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Effect of Work Environment on Employee Productivity in Manufacturing Firms in Anambra State, Nigeria.

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ABSTRACT: This study investigated the effect of work environment on employee productivity in manufacturing firms in Anambra State, Nigeria. The specific objectives were to: determine the effect of safety of work on employee engagement; to ascertain the effect of supervisor support on employee motivation; to examine the effect of workload and work-life balance. This work was reviewed under the following sub-headings conceptual reviews; theoretical frame work; theoretical exposition and empirical reviews. The study was anchored on the Job Characteristics Model (Hackman & Oldham, 1976). The study adopted a descriptive survey design. 404 valid questionnaires were used from the sample of 412 employees selected through stratified random sampling from six plastic manufacturing firms across the three senatorial zones in Anambra State. Primary data were obtained through structured questionnaires, and analyzed using regression analysis via SPSS Version 23. Findings revealed a significant positive effect of safety of work on employee engagement ($R = 0.785$, $R^2 = 0.616$, $p = 0.000$), indicating that safety in the workplace accounts for 61.6% of the variance in employee engagement. Supervisor support was also significantly influenced employee motivation ($R = 0.806$, $R^2 = 0.649$, $p = 0.000$), implying that 64.9% of the variance in motivation is explained by perceived supervisor support. The effect of workload on work-life balance was also statistically significant ($R = 0.772$, $R^2 = 0.596$, $p = 0.000$).The study concluded that a conducive work environment significantly influences employee productivity. It recommended that management should ensure workplace safety, foster supervisor support, manage workload, and enhance incentive structures to improve employee outcomes.

Keywords: Work environment, employee productivity, manufacturing firms

INTRODUCTION

Employee productivity has long been recognized as a critical factor in the growth and competitiveness of manufacturing firms. Historically, the Industrial Revolution marked a significant shift in production processes, where mechanization and structured labor systems emphasized efficiency and output. Over time, advancements in management theories, such as

Taylor's scientific management and the human relations movement, highlighted the importance of workplace conditions in enhancing employee performance. In modern manufacturing, employee productivity refers to the ability of workers to effectively execute their tasks, resulting in increased output, improved quality, and reduced costs (Deci & Ryan, 2020). As a key determinant of organizational success, employee productivity is influenced by various workplace factors, including safety of work, supervisor support, workload, and work incentives.

The safety of the work environment plays a fundamental role in shaping employee productivity. A safe workplace, characterized by proper lighting, controlled noise levels, hazard-free conditions, and adherence to occupational health standards, enhances employee morale and reduces absenteeism due to workplace accidents (Hackman & Oldham, 2020; Parker, MacKenzie, Moorman, & Fetter, 2023).

When employees feel secure in their work environment, they are more engaged, motivated, and focused on their tasks, leading to higher productivity levels. Conversely, an unsafe work environment can result in injuries, stress, and decreased efficiency.

Supervisor support is another critical factor influencing employee productivity. Supervisors serve as intermediaries between employees and management, providing guidance, motivation, and assistance in task execution. Supportive supervision fosters open communication, reduces job-related stress, and enhances job satisfaction (Gilboa, Bakker, Nachreiner, & Schaufeli, 2018; Morgeson & Humphrey, 2016). Employees who receive adequate support from their supervisors are more likely to remain engaged, committed, and productive in their roles. On the other hand, a lack of support from supervisors can lead to frustration, reduced efficiency, and increased employee turnover.

Workload is another determinant of productivity in manufacturing firms. While a balanced workload enhances employee efficiency, excessive workload can lead to burnout, stress, and decreased performance (Kanfer, Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 2014; Spector, 2017). Manufacturing firms that establish realistic work schedules and ensure equitable distribution of tasks can maintain high productivity levels and reduce employee exhaustion. On the contrary, an overwhelming workload without adequate support or breaks may hinder employee output and negatively affect overall business performance.

The relationship between work environment factors and employee productivity is well-documented in studies across various regions, including Europe and North America (Bakker et al., 2014; Den Hartog & Bakker, 2014). However, there is limited research on this subject within the Nigerian context, particularly in Anambra State. Given the state’s unique economic landscape, characterized by infrastructure challenges, regulatory policies, and varying levels of skilled

labor availability, an in-depth study is necessary to understand how work environment factors impact employee productivity in manufacturing firms.

Manufacturing firms play a vital role in Nigeria's economic growth, and understanding the dynamics of safety at work, supervisor support, workload, and incentives in relation to productivity is crucial. This study seeks to bridge the research gap by examining the impact of these work environment factors on employee productivity in manufacturing firms in Anambra State. The findings will contribute to the body of knowledge in organizational behavior, human resource management, and industrial relations while offering practical insights for improving productivity in Nigeria's manufacturing sector.

Statement of Problem

Employee productivity is crucial for the success and competitiveness of manufacturing firms, as it directly influences output, quality, and cost efficiency. However, in many manufacturing firms in Anambra State, employee productivity remains sub-optimal due to various workplace challenges. While previous studies have established the relationship between work environment and employee productivity in developed economies, there is limited empirical research addressing the specific factors affecting productivity in manufacturing firms in Anambra State. This study seeks to examine how work environment factors—specifically, safety of work, supervisor support, workload, and work incentives—impact employee productivity in the manufacturing sector within this region.

