

Manpower Development and Productivity in Nigerian National Petroleum Company Gas and Power Investment Services (NGPIS) Abuja, Nigeria

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Received: 12 March 2026 Revised: 16 March 2026 Accepted: 18 March 2026 Published: 20 March 2026

Abstract - The productivity of employees is a key driver of organizational success, particularly in the energy sector where competition is intense, and operational efficiency is crucial. The main objective of this study is to examine the effect of manpower development on productivity in NNPC Gas & Power Investment Services (NGPIS) Abuja, Nigeria. A descriptive research design was employed, utilizing a structured questionnaire distributed to 150 employees of NGPIS. Data was analyzed using regression via the Statistical Package for Social Sciences (SPSS). The results indicated that manpower development (employee retention rates, skills assessment and career progression) had positive and significant effect on productivity (efficiency) in NNPC Gas & Power Investment Services. Specifically, skill assessments (SKA = 0.482) had the most significant impact on productivity, followed by career progression (CAP = 0.334) opportunities while retention rate (RER = 0.139) had the least significant effect on employee efficiency. The findings highlight the need for the company to invest more in regular skill evaluations and provide clearer career advancement pathways to improve job satisfaction and organizational performance. The study concluded that effective retention strategies, skills assessment, and career progression opportunities are critical for enhancing employee productivity at NNPC Gas & Power Investment Services. The study recommended that NNPC Gas & Power Investment Services should focus on improving retention strategies, investing in continuous skill assessments, and ensuring that career progression opportunities are clearly communicated and accessible to all employees. These practices will contribute to the long-term success and competitiveness of the organization in the energy sector.

Keywords - Efficiency, Career Progression, Manpower Development, Productivity, Retention Rate, Skills Assessment.

I. INTRODUCTION

The business environment is rapidly changing and constantly evolving as such the productivity of employees is a key driver of organizational success. High levels of productivity is at the centre of attention for most organisations across industry sectors. To sustain business operations whilst remaining competitive, especially in a complicated industry such as the energy sector, organizations have to invest heavily in their manpower or human capital development. This can be achieved primarily through training (Soliu, 2021). NNPC Gas & Power Investment Services, a major player in the Nigerian energy industry, is not any different. The organization depends on talented workers to facilitate its operations towards attaining its strategic goals.

However, the efficiency and effectiveness of its employees depend on a variety of factors such as retention rates, skills assessment and career progression. Manpower development programs are key to developing the competencies of employees to the level that they can deliver in their required roles and responsibilities even as it becomes more challenging. Oshishepo et al. (2021) stated that enhancing the workforce of an organization is a function of human resources investment resulting in increased performance and productivity of employees as well as minimization of the declining rate of employees' turnover. In NNPC Gas & Power Investment Services,

training programs are developed with the view to implementing solutions to bridge identified skill gaps and also solve future skills problem while also preparing the work force to cope with technological changes in the industry. Moreover, effective training programs facilitate the satisfaction and motivation of employees, which is key to long term productivity (Urbancová et al., 2021).

The Manpower Development Programs include such strategies as formal education system, vocational training framework, mentoring strategy and career progression strategy. Manpower planning, as brought out by Okon et al., (2022), is a crucial organizational activity that helps the organizations coordinates its workforce to future demands, and it puts qualified personnel in the appropriate position at the right time. This process allows organizations to foresee shortcomings in skills and make the relevant training programs to fill in those gaps and the workforce abilities would be in line with the strategic aims of the organization.

Instead of using short-term staffing solutions, organizations should investigate long-term manpower growth strategies to enhance sustainability, bringing growth and goals. Nevertheless, it is not easy to execute successful manpower development programs. Funding, organizational support, and infrastructure are most often limiting factors for the success of these programs. According to Zakari (2023), many organizations, especially in developing countries find it difficult to finance and deal with logistic challenges to effectively implement training and development programs. Zehra (2025) noted that organizations seeking to survive in competitive global markets need to continually invest in human capital to remain market competitive. Organizational leaders have to uphold effectiveness and address issues in designing as well as implementing manpower development programs for them to deliver improved employee productivity and organizational success.

Despite the acknowledgment of the necessity of employee retention, skills assessment, and career progression in achieving efficiency of organizational processes, NNPC Gas & Power Investment Services is in an industry characterized by intense competition. It also encounters a variety of obstacles that affect the productivity of its workforce (Nwaoburu & Mark, 2025). Employee turnover continues to be a major challenge for the organization as it finds it difficult to retain skilled personnel. Turnover rates are high and thus there is high recruitment costs and loss of organizational knowledge, thus operations are hampered and productivity adversely affected. Moreover, absence of system to advance careers may lead to employees being unsatisfied from the job and losing motivation, hence affecting levels of productivity of employees (Mengistu & Mahesh, 2022).

