existing study is allied with the views in Jibowo (|2007) in positions of data collection instrument, and statistical tools.

Methodology

Research design is the structure of investigation aimed at identifying variables and their relationships to one another. It refers to the blue print, plan and guidelines utilized in data analysis with respect to the study. The researcher employed survey design for this study because it creates room for gathering large amounts of data from a sizeable population in a cost-effective way

The study population comprises of462employees selected from ten chemical companiesin Rivers State. The information was gathered from official bulletins and Rivers State Internal Revenue Service (RIRS) Report 2023. The researcher limited the study toten companies for the purpose of convenience and accessibility.In the course of this study,the researcher interacted with two different levels of employees namely the supervisors and senior staff selected from thechemical companies The sample size was projected as 214 participants which was determined through Taro Yamane's formula. Bowley's proportional allocation formula was adopted to distribute the questionnaire to employees in selected chemical companies in Rivers State.Accessible population of the study is illustrated in Table 1 which shows the names of chemical companies and status of the employees, and number of employees.

Table1

Names of Chemical Companies and Number of Employees

	Names of chemical companies	Population
1	Peritoneum Global Services Limited	50
2	Auburn oil	51
3	Virgo energy Limited	45
4	Hech environmental services Ltd	48
5	Giolee global resources Limited	40
6	Epoxy Oilserv Ltd	43
7	M & P Nigeria Ltd	44
8	Well fluid services Ltd	42
9	Crownhouse technologies Ltd	45
	10. Omorine global resources Limited.	54
	TOTAL	**462**

Source: Rivers State Internal Revenue Service Bulletin, 2023**.**

Sampling Techniques and Determination of Sample Size

Sampling denotes the choice of a subgroup of individuals from the target population in order to enable the estimation of the characteristics of the entire population.The stratified random sampling was utilized in this study. This was done by segmenting the workers based on their job status within the level of supervisor and senior staff. The researcher utilized Taro Yamen's formula to determine the sample size.

The formula is stated as:

$$n = \frac{N}{1 + N^{(e)^2}}$$

Where:
n= Sample size
N= Population size
e= level of significant (0.05)

$$n = \frac{462}{1 + 462(0.05)^2}$$

$$= \frac{462}{1+1.155}$$

$$= \frac{462}{2.155}$$

$$n = 214$$

The sample size for the study was 214 employees selected from chemical companies in Rivers State, Nigeria**.**

The researcher adopted primary and secondary data for the study. Data collection involves gathering of relevant and important data used for conducting a particular research work. It is the basis for acquiring data.Primary source of data emanated from questionnaire distributed to the participants. The secondary source was possible through staff nominal rolls, official bulletin, andRivers State internal revenue service (RIRS) bulletin, 2023.

The instrument used for data collection in this study is the questionnaire, the questionnaires were self-administered. The questionnaire is structured on workers motivation and organizational productivity (Mugenda&Mugenda, 2003). For the purpose of this research, the questionnaire was based on close-ended questions aimed at generating brief and specific answers from the participants. The questionnaire used for this study consists of three sections. Section A was based on the respondents profile, section B represented workers motivation and section Ccovered organizational productivity. The variables were measured through the ordinal scale using five-point Likert scale interpreted as (5-strongly agreed, 4- agree, 3-undecided, 2- disagree, 1- strongly disagree).

The researcher applied spearman rank correlation and descriptive statistics which are illustrated through the aid of statistical package for social sciences (SPSS). Ethical considerations regarding this study are the researcher notified the selected universities before questionnaire was distributed and participant's identity was kept secret.

Results and Discussion

Analysis of Research Questions

Research question one: What is the relationship between compensation and the level of effectiveness of the workers in chemical companies Rivers State, Nigeria?

Table 2
Mean Score of Respondents on Compensation
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Employees in this company receive adequate remuneration.	214	1	5	4.13	1.051
This company does not pay allowances for special duties and overtime.	214	1	5	4.29	.814
Workers prefer cash rewards to praises and promises.	214	1	5	4.35	.768
Employees in this company need more incentives to increase their total reward package.	214	1	5	4.47	.702
Reasonable compensation reduces anger, turnover, and low productivity	214	1	5	4.55	.654
Valid N (listwise)	214				

Table 2illustrated the mean score of respondents on compensation as a measure of workers motivation. The grand mean score was4.4 this means that majority of the employees in chemical companies Rivers State, Nigeriaagreed that adequate salary leads to employee satisfaction and productivity.

Research question two: To what extent is the relationship between training and development and the level of efficiency of the workers in chemical companies Rivers State, Nigeria?

Table 3
Mean Score of Respondents onTraining and Development
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This company has a training and development policy applicable to all employees.	214	1	5	4.27	1.073
Skills and knowledge workers acquired in training improve their job performance.	214	1	5	4.39	.824
Supervisors support the implementation of the skills and techniques taught in training to achieveefficiency.	214	1	5	4.49	.781
Training and development of workers is a company business strategy.	214	1	5	4.56	.762
Workers are not satisfied with the level of training and development offered by the company.	214	1	5	4.64	.685
Valid N (listwise)	214				

The results in Table 3 presented the mean score analysis of respondents on training and development. The findings showed a grand mean score of4.4 which indicated that most of the employees in chemical companies Rivers State, Nigeria agreed that training and development promotes satisfaction, job performance, and efficiency in the organization.

Research question three: To what extent is the relationship between work environment and organizational productivity in chemical companies Rivers State, Nigeria?