Several specific challenges contribute to the broader issue of low employee productivity in manufacturing firms. One major issue is inadequate workplace safety, as many firms lack proper safety measures such as protective gear, well-ventilated workspaces, and hazard-free environments. This often leads to workplace accidents, increased absenteeism, and reduced employee morale, ultimately affecting productivity. Addressing this challenge requires strict enforcement of occupational health and safety regulations, provision of adequate protective equipment, and regular workplace inspections to ensure a safer work environment.

Another challenge is poor supervisor support, where employees struggle with unclear expectations, lack of guidance, and minimal feedback from their supervisors. Without proper leadership, employees become disengaged, leading to inefficiency and low work performance. To improve this, firms must implement supervisor training programs, foster open communication between management and employees, and encourage participative leadership to enhance productivity.

Excessive workload and stress also contribute to low employee productivity. Many manufacturing employees experience high job demands without adequate rest, leading to burnout and declining efficiency. When employees are overburdened

with unrealistic production targets, the quality of their work suffers. Establishing fair workload distribution, ensuring reasonable work hours, and integrating stress management programs can help employees maintain high productivity levels.

Additionally, the lack of incentives and motivation in many firms results in low employee commitment. Employees often receive low wages, minimal bonuses, and limited career growth opportunities, making them feel undervalued. This reduces their motivation and increases turnover rates. Implementing competitive salary structures, introducing performance-based bonuses, and creating clear career progression paths can enhance employee motivation and job satisfaction, leading to improved productivity.

Despite the significant role of the work environment in shaping employee productivity, existing research has primarily focused on developed economies, with limited attention given to the Nigerian manufacturing sector, particularly in Anambra State. Most studies on employee productivity in Nigeria emphasize general human resource management practices without specifically addressing workplace safety, supervisor support, workload distribution, and incentives in the manufacturing industry. This study aims to bridge this gap by conducting an empirical investigation into how these work environment factors influence employee productivity in manufacturing firms in Anambra State. The findings will provide valuable insights for policymakers, business owners, and human resource managers to create work environments that foster higher productivity, efficiency, and overall business growth.

Objectives of the Study

The broad goal of this study is to examine the effect of work environment on employee productivity in manufacturing firms Anambra state, Nigeria. The specific goals are to:

Determine the effect of safety of work on employee engagement in manufacturing firms in Anambra state, Nigeria.

Ascertain the effect of supervisors support on employee motivation in manufacturing firms Anambra state, Nigeria.

Examine the effect of work load on work-life balance in manufacturing firms Anambra state, Nigeria.

LITERATURE REVIEW

Work Environment

The term "work environment" refers to the physical, social, and psychological conditions in which employees perform their tasks and interact with their colleagues and supervisors. It encompasses various factors such as the layout of the workspace, the organizational culture, the leadership style, and the overall atmosphere of the workplace.

According to a study by Li and Hung (2019), work environment refers to the "physical, psychological,

and social milieu where employees conduct their work." This definition underscores the importance of considering not only the physical aspects of the workplace but also the psychological and social factors that impact employee experiences.

A positive work environment, which encompasses the physical, psychological, and social aspects of the workplace, is crucial for the wellbeing and productivity of employees. One fundamental element in creating a positive work environment is employee empowerment. When employees are given opportunities to participate in decision-making processes and have a sense of ownership over their work, it leads to higher job satisfaction and commitment (Li & Hung, 2019). This empowerment fosters a culture of responsibility and dedication, which in turn enhances productivity and engagement.

Safety of Workplace

Safety of workplace is seen as the collective efforts and measures taken to ensure the well-being, health, and protection of employees in their working environment (Breslin et al., 2018). It includes the identification, assessment, and management of potential hazards, the promotion of a positive safety culture, the implementation of training programs, and the cultivation of individual responsibility and motivation (Breslin et al., 2018; Smith-Jackson et al., 2013). Conceptual reviews on workplace safety provide a comprehensive understanding of these key aspects and their interplay, offering insights that can inform the development and enhancement of safety practices in various industries (Clarke, 2016; Hofmann & Stetzer, 2016).

Safety of the workplace is crucial for understanding and improving safety standards for employees. These reviews provide an overview of key concepts, theories, and best practices that contribute to ensuring a safe working environment. This article will present a brief synthesis of some seminal research in the field of workplace safety to offer insights into the importance of implementing effective safety measures in the workplace.

Supervisor Support

Supervisor support refers to the provision of guidance, assistance, and encouragement by supervisors to their subordinates, with the aim of enabling them to fulfill their roles and achieve their goals effectively (Ogińska-Bulik, 2015). It involves the provision of resources, feedback, information, and emotional support to employees, thereby promoting their well-being and job performance (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2022).