In addition to that, the lack of a consistent evaluation of employee skills has created skills gaps within the employee pool, which may bring about inefficiencies and poor performance in some parts of the organization. Although training programs are available, it is not always possible to train the skills requirements of people without assessing their competency (Nwapi, 2023). It becomes hard to determine the effectiveness of such programs. Lack of post-training support and follow-up evaluations as well as the lack of long-term impact of training initiatives also severely limits productivity levels as employees cannot use newly acquired skills in their roles effectively.

Such gap in evaluation systems means lost chances for organizational growth and improvement of the employees. Given these challenges, this study therefore seeks to explore the relationship between manpower development and productivity using parameters such as retention rates, skills assessment and career progression as it affects the efficiency of employees in NNPC Gas & Power Investment services. In examining these factors, the study hopes to generate practical actionable insights to help the organization improve its human resource management strategies, workforce efficiency and productivity at the organization level. Successful tackling of these challenges is essential for the long-term prosperity of NNPC Gas & Power Investment Services.

The main objective of this study is to examine the effect of manpower development on productivity in Nigerian National Petroleum Company Gas & Power Investment Services (NGPIS) ABUJA, Nigeria. However, the specific objectives are to examine the extent to which retention rates, skills assessment and career progression affect efficiency in NNPC Gas & Power Investment Services. As such the following hypotheses were formulated;

- HO1: Retention rates has no significant effect on efficiency in NNPC Gas & Power Investment Services.
 HO2: Skills assessment has no significant effect on efficiency in NNPC Gas & Power Investment Services.
 HO3: Career progression has no significant effect on efficiency in NNPC Gas & Power Investment Services.

II. LITERATURE REVIEW

This section discusses the various concepts of the variables used in the study. These include manpower development and productivity as well as their proxies comprising retention rates, skill assessment, career progression and efficiency.

A. Concept of Manpower Development

Manpower development refers to all the activities, processes, and strategies used by an organization, industry, or country to improve the skills, knowledge, attitudes, and capacity of its human workforce. It ensures that employees are well-prepared to perform their current jobs effectively and to meet future organizational needs. Human resource management places primary attention on manpower development as it is essential for the workforce of any organization to acquire new skills and knowledge enabling better job performance.

It enhances worker capabilities through educational strategies which develop abilities for achieving organizational goals. This can be attained via a variety of educational activities such as critical job training, workshops and seminars alongside formal courses and training sessions form this process. These activities prepare employees for both their current tasks and future assignments (Burhan Ismael et al., 2021). Manpower development serve organizational advantages in addition to employee growth by leading to better performance together with reduced employee turnover and increased customer satisfaction. Organizations stay competitive through ongoing training investments because this allows their workers to adapt to new technology trends and market requirements.

Employees develop innovative ideas inside the organization when training programs provide them guidance about modern industry trends. Excellent training programs overcome both short-term skill deficiencies while simultaneously building employee readiness for future leadership positions within the organization (Urbancová et al. 2021). Manpower development is important for increasing productivity of workers through the improvement of the skills, knowledge and competencies required to deliver organizational goals. Manpower development as expressed by Mohammed et al., (2022), is important for improving the performance of an organization because it inculcates in the staff appropriate competencies and information needed for excelling in their jobs.

It serves a dual purpose: It is conducive to personal development and development of flexi teams that can succeed coping with changes in the dynamic business environment. Once employees are appropriately developed, they add a lot to organizational success as they drive their individual performance and impact other overall business goals. The rate of manpower development directly thwarts both retention and employee engagement. When employers put investment into employee development, they send a message on the importance of the workers' development and career relations hence job satisfaction and loyalty.

Mengistu and Mahesh (2022) show evidence that highly developed manpower in labor-intensive industries including construction will benefit the company by cutting down on operational costs while improving its efficiency. Through the development of skills among employees, organizations equip not only employees to meet current positions' requirements but also equip employees to deal with future marketplace challenges to create a population of more adaptable and resilient employees.

The activities of manpower development programs aim to enhance employee abilities for skill acquisition alongside knowledge retention to boost organizational performance. Formal training stands as a widespread manpower development method that teaches employees particular abilities for workplace effectiveness. Tools such as workshops and seminars accompany official training options which aim to strengthen employee skills across technical and interpersonal capability areas.

Zhu et al. (2024) show how successful training initiatives lead to organizational accomplishments through proper employee readiness for their duties. Through coaching and mentoring programs staff members access senior executives to learn through customized feedback which builds their knowledge base (Antunes and Pinheiro, 2020). Manpower development has played an undeniable role in improving employee performance in the sense that the duties of the employees are fully enhanced by acquiring the skills and competencies required for their duties. With sustained training and development initiatives, organizations can create a culture of development at work which will ensure both personal and professional development. This process enhances the employee's technical and soft skills in turn enhancing them to be more efficient and increase their work performance.

The effects of manpower development of an organization's efficiency are inconspicuous and beyond doubt considering the fact that manpower development improves performance of the individual workers as well as the overall productivity of an organization (Hopkins 2020). Employees trained regularly are better prepared to take up their duties responsibly and to adjust to the high technological changes and these results in better performance of the organization. The Nigerian oil sector has seen the implication of manpower development in improving the performance of employees being discussed by Arubayi et al., (2020) who note that individual Absorptive Capacity is the capability of an employee to acquire, assimilate, and adopt new knowledge plays a great role in influencing performance.