Table 4
Mean Score of Respondents onWork Environment
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
This company has a conducive and friendly work environment.	214	1	5	4.15	1.041
Workers offices are spacious and decent.	214	1	5	4.24	.912
Employees enjoy a certain level of freedom and autonomy in discharging their duties.	214	1	5	4.32	.881
This company organizes routine and safety environmental programs for the employees.	214	1	5	4.51	.769

Afavourable work setting helps to transfer knowledge and guarantees the satisfaction of workers.	214	1	5	4.67	.687
Valid N (listwise)	214				

The results in Table 4 presented the mean score analysis of respondents on work environment. The findings showed that the grand mean score was 4.4 which unveiled that most of the employees in chemical companies Rivers State, Nigeria agreed that conducive work environments attract satisfaction and motivate employees to improve on their job.

Test of Hypotheses

Hypothesis one

$H0_1$: There is no significant relationship between compensation and the level of effectiveness of the workers in chemical companies Rivers State, Nigeria.

Table 5

Spearman Rank Correlation ofCompensation and Effectiveness

Correlations

			Compensation	Effectiveness
Spearman's rho	Compensation	Correlation Coefficient	1.000	.917**
		Sig. (2-tailed)	.	.000
		N	214	214
	Effectiveness	Correlation Coefficient	.917**	1.000
		Sig. (2-tailed)	.000	.
		N	214	214

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

The results in Table 5clarified that the correlationcoefficient *r*-valuewas.917 and the *p*-value was.000 which proved that the result was statistically significant different. It also indicated that there was significant positive relationship between compensation and effectiveness. Similarly, when*p*-value is .000 which is less than .005 the null hypothesis is rejected and alternative hypothesis accepted. Furthermore, this result established that compensation predicts effectiveness of workers in chemical companies.

Hypothesis two

$H0_2$: There is no significant relationship between training and development and the level of efficiency of the workers in chemical companies Rivers State, Nigeria.

Table 6

Spearman Rank Correlation ofTraining and Development and Efficiency

Correlations

	Training and development	Efficiency

Spearman's rho	Trainingand development	Correlation Coefficient	1.000	.912**
		Sig. (2-tailed)	.	.000
		N	214	214
	Efficiency	Correlation Coefficient	.912**	1.000
		Sig. (2-tailed)	.000	.
		N	214	214

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

The results in Table 6explained that the correlation coefficient *r*-valuewas.912and the *p*-value indicated .000 which proved that the result was statistically significant different. It also signified that there was significant positive relationship between training and development and efficiency. If*p*-value is .000 which is less than .005 the null hypothesis is rejected and alternative hypothesis accepted. Indeed, this result attested that training and development influences the efficiency of workers in chemical companies.

Hypothesis three

H03: There is no significant relationship between work environment and organizational productivity of the workers in chemical companies Rivers State, Nigeria.

HA3: There is significant relationship betweenwork environment and organizational productivity of the workers in chemical companies Rivers State, Nigeria.

Table 7

Spearman Rank Correlation ofWork Environment and Organizational Productivity

Correlations

			Work environment	Organizational productivity
Spearman's rho	Work environment	Correlation Coefficient	1.000	.823**
		Sig. (2-tailed)	.	.000
		N	214	214
	Organizational productivity	Correlation Coefficient	.823**	1.000
		Sig. (2-tailed)	.000	.
		N	214	214

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

The results in Table 7 illustrated the correlation coefficient*r*-valueas.823 and the *p*-value as .000 which means the resultproved statistically significant different. It also indicated that there was significant positive relationship between work environment and organizational productivity. When the *p*-value is .000 which is less than .005 the null hypothesis is rejected and alternative hypothesis accepted. Moreover, this result signified that work environment influences the organizational productivity.

Discussion of Findings

The findings in the first hypothesis show that there is positive significantrelationship between compensation and effectiveness of workers in chemical companies in Rivers State, Nigeria. This suggests that employees are motivated when they receive adequate pay and allowances which make them feel happy and satisfied. This finding is in line with Lumley et.al.(2011) they contended that compensation is the reward and financial benefits that satisfy material, social and

psychological needs of the individual which is linked general satisfaction and pay satisfaction. Hypothesis two findings demonstrate a positive significant relationship between training and development and efficiency of workers in chemical companies. This implies that employees express satisfaction when the training gives them skills and knowledge to improve job performance and productivity. This finding is in accordance with Mathis (2003) who stated that for workers in chemical firms to effectively carry out their responsibilities, there is need to constantly train and develop workers.Hypothesis three resultsindicate a positive significant relationship between work environment and organizational productivity of workers in chemical companies. This assumption stipulates that employees are motivated and satisfied when they work in comfortable office and pleasant work environment. This finding agrees with Akinyele(2007) who declared that a favourable work setting guarantees the satisfaction of workers which customarily may encourage them to display their skills, responsibilities with a high level of morale thereby creating higher productivity.

Conclusions

Organizations that have motivational factors are capable of retaining talented and hard-working employees that may contribute to the success and sustainable production. Thus, the findings from this study disclosed thatthree measures of workers motivation namely compensation, training and development, and work environment have positive significant relationship with organizational productivity in chemical companies Rivers State, Nigeria. Indeed, the study concluded that compensation influences the effectiveness of workers in chemical companies and there is positive significant relationship between workers motivation and organizational productivity.

Recommendations

1. Chemical companies and related manufacturing firms should ensure that workers are motivated with reasonable pay, incentives, and fridge benefits to enable the employees feel satisfied and in turn demonstrate their happiness to high job performance and productivity.
2. Organization should guarantee the safety of their workers at the workplace and provide favourable work environment with juicy work conditions, attractive offices, and technologies to boost job performance.
3. Chemical companies should minimize the high rate of turnover, disruptive behaviour, and low productivity by providing valence training programs to the workers which may help the employees acquire new skills, knowledge, information, and experience needed to transform and achieve set goals.

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