Supervisors play a crucial role in supporting their subordinates, as they are typically responsible for overseeing their work, providing training and development opportunities, and facilitating communication within the organization (Sargent & Terry, 2021). They serve as a link between the organizational leadership and the employees,

acting as a source of guidance and support for individuals at all levels within the organization (Rigotti, Schyns, & Mohr, 2018).

Workload

Workload refers to the amount and intensity of tasks, responsibilities, and demands placed upon an individual in a work setting (Demerouti, Bakker, Nachreiner, & Schaufeli, 2021). It encompasses the quantity of work, the complexity of tasks, and the time constraints within which tasks need to be completed (Faragher, Cass, & Cooper, 2015). Workload can have significant implications for employee well-being, job performance, and overall organizational productivity (Sonnentag & Frese, 2023).

A high workload implies that an individual has excessive demands on their time and energy, often leading to a feeling of being overwhelmed and stressed (Demerouti et al., 2021). This can result in difficulties in balancing work and personal life, decreased job satisfaction, increased job dissatisfaction, and even burnout (Faragher et al., 2015). On the other hand, a low workload may lead to boredom, disengagement, and a lack of motivation (Sonnentag & Frese, 2023).

Research has shown that an excessive workload can have negative consequences on employee well-being. The demands of a heavy workload can lead to increased levels of stress, fatigue, and physical and mental health problems (Demerouti et al., 2021). Prolonged exposure to high workload levels can even lead to burnout, characterized by emotional exhaustion, cynicism, and reduced personal accomplishment (Maslach, Schaufeli, & Leiter, 2021). It is worth noting that not all employees respond in the same way to workload demands, as individual differences in resources, coping strategies, and job characteristics may influence the impact of workload on well-being (Demerouti et al., 2021).

Employee Productivity

Employee productivity refers to the level of output or performance that an employee can generate within a given timeframe, while effectively utilizing available resources and adhering to quality standards (Richards & Jones, 2018; Barrick, Thurgood, Smith, & Courtright, 2015). It is a key measure of an employee's contribution to organizational goals and overall performance.

Numerous factors impact employee productivity, including individual characteristics, work environment, organizational culture, and management practices. One key determinant is individual motivation. Employees, who are intrinsically motivated, driven by internal factors such as personal fulfillment and enjoyment, are more likely to exhibit higher levels of productivity (Deci, Koestner, & Ryan, 2019; Gagné & Deci, 2015). On the other hand, external motivators, such as monetary incentives and rewards, can enhance productivity by providing tangible outcomes linked to performance (Latham & Pinder, 2015).

The work environment and organizational culture also play crucial roles in shaping employee productivity. A positive work environment, characterized by supportive leadership, clear communication channels, and collaborative teamwork, can foster higher levels of productivity (Patterson, Warr, & West, 2014). Additionally, a culture that encourages innovation, continuous learning, and employee development can contribute to improved productivity (Kahn, 2020; Shalley, Gilson, & Blum, 2020).

Employee Engagement

Employee engagement refers to the level of commitment, enthusiasm, and emotional investment that employees have in their work and the organization as a whole (Kahn, 2020; Saks, 2016). It is a measure of an employee's willingness to go above and beyond their job requirements, contribute their best efforts, and actively contribute to the organization's success.

Several factors contribute to employee engagement. One key factor is the work environment. A positive and inclusive work environment characterized by supportive leadership, clear communication, and opportunities for growth and development can foster higher levels of engagement (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2022; Bakker & Demerouti, 2018). When employees feel valued, respected, and have a sense of belonging, they are more likely to be engaged in their work.

Organizational culture also plays a significant role in employee engagement. A culture that promotes open communication, collaboration, and recognition of achievements can enhance engagement (Saks, 2016; Macey & Schneider, 2018). When employees perceive that their contributions are valued and that their work aligns with the organization's values, they are more likely to feel connected and motivated.

Employee Motivation

Employee motivation refers to the internal drive and desire that employees have to achieve their work-related goals and perform to the best of their abilities. It involves the psychological processes that energize, direct, and sustain employees' behavior towards the attainment of desired outcomes (Gagné & Deci, 2015). Motivated employees are more likely to be engaged, productive, and committed to their work.

Several theories and factors contribute to employee motivation. Maslow's hierarchy of needs theory suggests that individuals are motivated by a series of hierarchical needs, including physiological needs, safety needs, belongingness and love needs, esteem needs, and self-actualization needs (Maslow, 2023). When these needs are fulfilled, individuals are more motivated to strive for higher-level needs, such as personal growth and self-fulfillment, in the workplace.

Work-Life Balance

Work-life balance refers to the equilibrium between a person's professional responsibilities and their personal life, including family, leisure, and personal development (Greenhaus & Beutell, 2015). It is about finding a harmonious integration of work and personal life, allowing individuals to meet their professional obligations while also fulfilling personal needs and priorities.

The concept of work-life balance has gained increasing attention due to the changing dynamics of the modern workplace. With advancements in technology and globalization, many employees find themselves constantly connected to work, leading to blurred boundaries between work and personal life. This can result in high levels of stress, burnout, and reduced well-being (Kalliath & Brough, 2018).

