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# Influence of Monetary and Non-Monetary Incentives on Employee Performance in Selected Tertiary Institutions in Adamawa State, Nigeria

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## Abstract

*Employee performance is essential to the effective delivery of teaching, research, administration and student services in tertiary institutions. This study examined the influence of six monetary and non-monetary incentive dimensions on employee performance in three public tertiary institutions in Adamawa State, Nigeria. The monetary dimensions were salaries and wages, fringe benefits, and leave allowance; the non-monetary dimensions were recognition, work environment, and career development. A quantitative cross-sectional survey design was adopted. The study population comprised 3,552 employees of Federal Polytechnic Mubi, Federal College of Education Yola, and Adamawa State College of Agriculture, Science and Technology, Ganye. A sample of 360 employees was determined using the Taro Yamane formula. Of 335 questionnaires returned, 314 were retained for regression analysis. Cronbach's alpha coefficients ranged from 0.848 to 0.907. The multiple regression model was statistically significant, $F(6, 307) = 200.350$, $p < 0.001$, and explained 79.7% of the variance in employee performance ($R^2 = 0.797$; adjusted $R^2 = 0.793$). All six predictors had positive and statistically significant coefficients: salaries and wages ($\beta = 0.112$, $p = 0.010$), fringe benefits ($\beta = 0.258$, $p < 0.001$), leave allowance ($\beta = 0.183$, $p < 0.001$), recognition ($\beta = 0.266$, $p < 0.001$), work environment ($\beta = 0.090$, $p = 0.035$), and career development ($\beta = 0.122$, $p = 0.003$). Recognition had the largest standardised coefficient, followed by fringe benefits. The findings suggest that employee performance is associated with a combination of financial rewards, welfare provisions, recognition, supportive working conditions and development opportunities. Given the cross-sectional design, the results are interpreted as statistical associations rather than definitive causal effects.*

**Keywords: career development, employee performance, fringe benefits, monetary incentives, non-monetary incentives, recognition, tertiary institutions**

## Introduction

Employee performance is an important determinant of organisational effectiveness because institutions depend on employees to translate resources, policies and professional expertise into productive work. In tertiary institutions, performance affects teaching, research, student support, administration and the quality of institutional services. Employees' ability and willingness to perform depend not only on individual competence but also on the rewards, working conditions and development opportunities available to them. Research on work motivation indicates that financial incentives and intrinsic motivation can jointly contribute to performance, although their relative importance varies according to whether performance is assessed in terms of quantity or quality (Cerasoli et al., 2014). The job demands –resources framework also explains how supportive working conditions and access to job resources can help employees meet work demands and sustain effective performance (Bakker & Demerouti, 2007).

Recent Nigerian evidence also supports examining monetary and non-monetary incentives together. Alase and Akinbo (2021), studying 206 senior employees of a Nigerian bank, reported positive relationships between job performance and both monetary incentives such as competitive salaries and allowances and non-monetary incentives, including job security, training and career opportunities. In a more recent study of 335 hotel employees in Northeast Nigeria, Marcel and Mohammad (2026) reported positive and significant relationships between incentive strategies and employee performance. Although these studies provide relevant Nigerian evidence, their banking and hospitality settings differ from public tertiary institutions, and they do not test the same six incentive dimensions in a single model.

Incentives represent one means through which organisations attract effort, acknowledge contributions and support employees' capacity to perform. Monetary incentives provide financial compensation or

welfare-related benefits, whereas non-monetary incentives include recognition, supportive working conditions and opportunities for professional growth. Evidence indicates that performance-contingent pay can improve measurable output under particular conditions (Lazear, 2000), while organisational rewards and favourable job conditions can strengthen employees' perceptions that their organisation values their contributions and well-being (Rhoades & Eisenberger, 2002). Recognition can also influence performance independently of direct financial rewards, as demonstrated by Bradler et al. (2016). These findings suggest that employee performance should be examined in relation to a combination of incentives rather than remuneration alone.

This issue is relevant to public tertiary institutions, where employees perform diverse academic, technical and administrative duties and where resources for rewards and workplace improvement may be constrained. Salaries and benefits may support employees' economic security, while recognition, suitable working conditions and career opportunities may address other motivational and professional needs. However, the relevance of these practices does not establish that each incentive has the same relationship with performance or that findings from other organisational settings necessarily apply to tertiary institutions in Adamawa State.