Their study puts forward a view that the success of human resource development (HRD) initiatives lies largely on the willingness and the ability of employees to assimilate new skills and knowledge. This consequently affects their ability to carry out tasks in a more efficient manner and to deliver the goals of the organization. By continuing to push for investment into HRD practices, this empowers employees to be more successful at their job thus resulting in more effective organization-wide success.

B. Retention Rates

Retention rate refers to the percentage of employees who remain with an organization or institution over a specific period of time. In human resource management, employee retention rate measures how well a company is able to keep its workers from leaving. Employee retention is a critical factor in making organizations receives the desired returns from training and development investments. The research work by Gabriel and Rowland (2020), highlights the need to bring back skilled workers in an effort of curbing recruitment costs as well as maintaining organizational knowledge.

The more long-term the employees stay in an organization, they acquire personal knowledge and skills that lead to long-term productivity. On the other hand; high turnover rates may cause interruption to work processes, decline in morale, and loss of organizational know how, which may also weaken the productivity of the organization. Retention rates are indicators of employee satisfaction as high retention means employees are happy and motivated. Keeping employees reduces the need to constantly hire and train new workers. Low turnover increases team cohesion and continuity and enhances company reputation as companies with high retention rates attract better talent and improves productivity.

C. Skills Assessment

Skills assessment is the process of evaluating an individual's abilities, knowledge, competencies, and behavior to determine their level of proficiency in specific tasks or job roles. It helps employers understand what employees can do, what they need to improve, and how best to utilize their strengths. Skill assessments form another important part of the process of workforce development. These assessments assist organizations in diagnosing skill gaps and determine training programs which suit specific needs of the employees.

Skill Assessments, according to Ashmond et al. (2022), help organizations to maximize its training resources by determining which areas will have the most significant influence on the employee plans. In NNPC Gas & Power Investment services, continual skill appraisal helps to introduce employees to competencies needed to do their jobs excellently and add value to the success of the organization. Through skills acquisition, workers are

trained to gain new technical and soft skills needed to perform tasks effectively and efficiently. This is because employees are exposed to updated information, modern tools, and new methods related to their job roles

D. Career Progression

Career progression is the other vital factor that affects the motivation and performance of employees. Organisations that have clear career paths are likely to retain motivated high performing employees. Career progression opportunities towards employee job satisfaction and loyalty to organization are an improvement in overall productivity (Aziedjo, 2024). In NNPC Gas & Power Investment Services opportunities for growth and development in the organization itself are critical as far as retaining the skilled and committed work force of the company given that motor of success of the company is the work force.

Manpower development supports promotions, role expansion, and long-term career progress. Organizations through methods of manpower development such as On-the-Job Training (OJT) characterised by coaching, job rotation, apprenticeship or Off-the-Job Training comprising work done outside the workplace such as workshops, seminars & conferences, classroom-based learning, simulation training are able to achieve set objectives. Other methods include vocational and technical education as well as professional development programs such as certification courses, leadership development and management training.

E. Concept of Productivity

An assessment of manpower development programs of NNPC Gas & Power Investment Services is important to understanding their effective contribution to workforce productivity and organizational efficiency. As Nwaoburu and Mark (2025) note, the effectiveness of public-private partnership, including such partnerships within national oil corporations such as NNPC, rests on the appropriateness of their human resource development strategies. At NNPC Gas & Power Investment Services, review of manpower development exercise is ongoing to align the training initiative with the strategic plans of the corporation. Assessments base on key performance indicator such as employee engagement, skill development and overall performance improvement. Regular assessment allows the organization to learn both its strengths and weaknesses which in turn guides their future investment in training and an adjustment to the existing program.

In addition to this, Igwe et al., (2024), discuss the significance of service delivery programs in NNPC, and their contribution to the increase in employee group productivity and organizational performance. Evaluation of such programs is accompanied by analysis of service delivery results including such aspects as quality of work produced, efficiency and level of customer satisfaction within the energy sector. Through the constant blowing of the effectiveness of their development program, NNPC Gas and Power Investment Services helps it employees acquire needed skills and competencies to enable them to capture the highly competitive and changing energy market. This also allows the identification of skills gaps and ensures that there are targeted interventions that will enhance employee performance and in turn organizational success.

Emeke et al. (2024) also provide reasons to support the need for the effective evaluation by highlighting the possibility of non-associated gas reservoirs of unlocking the future energy demands of Nigeria. As these resources are assessed in their potential contribution to the energy sector so must the effectiveness of training and development initiatives be measured for their contribution to organizational productivity. It is imperative when studying manpower development programs at NNPC Gas & Power Investment Services to not only test the return on training expenditure measures but also to have the workforce adequately prepared for the new challenges ahead, which include a shift to more sustainable energy solutions.