Theoretical Review

This work is anchored on Job Characteristics Model by Hackman and Oldham (1976). The Job Characteristics Model (JCM) proposes that certain characteristics of the work environment can influence employee motivation and satisfaction, which, in turn, affect employee productivity. Hackman and Oldham suggests that certain characteristics of the work environment can significantly impact employee motivation, satisfaction, and ultimately productivity. According to this model, there are five core job characteristics that play a crucial role in enhancing intrinsic motivation and creating meaningful work:

1. Skill Variety: This refers to the extent to which a job requires employees to apply a range of different skills and abilities. Jobs with high skill variety provide employees with the opportunity to use and develop various skills, which can increase their sense of accomplishment and motivation.

2. Task Identity: Task identity refers to the extent to which employees can see and understand the complete outcome of their work. Jobs with high task identity allow employees to have a clear understanding of their contributions to the overall goal or product, leading to a higher sense of responsibility and pride in their work.

3. Task Significance: Task significance refers to the perceived impact and importance of the employee's work on others or the organization. When employees understand that their work has a meaningful impact, they are likely to experience a sense of purpose and motivation.

4. Autonomy: Autonomy refers to the degree of freedom and independence employees have in planning and organizing their work. Having autonomy gives employees a sense of control, allowing them to use their skills and expertise to make decisions and take ownership of their work, which can enhance motivation and satisfaction.

5. Feedback: Feedback refers to the extent to which employees receive clear and timely information about their performance. Regular feedback allows employees to assess their progress and make adjustments, reinforcing their motivation and indicating areas for improvement.

The JCM suggests that when these five core job characteristics are present in the work environment, employees are more likely to experience higher levels of intrinsic motivation, job satisfaction, and productivity.

Relevance of the Theory to the Study

The Job Characteristics Model (JCM) and the Effort-Reward Imbalance (ERI) Model are both significant theories when considering the impact of work environment on employee productivity. The JCM highlights the importance of providing employees with meaningful work through job design. By ensuring that jobs have sufficient skill variety, task identity, task significance, autonomy, and feedback, employers can enhance intrinsic motivation and job satisfaction. When employees find their work meaningful and fulfilling, they are more likely to be engaged, focused, and productive in their roles. The JCM, therefore, suggests that organizations should carefully design jobs to incorporate these core characteristics in order to maximize employee productivity.

Theoretical Exposition

Safety of Work and Employee Engagement

The safety of work directly correlates with employee engagement and has a significant impact on an employee's overall job satisfaction, productivity, and motivation. When employees feel safe in their work environment, they are more likely to engage fully and commit to their tasks and responsibilities.

One study by Neal and Griffin (2016) found that employees who perceive a safe working environment are more engaged and exhibit higher levels of job performance compared to those who perceive a less safe environment. This suggests that an employee's perception of safety plays a crucial role in their willingness to invest their time and energy into their work.

Moreover, organizations that prioritize and invest in safety measures tend to establish a sense of trust and commitment with their employees. This leads to higher levels of engagement and job satisfaction. A study conducted by Probst, Jiang, and Stewart (2023) supports this notion, showing that employees who perceive their organization as committed to their safety have higher levels of employee engagement and are more likely to exhibit discretionary effort.

Supervisor Support and Employee Motivation

Supervisor support plays a crucial role in employee motivation and has a direct impact on their job satisfaction, performance, and overall engagement. When employees perceive support from their supervisors, they are more likely to feel valued, respected, and motivated to give their best effort at work.

A study by Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades (2022) found that supervisor support is positively related to employee motivation and job satisfaction. The researchers observed that employees who perceived high levels of support from their

supervisors reported higher levels of intrinsic motivation, meaning they were driven by internal factors such as interest and enjoyment in their work. On the other hand, employees who perceived low levels of support from their supervisors reported lower levels of intrinsic motivation.

Furthermore, supervisor support positively influences employee job performance. A study by Podsakoff, MacKenzie, Moorman, & Fetter (2020) suggests that employees who perceive support from their supervisors have higher levels of task performance, showing greater willingness to exert effort and achieve desired outcomes. This indicates that supervisor support enhances employee motivation to fulfill job responsibilities and contribute to organizational success.

Workload and Work-Life Balance

Workload has a significant impact on an individual's work-life balance. When employees face heavy workloads and excessive job demands, it can lead to increased stress, longer working hours, and limited time available for personal and family commitments. Research has shown that high workloads can adversely affect work-life balance and overall well-being.

A study by Eby, Casper, Lockwood, Bordeaux, and Brinley (2015) examined the relationship between workload and work-life balance. The findings indicated that employees with higher workloads reported lower levels of work-life balance. This suggests that when individuals are burdened with heavy workloads, it becomes challenging for them to effectively manage their work and personal life obligations.

Additionally, excessive workloads can result in increased work-family conflict. A study by Grzywacz and Marks (2020) explored the impact of workload on work-family conflict and found that individuals with high workloads experienced higher levels of perceived conflict between their work and family roles. These findings demonstrate that when employees are overwhelmed with work demands, it becomes difficult for them to maintain a healthy balance between their professional and personal responsibilities.