This study examines the relationship between six incentive dimensions salaries and wages, fringe benefits, leave allowance, recognition, work environment, and career development—and employee performance in Federal Polytechnic Mubi, Federal College of Education Yola, and Adamawa State College of Agriculture, Science and Technology, Ganye. By estimating the unique statistical contribution of each dimension within one multiple regression model, the study provides context-specific evidence that may inform human resource management in the selected institutions.

## Literature Review

### Incentives and Employee Performance

Incentives are organisational rewards or employment conditions intended to encourage effort, acknowledge contributions, support employee welfare or facilitate effective work. Their relevance to performance depends on how employees perceive the rewards and whether conditions necessary for effective task execution are available. Cerasoli et al. (2014), in a meta-analysis of 183 samples involving 212,468 observations, found that intrinsic motivation and extrinsic incentives both contributed to performance. Incentives were more strongly associated with performance quantity, whereas intrinsic motivation contributed more strongly to performance quality. This evidence challenges the assumption that employee performance can be explained by financial rewards alone.

The present study distinguishes monetary incentives salaries and wages, fringe benefits, and leave allowance from non-monetary incentives recognition, work environment, and career development. This classification reflects the principal emphasis of each practice rather than an absolute separation between financial and non-financial consequences. Fringe benefits and leave allowance have financial value but may also communicate organisational support or facilitate recovery. Career development may require organisational expenditure while providing employees primarily with professional and developmental benefits. The six dimensions are therefore treated as complementary but analytically distinct predictors.

### Monetary Incentives and Employee Performance

#### Salaries and Wages

Salaries and wages constitute the regular financial compensation employees receive for their work. They provide income, support economic security and may influence employees' assessments of fairness in the employment relationship. The relationship between compensation and performance is particularly evident when remuneration is explicitly linked to measurable output. Lazear (2000), for example, found that introducing piece-rate pay in a large organisation was associated with a substantial increase in worker productivity. This evidence concerns performance-contingent compensation and should not be interpreted as proof that increases in ordinary fixed salaries necessarily produce equivalent productivity gains.

Evidence from Nigeria is broadly consistent with the relevance of a combined incentive package. Alase and Akinbo (2021) found that competitive salary was an important monetary motivation factor in their banking sample, while Marcel and Mohammad (2026) reported positive associations between broader extrinsic incentive strategies and employee performance among hotel employees in Northeast Nigeria.

These studies strengthen the case for examining compensation in context, but neither establishes that fixed salary increases alone will produce equivalent performance gains in tertiary institutions.

Compensation may also influence performance through perceptions of fairness, security and organisational support. Rhoades and Eisenberger (2002) identified organisational rewards and favourable job conditions as antecedents of perceived organisational support, which is associated with favourable employee outcomes. Thus, the relationship between salaries and wages and performance may depend on adequacy, timeliness, fairness and perceived connection with employees' responsibilities. Salaries and wages are expected to be positively associated with employee performance.

### Fringe Benefits

Fringe benefits comprise employment-related welfare provisions beyond basic salaries and wages. Depending on institutional arrangements, these may include health-related benefits, housing or transport support, pension provisions and other welfare benefits. Such benefits can support employees' material security while communicating that the institution values their contributions. Organisational support theory conceptualises perceived organisational support as employees' belief that their organisation values their contributions and cares about their well-being (Eisenberger et al., 1986). Subsequent research identifies organisational rewards and favourable job conditions as relevant to perceived support and its associated employee outcomes (Rhoades & Eisenberger, 2002). A meta-analysis by Riggle et al. (2009) also reported a positive relationship between perceived organisational support and employee performance. Fringe benefits may therefore be associated with performance through their practical welfare value and the employment relationship they signal. Their effectiveness is likely to depend on relevance, fairness and reliability.

### Leave Allowance

Leave allowance is the financial support provided in connection with approved leave, as defined in this study. Its potential relevance extends beyond monetary value because paid leave arrangements may help employees access rest and recover from work demands. Research on employee recovery indicates that recovery experiences are associated with well-being and performance, although relationships vary according to how recovery is defined and measured (Steed et al., 2021). A more recent meta-analysis of vacation research found benefits for employee well-being, while also highlighting that effects depend on the outcome and context measured (Grant et al., 2025). The distinction between leave allowance and leave-taking is important: an allowance is a financial benefit, whereas recovery depends partly on whether employees can take leave and disengage from work demands. Neither study directly tests leave allowance as a distinct incentive, so the present relationship should be interpreted as evidence about the measured allowance rather than proof that the payment itself produces recovery or higher performance.