Effective evaluation systems give good feedback that can be used to improve the methods of training, individual worker efficiency, and the long-term success of the organization. The future of the manpower development at NNPC Gas & Power Investment Services is inextricably linked to the developing needs of the Nigerian petroleum industry and the increasing drive to a world energy transition. Dokpesi and Godwin (2024) notes the dear role NNPC has played in Nigeria petro-business landscape since the 1970s. In the future, it becomes critical for NNPC Gas & Power Investment Services to bolster its workforce abilities to respond to new trends in energy and new technology and increased focus on sustainability. With the movement in the energy

sector to more sustainable and low carbon alternatives, NNPC must train human capital to power innovation in such areas as renewable energy and energy efficiency. This move needs an employee base which is not only technically competent, but also adaptable and equipped with ability to manage new technological systems and industry regulations.

Given the Petroleum Industry Act (PIA) and reforms following it, Promise and Agunia (2023) focus on the legal and operational challenges that NNPC Limited experience as it prepares itself for a competitive future in the industry of oil and gas. The PIA's implementation provides a rare opportunity for NNPC Gas & Power Investment Services to reform its manpower development practices to respond to emerging regulatory requirements and changes in the market environment. Among other things, this may mean the development of training programs for sustainable compliance with environmental standards, corporate governance, corporate social responsibility, all of which are becoming more important for industry players.

The future of manpower development of NNPC Gas & Power Investment Services will probably involve a great emphasis on having a flexible workforce that will be able to deal with these legal and regulatory changes, and will be used in a competitive marketplace in the world. Dokpesi and Godwin (2024) talk of the prospects for the oil and gas industry in Nigeria under the Petroleum Industry Act, and they explain that implementation of the act will make the industry more transparent and more accountable. For NNPC Gas & Power Investment Services this change requires a workforce that is not only skilled but one that is capable of coping with new operational structures and governance models.

With the growth of the industry, NNPC has to invest in the programs of constant learning and the development of the leading potential among employees to help them lead the company during this transformation. With this, the future of manpower development at NNPC Gas & Power Investment Services will therefore depend on creating a learning culture in the organization that provides adaptability, innovation and long-term sustainability, thus ensuring that the company will continue to be a major player in the energy field in Nigeria.

Employee retention and career advancement are important building blocks to productivity in organizations; this includes NNPC Gas & Power Investment Services. Career development has a large impact on the engagement levels of the employees and thus has a high retention rate and better performances of the jobs. Aziedjo (2024) notes the positive relationship that exists between career development initiative and employee retention. When employees have a clear career path, they are more likely to continue working in an organisation as they can see the way ahead in an organisation. This feeling of improvement increases worker morale, commitment, and bottom line, in turn, as staff members are feeling appreciated, and eager to contribute their best towards the success of the organization.

Retention strategies are as important in improving performance of employees. Zehra (2025) says that employee benefits including competitive salaries, bonuses and the like, directly impact on retention and, consequently, workability. In the prevailing environmental context, where NNPC Gas & Power Investment Services operate, it is important that the employees are not only given the proper training but also incentives to stay with the company so as to keep the workers into skilled and committed hands. A high level of employee turnover can cripple operations and boost recruitment cost while reducing organizational knowledge ultimately affecting productivity. Consequently, organizations must develop a work environment where employees wish to work long term, thereby encouraging both loyalty and sense of ownership when it comes to their roles.

Besides, Vakouftsis (2024) explores the mechanisms behind driving employee loyalty, which he perceives that career growth is among the best strategies to retain the staff. By providing avenues for elevating career stage, whether through promotion, lateral transfers or in the form of leadership development programs, NNPC Gas & Power Investment Services can build a strong retention mechanism not only to increase satisfaction with work, but also to achieve superior outcomes at the level of the organization. Jacob (2020) also points out that the lack of career progression opportunities is the greatest factor in poor employee retention. When employees do not feel challenged in their job positions, they will look for other jobs elsewhere and hence depreciating the

organization’s productive capacity of quality. Thus, it is an important strategy of improving employee retention as well as the performance by investing in career development programs.

F. Efficiency

Efficiency refers to the ability to accomplish a task or produce an outcome using the least amount of resources such as time, money, effort, or materials while still achieving the desired result. It is about doing things right and focuses on minimizing waste. It measures how well inputs (resources) are converted into outputs (results) (Ozkan-Ozen & Kazancoglu, 2022). A worker who completes tasks faster without reducing quality shows high efficiency.

A business that reduces production costs while maintaining output improves efficiency. Efficiency can be operational which is concerned with improving internal processes, it can also be viewed in terms of cost with the goal of achieving goals with minimum financial resources as well as in forms of time and energy with the aim of completing tasks within the shortest time possible and using less energy to perform the same work.

G. Theoretical Framework

The study is anchored on the Human Capital Theory which was formally developed by economists Theodore Schultz and Gary Becker in the 1950s and 1960s. The theory posits that workers represent organizational value because their skills and expertise drive operational success. This theory views employees as assets whose value can be enhanced through investment in training, education, and development (Musoka, 2022).