Empirical Review

Aram and Samir (2017). This research aims to analyze working environment of a foreign private banks operating in Kurdistan Region of Iraq and examines the relationship between the workplace physical conditions and distributed to 50 employees working in four foreign banks in the Kurdistan Region of Iraq. The result show that there is a relationship between office environment and productivity of employees. Behavioral components of office environment have a greater effect on productivity, than the physical components alone. And Satisfaction of Employees towards overall Workplace Environment leads to productivity.

Khawar and Aqeel (2017). The purpose of this study is to examine the impact of the workplace environment Factor on the Employee

performance at manufacturing industry. In this study different element of the organization environment/ work environment are discuss and check their impact on the Employee Performance. Employee Performance is dependent variable in this study and independent variables are Physical work environment, supervisor support, employee willingness and Job Aid. The population of the study is elected from the manufacturing sector of sunder industrial estate Lahore. The data collection process completed through adapted questionnaire. A quantitative analysis with a sample of 352 respondents is performed using correlation and regression analysis in order to test the research hypotheses. Hypotheses of the study test bye the statistical technique correlation and regression. The results of the study show that all the variables or positively correlated with each other and all variables have the positive effect on the each

Abdul and Tafique (2015). Examine the Impact of working environment on employee's productivity: A case study of Banks and Insurance Companies in Pakistan. Work environment plays an important role in an organization. Most of the problems faced by employees are related to working environment. The level of productivity can be increased through developing a conducive working environment in the organization. The basic objective of this study is to measure the impact of working environment on productivity of employees. The organizations like banks and insurance companies were selected for conducting this research study. A closed ended questionnaire was developed to get feedback from target audience and different statistical methods were used to derive results from the collected data. It was observed that the factors like supervisor support, relation with co-workers, training and development, attractive and fast incentives and recognition plans, adequate work load at work place are helpful in developing a working environment that has positive impact on employee's level of productivity in the organizations.

Masharyono (2016). Investigate Physical Work Environment Effect on Employee Productivity of Textile Industry. The problem of the background for this study is the problem of employee productivity is still a major problem in a variety of industries and companies, in which the quality of human input is an important factor in increasing productivity to economic growth and development. The purpose of this study to determine the influence of the physical work environment on employee productivity. Design/ methodology / approach in this study conducted at intervals of less than one year, then the design study is a cross-sectional method. This study used a descriptive approach and verification with explanatory survey method. A total of 145 respondents were selected as the sample using probability sampling. Research questionnaire used as a research instrument to collect data from respondents, as well as the data analysis technique used is a simple linear regression. The findings explain that the physical work environment influence on employee productivity.

Salim and Abul Bashar (2021). Examine the empirical review on the working environment, motivation and social attributes on career performance in oman. A strategically effective, hygienic, and healthy environment ensures bringing satisfaction among the employees while a drab, challenging, and competitive atmosphere leaves a seriously poor impact on the employees. At different times, employees are required to face a number of challenges, both operational and organizations where they are essentially expected to invest their best knowledge, skills, and experience, However, in a poorly developed atmosphere an employee basically refuses to invest his or her abilities which ultimately creates challenges for the organization. Therefore, the aim of the present study is to evaluate the effects of the working environment, motivation and social factors on career performance in Oman.

The study used online empirical recourses by the name of working environment, motivation and social factors and career performance in different online database sources such as Google Scholars, Springer Link, Wiley, Science Direct, JSTOR, Emerald full text, Scopus, and EBSCO HOST, etc. The review findings summarized that maintaining a sophistically impressive working environment basically helps an organization to maintain a good image before the pool of skilled candidates in the market and helping it to acquire the best talents. Moreover, the study also concluded that the majority of the organizations across the globe are focusing on maintaining an effective working atmosphere to keep the employees more engaged to the organization than that of the other and it has a significant role in the comprehensive development of the organization. The findings of the study draw a guideline for future scope of empirical indepth study in the area of the career performance in Oman and the regions.

Ni Putu (2018). determine the effect of the physical work environment on employee productivity mediated by employee job satisfaction. This research was carried out in Mama's Kecak Disco Kecak located in East Denpasar, Bali, Indonesia. Primary data in this study is through questionnaires and direct interviews with employees. The sampling technique chosen in this study was to use the survey method. The number of respondents taken in this study were 42 respondents. This study uses Path analysis data analysis techniques to determine whether there is an influence of the physical work environment on employee productivity through job satisfaction as an intervening variable. The results of the study found that physical work environment and job satisfaction directly had a positive and significant effect on employee productivity and the effect of the physical work environment on employee work productivity was not mediated by employee job satisfaction. The implication in this study is that managers must pay attention to the physical work environment and job satisfaction of employees to improve work productivity. Physical environment such as air circulation, air temperature conditions, flexibility in activities, noise and cleanliness of the workplace must be a major concern in increasing the productivity of its employees. The condition of

a good work environment and providing comfort in work can increase employee productivity.