## Non-Monetary Incentives and Employee Performance

### Recognition

Recognition involves acknowledging employees' contributions, achievements or effective work behaviour. It can communicate appreciation, reinforce valued conduct and strengthen employees' sense that their contributions matter. In a controlled field experiment, Bradler et al. (2016) found that public recognition increased subsequent performance in a data-entry task, particularly when recognition was selectively awarded to high performers. Because the experiment involved a specific task and short observation period, its results should not be assumed to apply identically to every professional setting. In tertiary institutions, transparent recognition practices may acknowledge teaching, research, student support, administration and teamwork. Recognition is expected to be positively associated with employee performance.

More recent field evidence also suggests that the design of recognition matters. Scherbaum et al. (2022) found that manager training designed to increase recognition was followed by higher recognition and improved unit-level performance in a financial-services setting. However, evidence is not uniformly in favour of public awards: Delavallade (2021), using a randomized field experiment with school-feeding teams in South Africa, found that private performance feedback improved effort more than public recognition. In Nigeria, Oigbochie et al. (2024) reported significant relationships between non-monetary compensation dimensions including praise, promotion, recognition and office environment and employee performance in the Transmission Company of Nigeria. Together, these studies suggest that recognition

can be useful, but its effectiveness may depend on how it is delivered, the work setting and the performance measure used.

### Work Environment

The work environment encompasses the physical, social and organisational conditions under which employees perform their duties, including facilities, safety, communication, supervisory support and access to necessary resources. These conditions matter because motivation alone cannot fully compensate for the absence of essential work resources. The job demands–resources model proposes that job resources help employees meet work demands, support motivational processes and reduce strain (Bakker & Demerouti, 2007). Organisational support research similarly identifies favourable job conditions and supportive treatment as relevant to employees' perceptions of their organisation (Rhoades & Eisenberger, 2002). In tertiary institutions, suitable facilities, functional equipment, clear communication and supportive supervision may reduce practical barriers and enable effective task execution.

Nigerian evidence provides context-specific support for including workplace conditions among non-monetary incentives. Oigbochie et al. (2024) reported a significant relationship between office environment and employee performance in the Transmission Company of Nigeria. Their study used a different organisation and sample, so it cannot establish the size of the relationship in tertiary institutions; nevertheless, it supports examining the work environment alongside other incentive dimensions rather than treating it as incidental.

### Career Development

Career development refers to opportunities and practices through which employees build professional competence, acquire relevant experience and progress in their careers. It may include training, mentoring, further education, developmental assignments and transparent promotion opportunities. These practices can help employees improve their knowledge and skills, although access to development does not automatically translate into higher performance. A meta-analysis by Ng et al. (2024) found that employer-sponsored career-development practices were related to job performance through perceived organisational support and organisational attachment. In Nigeria, Iyke-Ofoedu et al. (2023) reported positive relationships between career-development techniques—including induction training, job rotation and formal education—and selected employee performance indicators in deposit money banks. Cao and Hamori (2023) also found an indirect relationship between developmental job experience and performance through information- and support-seeking behaviours, with team context relevant. Earlier evidence cautions against assuming that all career-management practices directly translate into higher performance ratings (Noe, 1996). Career development may therefore be most useful when opportunities are accessible, relevant to work and transferable to employees' responsibilities.

Career development also appears in Nigerian empirical work as part of a wider incentive package. Alase and Akinbo (2021) included job training and career advancement among non-monetary motivation factors associated with performance in a Nigerian banking sample. Iyke-Ofoedu et al. (2023) separately reported positive relationships between selected career-development techniques and performance indicators among bank employees. These findings are relevant but do not isolate the unique effect of career development in public tertiary institutions. The present study contributes by estimating the career-development coefficient while controlling for salaries and wages, fringe benefits, leave allowance, recognition and work environment.

### Employee Performance

Employee performance concerns the behaviours and work outcomes through which individuals contribute to organisational objectives. It is multidimensional and should not be reduced to output quantity alone. Borman and Motowidlo (1997) distinguished task performance, which concerns activities directly related to formal job responsibilities, from contextual performance, which concerns behaviours that support the broader organisational and social environment. In tertiary institutions, relevant indicators may include completion of assigned duties, work quality, productivity, attendance and the reliability of academic or administrative services. These indicators reflect different aspects of performance and may respond differently to financial incentives, recognition and work resources (Cerasoli et al., 2014). The interpretation of the present results is limited to the performance indicators included in the study questionnaire.