Human capital theory suggests that workforce planning should focus on long-term employee development and retention, as a skilled workforce drives productivity and competitive advantage. Organizations use this theory to justify investments in employee development programs, which is a critical part of planning for future skills requirements and succession. The development of human capital occurs through education combined with training and experience (Soliu, 2021).

III. MATERIALS AND METHODS

A structured questionnaire was used as the method of data collection for this study. Also, a descriptive research design was used because it allowed the researcher to collect information from employees of NNPC Gas & Power Investment Services Abuja, Nigeria to ascertain the effect of manpower development on their productivity. The population of the study was 150 employees of NNPC Gas & Power Investment Services Abuja, Nigeria. As such, census sampling technique was used to ensure that every individual within the population is included in the study, providing a comprehensive and accurate representation of the entire group. Also, the census sampling technique is best suitable for this study because of the relatively small size of the population. Convenience sampling technique was used to reach the targeted population. Data was analysed and interpreted using descriptive (mean, frequencies and percentages) and inferential statistics (multiple regression) via the Statistical Package of Social Sciences (SPSS) Version 27.

A. Model Specification

A multiple regression model was employed in evaluating the effect of manpower development on productivity. This helped to show the relationship between the two variables. The Independent variable manpower development was measured using retention rates, skills assessment and career progression while the dependent variable productivity was measured using efficiency. The regression equation is displayed below:

$$Y = f(X_1, X_2, \dots, X_n) \dots \dots \dots \text{equation 1}$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \dots \dots \dots X_n$$

Where:

Y = Dependent Variable of the study

X1Xn = Independent variable of the study

β = Constant

α = Intercept

ϵ = Error terms

By putting the variable of this current study into equation 1 above, we have:

$$PRO = f(RER, SKA, CAP) \dots\dots\dots (2)$$

Where:

PRO = Productivity (measured as efficiency)

RER = Retention Rates

SKA = Skills Assessment

CAP = Career Progression

From equation (2), the model was further expressed as:

$$PRO = \beta_0 + \beta_1RER + \beta_2SKA + \beta_3CAP + \epsilon \dots\dots\dots (3)$$

IV. RESULTS AND DISCUSSION

This section presents data related to manpower development and employees productivity in NNPC Gas and Power Investment Services Abuja, Nigeria.

Table 1. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
RER	150	1	5	3.98	0.973	-1.291	0.198	1.864	0.394
CAP	150	1	5	3.74	0.958	-0.847	0.198	0.921	0.394
SKA	150	1	5	3.46	1.103	-0.262	0.198	-0.685	0.394
EMP	150	1	5	2.96	1.117	0.08	0.198	-0.603	0.394
RER – Retention Rate					CAP – Career Progression				
SKA – Skill Assessment					EMP – Employee Productivity				

The descriptive statistics in Table 1 reflect responses from 150 participants across four key variables: Retention Rate, Career Progression, Skills Assessment, and Employee Productivity. On average, the Retention Rate scored highest (Mean = 3.98), followed closely by Career Progression (Mean = 3.74), while Employee Productivity had the lowest mean (2.96), indicating relatively lower agreement or satisfaction in this area. The standard deviations across variables range from 0.958 to 1.117, suggesting moderate variability in responses. Notably, all variables are measured on a 5-point scale, with the minimum and maximum responses for each ranging from 1 to 5, confirming that respondents utilized the full range of options.

Skewness and kurtosis values provide insight into the shape of the distribution. Retention Rate and Career Progression are negatively skewed (-1.291 and -0.847 respectively), indicating that more respondents rated these aspects highly. Additionally, the positive kurtosis values for these two variables (1.864 and 0.921) suggest a more peaked distribution, implying a concentration of responses around the mean. In contrast, Skills Assessment and Employee Productivity show near-normal to slightly platykurtic distributions, with lower skewness and negative kurtosis, especially for Skills Assessment (kurtosis = -0.685). This implies more evenly

spread or flatter responses. But the sum the results up, the results suggest employees are generally more satisfied with retention and career progression than with productivity and skill assessment processes.

A. Test of Hypotheses (Multiple Regression Analysis)

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.927 ^a	0.86	0.857	0.422	0.86	299.411	3	146	0

a. Predictors: (Constant), RER, CAP, SKA

RER – Retention Rate **CAP – Career Progression**

SKA – Skill Assessment **EMP – Employee Productivity**

The model summary, Table 2, presents the results of a multiple regression analysis where Retention Rate, Career Progression, and Skills Assessment were used to predict an outcome of Employee Productivity at NNPC Gas & Power Investment Services. The model shows a very high R value of 0.927, indicating a strong positive correlation between the combined predictors and the dependent variable. The R Square value of 0.860 means that approximately 86% of the variance in the dependent variable is explained by the three independent variables. This is a substantial amount, suggesting that the model has a very good fit. The Adjusted R Square of 0.857 confirms the robustness of the model even after accounting for the number of predictors, and the standard error of the estimate (0.422) indicates a relatively low average distance between the observed and predicted values. The F Change statistic of 299.411 with a significance value of 0.000 shows that the overall model is statistically significant. These results strongly support the conclusion that Retention Rate, Career Progression, and Skills Assessment are important predictors of employee productivity at NNPC Gas & Power Investment Services.