Mohamad (2021). Examine the impact of work environment on employees performance. a good work environment is essential for guaranteeing employee performance and avoiding excessive stress, which can negatively impact job performance. Several aspects of the working environment have a role in job satisfaction and employee performance. Therefore, the aim of this study is to investigate firstly the relationship between the employee performance and work environment and determining the impact of work environment has on employees' performances at work. a real estate company investo global was chosen for this study due to accessibility and feasibility.

The target population of the study was found to be 120, through the rao soft sample size was found to be 92 which were the respondents of the study and will be tested, with confidence level of 95% while remaining 5% was considered as error. to collect data a structured quantitative questionnaire was adapted from the prior research with permission and referenced. a mixed methodology was selected for this study. the data collected is analyzed through spss, the cross-sectional approach was used. to test the data each of the questions were separately first analyzed and interpreted and to see the contribution of each variable and contribution to the work performance of investo global employees, pearson's correlation analysis was used to see relationship of variables. the factors which were selected for measuring work environment were employee benefits, supervisors and coworker's support, training and development, adequate workload, physical work environment. the results show all the variables had a significant and positive relationship with employee performance. the most dominating variable out of all was employee benefits as considered by the employees of investo global which effect their work performance greatly.

Johnson, Smith & Anderson (2017) Examine "The Impact of Workplace Environment on Employee Productivity: An Empirical Analysis". Purpose: To explore the relationship between work environment factors and employee productivity. Sample size and sampling method: 500 employees from various industries randomly sampled. Method of analysis is Survey questionnaire analysis and regression analysis. The study finds that there Significant positive relationship between a positive work environment and employee productivity and Conclusions that A positive work environment can enhance employee productivity the study Recommends that Organizations should focus on creating a positive work environment to improve employee productivity.

Lee, Harrison & Patel (2018). Investigate "Work Environment and Employee Engagement: A Cross-sectional Study". Purpose: To investigate the influence of work environment on employee engagement. The study make use of Sample size and sampling method of 800 employees from different organizations, convenience sampling.

Method of analysis was Structural equation modeling. The findings were that there is Positive relationship between a supportive work environment and employee engagement. The study Concluds that a supportive work environment positively impacts employee engagement. Recommendations was that Organizations should foster a supportive work environment to enhance employee engagement.

METHODOLOGY

The research design used for the study is the descriptive survey research method/design. This enables the researcher to generate data for the study and for the test of hypotheses. The study was conducted in Anambra State, Nigeria. Anambra is a state in southeastern Nigeria. The sources of data for this research were primary and secondary data. The primary data for the study were collected through the distribution of questionnaire. The secondary data for the study was generated through data from journals, strategic periodicals, textbooks obtained from libraries, and mainly from the internet.

Population of the Study

The population of the study comprises 34 plastic manufacturing firms existing in the Anambra state, Nigeria. However, Six (6) plastic manufacturing firms were selected for the study (two 2 firms from each of the Zones) by the use of Purposive or judgmental Sampling. Thus, the study population for this research comprises all permanent (Senior and Junior) employees, i.e., the total staff strength of the twenty (6) manufacturing firms selected for the study. The total staff strength of the manufacturing firms selected for the study is 1,310 as shown in table 3.1 below.

Population of the Selected Manufacturing Firms

S/n	Manufacturing Firms	Population	State
1	Jezco plastic segment Nigeria ltd Awka	300	Anambra
2	Precious blood plastic, Nnewi	200	Anambra
3	Innosam plastic, Obosi	220	Anambra
4	Ozalla plastics enterprises ltd, Ubulu-uku	200	Anambra
5	Chinedu plastic industry, Onitsha	200	Anambra
6	Vincent standard plastic industries ltd, Ifite-ukpo	190	Anambra
	Grand Total	**1,310**	

Source: Field Survey, 2024

Sample Size Determination

The sample size for the study was mathematically determined by Godden's (2004) formula. This formula is given as: Infinite population formula.

$$n = \frac{Z^2Pq}{C^2}$$

Where:

n = Sample size

Z = Z-value (E.G., 1.96 for a 95% confidence)

P = Percentage of population picking a choice, expressed as decimal; usually 0.5 is chosen.

C = Confidence interval, expressed as decimal (e.g., 0.04)

$$\text{So, } n = \frac{3.8416\ (0.5)(0.5)}{(0.04)^2} = 600$$

Sample Size Finite Population:

$$\text{New Sample Size, } n = \frac{n}{1 + \frac{(n-1)}{\text{Pop.}}}$$

Pop. = Population (1310)

Thus, substituting in the above equation, we have:

$$n = \frac{600}{1 + \frac{(600 - 1)}{1310}} = \frac{600}{1 + \frac{599}{1310}}$$

$$n = \frac{600}{1+0.457251908396946} = \frac{600}{1.457251908396946}$$

$$= 411.733 = 412$$

Reliability of the Research Instrument

Thus, this study conducted a reliability test by administering 10 copies of the questionnaire to 10 randomly selected respondents across the zone. The result of the Pilot test conducted is shown in Appendix III with their respective Cronbach's Alpha values based on the standard items that were generated with the reliability analysis.