### Theoretical Framework: Maslow's Hierarchy of Needs Theory

The study is informed by Maslow's (1943) hierarchy of needs theory, which proposes that human motivation is associated with physiological, safety, belongingness, esteem and self-actualisation needs. Salaries and wages can help employees meet basic material needs, while fringe benefits and leave arrangements may contribute to welfare and security. Recognition can address esteem and social needs, and a supportive work environment can contribute to safety and belongingness. Career development may provide opportunities for achievement and professional growth.

Maslow's framework is used as an interpretive lens rather than as a rigid sequence through which all employees must progress. The study does not measure the five need categories directly and therefore does not test the hierarchical ordering of needs. Instead, the framework supports the general proposition that employees' performance may be associated with a combination of financial rewards, supportive conditions, social recognition and developmental opportunities.

### Research Gap and Hypotheses

Existing research supports the relevance of performance-contingent compensation, organisational support, recognition, recovery, job resources and developmental experiences to employee outcomes (Bradler et al., 2016; Cerasoli et al., 2014; Lazear, 2000; Rhoades & Eisenberger, 2002; Steed et al., 2021; Cao & Hamori, 2023; Ng et al., 2024). Nigerian studies have also reported positive relationships between combined monetary and non-monetary incentives and performance in banking and hospitality (Alase & Akinbo, 2021; Marcel & Mohammad, 2026), while research in the Nigerian power sector has examined recognition, promotion, praise and office environment (Oigbochie et al., 2024). Nigerian research has also examined career-development techniques in banking (Iyke-Ofoedu et al., 2023). International field studies indicate that the impact of recognition may depend on the form of feedback or acknowledgement provided (Delavallade, 2021; Scherbaum et al., 2022). However, these studies examine different organisational settings, incentive measures and outcomes. The available evidence does not establish the relative contribution of the six dimensions considered together among employees in the selected public tertiary institutions in Adamawa State. This study addresses that contextual and analytical gap by estimating each dimension's unique statistical contribution while controlling for the other five predictors.

$H_{01}$: Salaries and wages have no significant relationship with employee performance in the selected tertiary institutions.
$H_{02}$: Fringe benefits have no significant relationship with employee performance in the selected tertiary institutions.
$H_{03}$: Leave allowance has no significant relationship with employee performance in the selected tertiary institutions.
$H_{04}$: Recognition has no significant relationship with employee performance in the selected tertiary institutions.
$H_{05}$: Work environment has no significant relationship with employee performance in the selected tertiary institutions.
$H_{06}$: Career development has no significant relationship with employee performance in the selected tertiary institutions.

## Methodology

### Research Design and Study Population

The study adopted a quantitative cross-sectional survey design to examine the relationships between monetary and non-monetary incentives and employee performance. The study was conducted in Federal Polytechnic Mubi, Federal College of Education Yola, and Adamawa State College of Agriculture, Science and Technology, Ganye. The reported population comprised 3,552 employees: 2,335 at Federal Polytechnic Mubi, 753 at Federal College of Education Yola, and 464 at the college in Ganye. These population figures should be verified against institutional staff records for the period of data collection.

### Sample Size and Data Collection

The sample size was determined using the Taro Yamane formula, $n = N/[1 + N(e)^2]$, where n is the sample size, N is the population and e is the selected precision level. With a population of 3,552 and a precision level of .05, the calculated sample was approximately 360 employees. The study reports that the sample was proportionately allocated across the institutions and questionnaires were administered

to academic and non-academic employees. Of 360 questionnaires administered, 335 were returned, representing 93.1%. Following data screening, 314 cases were retained for regression analysis. The retained sample represents 87.2% of the questionnaires administered. The actual allocation by institution and the detailed exclusion criteria should be reported from the original fieldwork records.