Table 3. ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	159.788	3	53.263	299.411	.000 ^b
	Residual	25.972	146	0.178		
	Total	185.76	149			

a. Dependent Variable: EMP

b. Predictors: (Constant), RER, CAP, SKA

The ANOVA, Table 3, further reinforces the statistical significance of the regression model used to predict Employee Productivity based on Retention Rate, Career Progression, and Skills Assessment. The Regression Sum of Squares (159.788) is substantially larger than the Residual Sum of Squares (25.972), indicating that most of the variation in Employee Productivity at NNPC Gas & Power Investment Services is explained by the model rather than by unexplained error. With 3 degrees of freedom for the regression and 146 for the residual, the Mean Square for the regression (53.263) is significantly higher than that of the residuals (0.178). The F-statistic of 299.411 and a p-value of .000 demonstrate that the overall model is highly significant. In essence, the ANOVA results confirm the model's effectiveness and indicate that the independent variables collectively provide a strong explanation for the variability in employee productivity levels at NNPC Gas & Power Investment Services.

Table 4. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
	1	(Constant)	-0.943			0.158		-5.981
	RER	0.159	0.089	0.139	1.793	0.005	-0.016	0.335
	CAP	0.338	0.083	0.334	4.049	0.000	0.173	0.503
	SKA	0.562	0.101	0.482	5.567	0.000	0.362	0.761

a. Dependent Variable: employee productivity

The coefficients table shows the individual contributions of Retention Rate, Career Progression, and Skills Assessment to predicting Employee Productivity. The constant (intercept) is -0.943 and statistically significant ($p = .000$), indicating that when all predictors are at zero, the predicted employee productivity score would be below the minimum of the 1–5 scale, which may be interpreted as a statistical artifact rather than a practical outcome. The most influential predictor is Skills Assessment, with the highest standardized beta coefficient ($\beta = 0.482$) and a highly significant p-value ($p = .000$). This suggests that better skills assessment is strongly associated with higher employee productivity and NNPC Gas & Power Investment Services. Career Progression also shows a strong and significant positive effect ($\beta = 0.334$, $p = .000$), indicating that opportunities for advancement contribute meaningfully to productivity levels. Retention Rate, while positively associated ($\beta = 0.139$), has a p-value of 0.005, making it statistically significant at the 0.05 level, and its confidence interval (-0.016 to 0.335). Therefore, the findings emphasize Skills Assessment, retention rate and Career Progression as critical drivers of employee productivity at NNPC Gas & Power Investment Services.

B. Discussion of Findings

The result of this study highlights the relevance of the different employee-related factors such as retention levels, career advancement, skill evaluation and their productivity in the NNPC Gas & Power Investment Services. These findings can be compared to the literature on work force development, and this has shown that, by providing the employee with a right atmosphere to develop their skills, to upgrade their careers, and to feel that they are an essential part of the organization, they will become more productive and satisfied in their jobs. The findings indicate that there is a strong impact and a positive correlation between the rate of employee retention and productivity. This goes in accordance with the enshrined concept that a stable labour force is imperative to high levels of productivity.

Retained employees are individuals who can be very knowledgeable and experienced in their jobs and this can benefit the company as well as lead to better working processes and efficiency. In NNPC Gas & Power Investment Services, high retention rate is likely to provide continuity of work, low turnover expenses and enable building up of organizational knowledge hence providing a fruitful setting. As the survey outcomes demonstrate, the skill development opportunities and employee engagement and empowerment satisfaction factors contribute to the retention significantly by raising the level of employee job satisfaction and concern about the company goal. Also, the level of significance that skill assessment plays in motivating performance of employees is particularly portrayed in this paper. Skill assessment was useful to a large proportion of the employees (72%) with a good percentage of them agreeing that assessment had enabled them to become better performers.

The results of this are in line with the theory that regular and constructive feedback that will be provided upon the skill assessment could be of great incentive to employee motivation and increase their productivity. The findings indicate that when the employees are given specific feedback on their strengths and areas which they need to grow, they are in a better position to establish achievable targets and improved on their performance. Moreover, multiple regressions revealed that the most important factor that determines the employee

productivity in the organization was the skills test. This is a reminder of the importance of having on-going skill development programmes and why organisations should invest in effective evaluation mechanisms that generate meaningful feedback to the employees.

Finally, the importance of career growth also emerged as another factor that determines employee output. The tendency of improvement in the career progression opportunities has a high degree of association with the overall motivation to remain and excel in the jobs. As indicated by the study, a relatively high number (82%) of employees consider the availability of opportunities to advance their careers as significant to enhancing their job performance and motivation. The results correspond with the Motivation-Hygiene theory by Herzberg, according to which, a chance of promotion and personal development are major motivational factors among the employees.