Method of Data Analysis

For the analysis of data, percentages and tables were used. The degree of correlation or relationships between variables was determined by

the use of linear Regression Analysis. Thus, the hypotheses were tested by linear regression analysis through the use of SPSS Computer Package Version 23.

DATA PRESENTATION, RESULT AND DISCUSSION

Demographic Profile of Respondents

Gender Distribution

Gender	Frequency (n)	Percentage (%)
Male	247	61.1%
Female	157	38.9%
Total	**404**	**100%**

Out of the 404 respondents, 247 (61.1%) were male, while 157 (38.9%) were female. This shows that male respondents were more represented in the workforce of the manufacturing firms surveyed, possibly indicating a gender imbalance in the sector.

Marital Status

Marital Status	Frequency (n)	Percentage (%)
Married	198	49.0%
Single	166	41.1%
Divorced	27	6.7%
Widowed	13	3.2%
Total	**404**	**100%**

The majority of respondents were married (49.0%), followed by single individuals (41.1%). A smaller portion was divorced (6.7%) and widowed (3.2%). This indicates a relatively mature and stable workforce in the manufacturing firms, which may contribute to job retention and commitment.

Age Category

Age Bracket	Frequency (n)	Percentage (%)
20 – 30 years	104	25.7%
31 – 40 years	162	40.1%
41 – 50 years	89	22.0%
51 – 60 years	49	12.1%
Total	**404**	**100%**

The largest age group among the respondents is 31–40 years (40.1%), followed by 20–30 years (25.7%). This suggests that the workforce is largely youthful to middle-aged. A moderate

number (22.0%) fall within the 41–50 years range, while only 12.1% are between 51–60 years, indicating fewer older workers in the firms surveyed.

Educational Qualification

Qualification	Frequency (n)	Percentage (%)
WAEC/NECO/GCE	52	12.9%
Diploma (ND/NCE)	96	23.8%
Bachelor's Degree (HND, B.Sc)	154	38.1%
Master's Degree (PGD, MBA, M.Sc, M.A)	68	16.8%
Doctoral Degree (Ph.D, D.Litt, D.Sc)	17	4.2%
Others (Professional/Foreign Certificates etc.)	17	4.2%
Total	**404**	**100%**

The majority of respondents hold a Bachelor's degree (38.1%)**,** followed by those with a Diploma (23.8%) and Master's degree (16.8%)**.** Only a small portion has a Doctoral degree (4.2%) **or** other professional qualifications (4.2%)**.** This shows that the workforce in the manufacturing firms is generally educated, with a strong representation at tertiary level

Working Experience

Years of Experience	Frequency (n)	Percentage (%)
0 – 5 years	108	26.7%
6 – 10 years	136	33.7%
11 – 15 years	91	22.5%
16 – 20 years	43	10.6%
21 years or longer	26	6.4%
Total	**404**	**100%**

Respondents with 6–10 years of experience were the most represented (33.7%), followed by those with 0–5 years (26.7%) and 11–15 years (22.5%)**.** Those with 16 years or more experience formed a smaller proportion (17.0%). This suggests that the workforce is moderately experienced, with a strong concentration of early- to mid-career professionals.

Level of Management

Management Level	Frequency (n)	Percentage (%)
Top Management	33	8.2%
Middle Management	84	20.8%
Operational Management	124	30.7%

Management Level	Frequency (n)	Percentage (%)
Operatives	163	40.3%
Total	**404**	**100%**

The largest proportion of respondents was operatives (40.3%)**,** followed by operational managers (30.7%)**.** Middle-level managers made up 20.8%**,** while top management accounted for only 8.2%**.** This reflects the typical hierarchical structure in manufacturing firms, where operational staff constitutes the bulk of the workforce.

Test Hypotheses

Hypothesis One (Ho_1): **Safety of work has no significant relationship with employee engagement in manufacturing firms in Anambra State, Nigeria.**

4.2.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.643	0.413	0.411	0.512

The R value of 0.643 indicates a moderate to strong positive correlation between safety of work and employee engagement. The R Square value of 0.413 suggests that approximately 41.3% of the variation in employee engagement can be explained by the perceived safety of work environment. The adjusted R square (0.411) confirms that this model is a good fit with minimal error.

ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	84.231	1	84.231	283.54	0.000
Residual	119.456	402	0.297		
Total	203.687	403			

The F-ratio of 283.54 and **a** p-value of 0.000 (which is less than 0.05) indicate that the model is statistically significant. This means that safety of work has a significant effect on employee engagement. Therefore, the null hypothesis is rejected**.**

Coefficients Table

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	1.215	0.134		9.06	0.000
Safety of Work	0.684	0.041	0.643	16.83	0.000

The unstandardized coefficient (B = 0.684) shows that for every unit increase in safety of work, employee engagement increases by 0.684 units**.** The p-value (.000) confirms this is statistically significant. Therefore, improving safety policies, measures, and practices in the workplace would positively and significantly boost employee engagement**.**

Hypothesis Two (Ho_2): Supervisor support has no significant relationship with employee motivation in manufacturing firms in Anambra State, Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.591	0.349	0.347	0.534

With R = 0.591, there exists **a** moderate positive relationship between supervisor support and employee motivation. The R Square of 0.349 implies that 34.9% of the variance in employee motivation can be explained by the level of support they receive from supervisors.

ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	74.823	1	74.823	217.66	0.000
Residual	138.115	402	0.344		
Total	212.938	403			

The F-statistic of 217.66 and p-value of 0.000 show that the regression model is statistically significant. Hence, supervisor support significantly affects employee motivation, and we reject the null hypothesis**.**

Coefficients Table

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	1.143	0.121		9.44	0.000

Predictor	B	Std. Error	Beta	t	Sig.
Supervisor Support	0.662	0.045	0.591	14.75	0.000

For every one-unit increase in supervisor support, employee motivation increases by 0.662 units, indicating a strong and statistically significant relationship**.** Hence, supervisor encouragement, communication, and guidance play a crucial role in enhancing motivation levels of staff.

Hypothesis Three (Ho_3): Workload has no significant relationship with work-life balance in manufacturing firms in Anambra State, Nigeria.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.478	0.229	0.227	0.588

With an R value of 0.478, the result shows a moderate negative relationship between workload and work-life balance. The R Square of 0.229 implies that 22.9% of the variation in work-life balance can be attributed to workload.

ANOVA Table

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	58.107	1	58.107	119.33	0.000
Residual	195.852	402	0.487		
Total	253.959	403			

The model is statistically significant **(**$p = 0.000 < 0.05$**)**, and the F-statistic of 119.33 confirms that workload has a significant impact on work-life balance. Thus, we reject the null hypothesis**.**

Coefficients Table

Predictor	B	Std. Error	Beta	t	Sig.
(Constant)	2.005	0.128		15.67	0.000
Workload	-0.511	0.047	-0.478	-10.93	0.000

A negative B value (-0.511) indicates that as workload increases, work-life balance decreases significantly**.** This means that heavier workloads put employees at risk of stress, burnout, and poor work-life integration.

Discussion of finding

Safety of Work and Employee Engagement

Safety of work has a significant positive effect on employee engagement ($R = 0.643$; $p < 0.000$). For every unit increase in safety, engagement increases by 0.684 units. This finding aligns strongly with Maryam Saleem (2017), who found that workplace safety significantly effect employee productivity in the manufacturing sector. Similarly, Tahira Nazir (2016) noted that job security and support (which includes safe work environments) play a crucial role in improving organizational performance. In manufacturing settings like in Anambra State, ensuring safety doesn't just prevent accidents—it directly boosts employee morale, engagement, and output. This supports the call by Saleem (2017) and Nazir (2016) for prioritizing ergonomics and a risk-free work environment.

Supervisor Support and Employee Motivation

There is a statistically significant positive relationship between supervisor support and employee motivation ($R = 0.591$; $p < 0.000$). A unit increase in support leads to a 0.662-unit increase in motivation. This resonates with Thibault Garcia (2020), who emphasized the role of communication and recognition (often facilitated by supervisors) in the hospitality sector. Tahira Nazir (2016) also stressed management support as a vital contributor to productivity. Supervisor support fuels intrinsic motivation, leading to more committed and proactive employees. Especially in environments where pressure is high, like manufacturing, supportive leadership bridges the gap between expectation and performance.

Workload and Work-Life Balance

Workload has a significant negative effect on work-life balance ($R = -0.478$; $p < 0.000$). Increased workload reduces work-life balance by 0.511 units. This aligns closely with findings from Tina Šarić (2018) and Thibault Garcia (2020), who identified *work-life balance* as a critical factor influencing productivity in IT and hospitality sectors. Nazir (2016) also identified work-life balance as vital for organizational productivity in developing countries. Overburdened employees face stress and burnout, leading to disengagement. Manufacturing firms must take note of this and implement policies that manage workload, possibly by optimizing staffing and shift rotations.

CONCLUSION

The study concludes that workplace conditions and support systems significantly affect employee engagement, motivation, satisfaction, and well-being in the manufacturing sector in Anambra State. Safe work environments promote higher engagement; supportive supervisors enhance motivation; heavy workloads reduce work-life balance; and attractive work incentives increase job satisfaction. These results underscore the need for management to invest in policies that create a safer, more supportive, balanced, and rewarding work environment to optimize employee productivity and organizational success. Based on

the findings of this study, the following recommendations are proposed:

i. Manufacturing firms should implement and maintain robust health and safety protocols, provide personal protective equipment, and regularly train employees on safety practices to enhance engagement.
ii. Manufacturing firms train supervisors in leadership, communication, and conflict resolution to foster a more supportive environment that boosts employee motivation.
iii. Manufacturing firms adopt flexible scheduling, reasonable shift rotations, and staff redistribution strategies to prevent employee burnout and improve work-life balance.

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