### Measures and Reliability

A structured questionnaire measured salaries and wages, fringe benefits, leave allowance, recognition, work environment, career development and employee performance. Each construct was measured using ten items. Cronbach's alpha coefficients ranged from .848 to .907, indicating good to high internal consistency for the reported scales. The final submission should identify the response scale, item sources, instrument-validation and pilot-testing procedures from the original research records.

| Construct | Items | Cronbach's α |
|---|---|---|
| Salaries and wages | 10 | .887 |
| Fringe benefits | 10 | .894 |
| Leave allowance | 10 | .872 |
| Recognition | 10 | .863 |
| Work environment | 10 | .872 |
| Career development | 10 | .848 |
| Employee performance | 10 | .907 |

### Model Specification and Analysis

Multiple linear regression was used to estimate the relationship between the six incentive dimensions and employee performance. The model was specified as:

$$EP_i = \beta_0 + \beta_1 SW_i + \beta_2 FB_i + \beta_3 LA_i + \beta_4 RC_i + \beta_5 WE_i + \beta_6 CD_i + \varepsilon_i$$

where EP represents employee performance; SW, salaries and wages; FB, fringe benefits; LA, leave allowance; RC, recognition; WE, work environment; CD, career development; $\beta_0$, the intercept; $\beta_1$–$\beta_6$, regression coefficients; and ε, the error term. Model fit was assessed using $R^2$, adjusted $R^2$ and the F-statistic. Individual predictors were assessed using their regression coefficients and p-values at the .05 significance level. The reported variance inflation factors ranged from 2.454 to 2.841, tolerance values exceeded commonly used minimum levels, and the highest condition index was 17.439. These diagnostics do not suggest serious multicollinearity. The Durbin–Watson statistic was 1.885. Given the cross-sectional survey design, estimates are interpreted as conditional associations rather than definitive causal effects.

## Results

### Table 1: Response Rate and Data Screening

| Measure | Result |
|---|---|
| Questionnaires administered | 360 |
| Questionnaires returned | 335 |
| Returned rate | 93.1% |
| Cases retained after screening | 314 |
| Usable rate based on questionnaires administered | 87.2% |

Of the 360 questionnaires administered, 335 were returned. Respondent-profile tables are based on the 335 returned questionnaires, whereas the regression analysis uses the 314 cases retained after screening. The manuscript reports that 21 cases were identified as outliers and excluded. The precise outlier-identification rule and screening diagnostics should be stated from the original analysis records; no screening criterion is assumed here.

### Reliability and Multicollinearity

All seven reported Cronbach's alpha coefficients exceeded .70, indicating satisfactory internal consistency for the measured constructs. The reported variance inflation factors ranged from 2.454 to 2.841, tolerance values were above commonly used minimum levels, and the highest condition index was 17.439. Taken together, these diagnostics do not indicate serious multicollinearity among the predictors. The underlying statistical output should be retained for verification.

**Table 2: Descriptive Profile of Respondents**

| Characteristic | Category | N | % |
|---|---|---|---|
| Gender | Male | 223 | 66.6 |
| | Female | 112 | 33.4 |
| Age | 18–25 | 55 | 16.4 |
| | 26–45 | 197 | 58.8 |
| | 46+ | 83 | 24.8 |
| Staff level | Senior | 230 | 68.7 |
| | Junior | 105 | 31.3 |

The respondent-profile tables describe the 335 returned questionnaires. Males constituted 66.6% of respondents and females 33.4%. The largest age group was 26–45 years (58.8%), while senior staff accounted for 68.7% of respondents. Percentages were recalculated from the displayed counts and rounded to one decimal place.

## Regression Results

The multiple regression model was statistically significant, $F(6, 307) = 200.350$, $p < .001$. The model produced $R = .893$, $R^2 = .797$ and adjusted $R^2 = .793$, indicating that the six incentive dimensions jointly accounted for 79.7% of the observed variance in employee performance in the regression sample. The Durbin–Watson statistic was 1.885.

Table 3: Multiple regression model

| Predictor | B | Standardised β | t | p | Decision |
|---|---|---|---|---|---|
| Salaries and wages | .116 | .112 | 2.607 | .010 | Reject $H_{01}$ |
| Fringe benefits | .262 | .258 | 5.956 | < .001 | Reject $H_{02}$ |
| Leave allowance | .197 | .183 | 4.227 | < .001 | Reject $H_{03}$ |
| Recognition | .292 | .266 | 6.226 | < .001 | Reject $H_{04}$ |
| Work environment | .098 | .090 | 2.119 | .035 | Reject $H_{05}$ |
| Career development | .139 | .122 | 3.022 | .003 | Reject $H_{06}$ |

All six predictors recorded positive coefficients and were statistically significant at the 5% level. Recognition had the largest standardised coefficient (β = .266), followed by fringe benefits (β = .258) and leave allowance (β = .183). Career development (β = .122), salaries and wages (β = .112), and work environment (β = .090) were also statistically significant. The coefficients represent each predictor's unique association with employee performance after accounting for the other predictors. The coefficient ranking does not establish that differences between coefficients are statistically significant. Because the design is cross-sectional, the results are interpreted as associations and predictive contributions rather than proof of causation.