It remains evident that this is acknowledged by the NNPC Gas & Power Investment Services since the employees gave positive feedback about the presence of career expansion opportunities. Nevertheless, it is worth noting that a group of the workforce (26%) is being neutral or unsatisfied with career growth opportunities which indicate the possibility of improvement associated with the definition of clearer career paths and the awareness could be increased about the career growth opportunities.

V. CONCLUSION

The study concluded that employee retention, skill assessments, and career progression opportunities are critical factors in enhancing employee productivity at NNPC Gas & Power Investment Services. These factors contribute to creating a highly engaged and skilled workforce, which in turn leads to higher organizational productivity. The findings emphasize that effective human resource practices, such as providing meaningful career development opportunities, regular skill evaluations, and retention strategies, play a vital role in the long-term success of the organization.

The results also indicated that while the company has made strides in employee training and career advancement, there is still room for improvement, particularly in ensuring that career progression opportunities are clearly communicated across all departments. The study's findings suggest that aligning skill assessments with the specific needs of employees and the organization's goals will further enhance overall productivity.

A. Recommendations

Based on the findings, the study provides the following recommendations:

- i. **Enhance Retention Strategies:** NNPC Gas & Power Investment Services should focus on developing robust retention strategies. This includes creating an environment where employees feel valued, providing competitive compensation packages, and addressing issues that may contribute to employee dissatisfaction. Retention strategies should emphasize the importance of long-term career development to ensure the organization retains a skilled workforce.
- ii. **Increase Focus on Skill Assessments:** The Company should invest in more frequent and detailed skill assessments. These evaluations should not only assess current competencies but also provide actionable feedback on how employees can improve their performance. Additionally, there should be clear follow-up support after training to ensure that the skills acquired are effectively applied in the workplace.
- iii. **Clarify Career Progression Opportunities:** The Company should provide clearer career progression pathways. Although the majority of employees expressed satisfaction with career progression opportunities, a notable portion of employees remained neutral or dissatisfied. NNPC Gas & Power Investment Services should ensure that all employees understand the career growth options available to them and take steps to make these pathways more transparent and accessible.

VI. REFERENCES

1. H.D.J.G. Antunes and P.G. Pinheiro, "Linking Knowledge Management, Organizational Learning and Memory," *Journal of Innovation & Knowledge*, vol. 5, no. 2, pp. 140-149, 2020. [Google Scholar](#) | [Publisher Link](#)
2. D.O. Arubayi, E.D. Eromafuru, and A.C.S. Egbule, "Human Resource Development and Employee Performance: The Role of Individual Absorptive Capacity in the Nigerian Oil Sector," *Journal of Management Information and Decision Sciences*, vol. 23, no. 2, pp. 1-15, 2020. [Google Scholar](#) | [Publisher Link](#)

3. B. Ashmond, A. Opoku-Danso, and R.A. Owusu, "Human Resource Development Practices and Employees' Performance in a Ghanaian University: A Case of the University of Cape Coast," *Journal of Human Resource and Sustainability Studies*, vol. 10, no. 1, pp. 77–97, 2022. [Google Scholar](#) | [Publisher Link](#)
4. A. Aziedjo, "The Impact of Career Development on Employee Engagement and Retention," *International Journal of Multidisciplinary Studies and Innovative Research*, vol. 12, no. 2, pp. 1776–1784, 2024. [Google Scholar](#) | [Publisher Link](#)
5. N. Burhan Ismael, B. Jabbar Othman, B. Gardi, P. Abdalla Hamza, S. Sorguli, H. Mahmood Aziz, and G. Anwar, "The Role of Training and Development on Organizational Effectiveness," *International Journal of Engineering, Business and Management*, vol. 5, no. 3, pp. 15–24, 2021. [Google Scholar](#) | [Publisher Link](#)
6. A.O. Dokpesi and G.O. Godwin, "Implementation of the Petroleum Industry Act, 2021: Available Prospects for a Better Oil and Gas Industry in Nigeria," *Journal of Social Theory and Research (JOSTAR)*, vol. 4, no. 1, 2024. [Google Scholar](#) | [Publisher Link](#)
7. C. Emeke, E.F. Oluwadarasimi, A.I. Uwanaobong, and C. Maduwesi, "Unlocking Non-Associated Gas Reservoirs to Power Future Energy Demands in Nigeria," *International Journal of Latest Technology in Engineering, Management & Applied Science*, vol. 13, no. 11, pp. 51–60, 2024. [Google Scholar](#) | [Publisher Link](#)
8. J.M.O. Gabriel and B.M. Rowland, "Training and Employee Effectiveness in Port Harcourt City Council, Rivers State, Nigeria," *International Journal of Innovative Social Sciences and Humanities Research*, vol. 8, no. 1, pp. 33–39, 2020.
9. L. Hopkins, "Impact of Manpower Development on the Efficiency of an Organization," *International Journal of Economics and Public Policy (JEPP)*, vol. 1, no. 1, pp. 14–29, 2020. [Google Scholar](#) | [Publisher Link](#)
10. L.E.B. Igwe, C.A. Akujuru, and O.O.K. Jamabo, "Employees' Service Delivery Programmes for Enhanced Productivity: Nigerian National Petroleum Corporation Limited, Abuja, 2015-2022," *Journals for Social Sciences*, vol. 1, no. 11, pp. 212–227, 2024. [Google Scholar](#) | [Publisher Link](#)
11. O.N. Jacob, "An Investigation into the Challenges Facing the Planning of Manpower," *International Journal on Integrated Education*, vol. 3, no. 7, pp. 100–110, 2020. [Google Scholar](#) | [Publisher Link](#)
12. I. Matejić and M. Čurčić, "The Importance of Training and Employee Development for Organizational Efficiency," *Ekonomija-teorija i praksa*, vol. 16, no. 2, pp. 24–43, 2023. [Google Scholar](#) | [Publisher Link](#)
13. D.G. Mengistu and G. Mahesh, "Manpower Development Framework for Ethiopian Construction Industry," *International Journal of Construction Management*, vol. 22, no. 2, pp. 121–132, 2022. [Google Scholar](#) | [Publisher Link](#)
14. N.A. Mohammed, D. Mohammed, and J. Gana, "The Impact of Training and Development on Employee Productivity in the 21st Century," *African Journal of Management and Business Research*, vol. 3, no. 1, pp. 41–58, 2022. [Google Scholar](#) | [Publisher Link](#)
15. V.A. Musoka, "The Effect of Human Capital Management Practices on Employee Retention in Large Manufacturing Companies in Kenya," Doctoral dissertation, KCA University, 2022. [Google Scholar](#) | [Publisher Link](#)
16. L. Nwaoburu and A.S. Mark, "Public-Private Partnerships and Efficiency at the Nigerian National Petroleum Corporation (NNPC)," 2025. [Google Scholar](#) | [Publisher Link](#)
17. R.O. Nwapi, "Effect of Capacity Building on Workers' Productivity in Public Sector Organization (A Case Study of Enugu State)," *International Journal of Public Administration (IJOPAD)*, vol. 2, no. 2, pp. 45–65, 2023. [Google Scholar](#) | [Publisher Link](#)
18. E.E. Okon, N.E. Akpanim, and U. Malachy, "Manpower Planning and Organizational Effectiveness in Akwa Ibom State University," *Global Journal of Human Resource Management*, vol. 10, no. 3, pp. 1–50, 2022. [Google Scholar](#) | [Publisher Link](#)
19. S.A. Oshishepo, R.A. Ahmed, and V.Y. Genda, "Impact of Manpower Training and Development on Staff Productivity in Nasarawa State Investment Property and Development Company (NIPDC), Lafia, Nasarawa State, Nigeria," *NIU Journal of Social Sciences*, vol. 7, no. 2, pp. 105–109, 2021. [Google Scholar](#) | [Publisher Link](#)
20. Y.D. Ozkan-Ozen and Y. Kazancoglu, "Analysing Workforce Development Challenges in the Industry 4.0," *International Journal of Manpower*, vol. 43, no. 2, pp. 310–333, 2022. [Google Scholar](#) | [Publisher Link](#)
21. B. Promise and E. Agunia, "Legal Appraisal of NNPC Limited Under the Petroleum Industry Act: Issues and Challenges," *AJIEEL*, vol. 7, no. 01, pp. 74–85, 2023. [Google Scholar](#) | [Publisher Link](#)
22. A.R. Soliu, "Human Capital Development and Quality of Education in Oyo State Owned Polytechnics," Master's thesis, Kwara State University (Nigeria), 2021. [Google Scholar](#) | [Publisher Link](#)
23. H. Urbancová, P. Vrabcová, M. Hudáková, and G.J. Petrů, "Effective Training Evaluation: The Role of Factors Influencing the Evaluation of Effectiveness of Employee Training and Development," *Sustainability*, vol. 13, no. 5, 2021. [Google Scholar](#) | [Publisher Link](#)
24. D.F. Vakouftsis, "The Science of Staff Retention: Mechanisms That Drive Employee Loyalty," *Knowledge-International Journal*, vol. 66, no. 1, pp. 15–19, 2024. [Google Scholar](#) | [Publisher Link](#)

25. M. Zakari, "Effect of Human Capital Development Policy on Staff Performance in Nigerian National Petroleum Corporation Limited (NNPCL)," *Governance and Society Review*, vol. 2, no. 1, pp. 32–54, 2023. [Google Scholar](#) | [Publisher Link](#)
26. F. Zehra, "Impact of Employee Benefits on Work Productivity and Retention," 2025. [Google Scholar](#) | [Publisher Link](#)
27. Z. Zhu, W. Zheng, N. Tang, and W. Zhong, "Review of Manpower Management in Healthcare System: Strategies, Challenges, and Innovations," *Journal of Multidisciplinary Healthcare*, pp. 5341–5351, 2024. [Google Scholar](#) | [Publisher Link](#)