## Discussion of Findings

The six incentive dimensions were jointly associated with employee performance, and the model explained 79.7% of the observed variance in the regression sample. This suggests that financial rewards, welfare provisions, recognition, working conditions and development opportunities may represent complementary aspects of employees' work experience. The high $R^2$ should nevertheless be interpreted cautiously: it does not establish that incentives caused 79.7% of performance, and the estimate may be influenced by the measures, sample and cross-sectional design.

Recognition recorded the largest standardised coefficient. This is consistent with evidence that acknowledgement can affect subsequent work behaviour: Bradler et al. (2016) found that public recognition increased performance in a controlled field experiment, while Scherbaum et al. (2022) reported improved unit-level performance following manager recognition training. Oigbochie et al. (2024) also reported a significant relationship between employee recognition and performance in the Nigerian power sector. However, the evidence requires nuance: Delavallade (2021) found that private performance feedback improved effort more than public recognition among school-feeding teams in South Africa. These findings suggest that the usefulness of recognition may depend on how it is designed and implemented. In tertiary institutions, recognition may acknowledge contributions that are not fully reflected in routine pay, including effective teaching, student support, administrative reliability

and teamwork. The present result remains a conditional association and does not establish the motivational mechanism or prove that recognition is universally more effective than other incentives.

Fringe benefits recorded the second-largest coefficient. This is consistent with organisational support theory, which proposes that employees interpret organisational rewards and favourable conditions as evidence of how much their contributions and well-being are valued (Eisenberger et al., 1986; Rhoades & Eisenberger, 2002). Prior meta-analytic evidence also supports a positive relationship between perceived organisational support and employee performance (Riggle et al., 2009). The present analysis does not isolate individual benefit types, so it cannot determine whether health, housing, transport or pension-related provisions account for the observed relationship.

Leave allowance had a positive and significant coefficient. This is compatible with research linking employee recovery with well-being and performance (Steed et al., 2021). However, financial support for leave and actual recovery are distinct. The result does not establish whether respondents took leave, recovered from work demands or improved their performance as a consequence. It indicates that leave allowance, as measured, was positively associated with performance after controlling for the other predictors.

Career development was positively associated with performance. This finding is consistent with a recent meta-analysis showing that employer-sponsored career-development practices are related to employee performance, partly through perceived organisational support and organisational attachment (Ng et al., 2024). It also aligns with Nigerian evidence that selected career-development techniques, including induction training, job rotation and formal education, were positively related to employee performance indicators in deposit money banks (Iyke-Ofoedu et al., 2023). Cao and Hamori (2023) reported a positive indirect relationship between developmental job experience and performance through information- and support-seeking behaviours. Noe (1996), however, cautions against assuming that all career-management practices directly translate into higher performance ratings. The present result supports the relevance of career development but does not identify which specific practices were most effective.

Salaries and wages had a positive, statistically significant coefficient, consistent with broader evidence that extrinsic incentives can contribute to work performance (Cerasoli et al., 2014) and that performance-contingent pay can increase measurable output under particular conditions (Lazear, 2000). Nigerian studies likewise identify competitive salary and broader incentive strategies as relevant to employee performance in banking and hospitality settings (Alase & Akinbo, 2021; Marcel & Mohammad, 2026). Its comparatively smaller standardised coefficient does not mean that salary is unimportant; it reflects its unique association after accounting for the other five predictors. The analysis does not report pay variation, adequacy or interactions, so explanations for the coefficient's relative size remain tentative.

Work environment had the smallest standardised coefficient, although the association was statistically significant. This result is compatible with the job demands–resources model, which identifies job resources as relevant to employees' capacity to meet work demands (Bakker & Demerouti, 2007). Oigbochie et al. (2024) also reported a significant relationship between office environment and employee performance in a Nigerian electricity-sector organisation. The comparatively smaller coefficient in the present study does not imply that workplace conditions are dispensable; it indicates a smaller unique contribution within this model and sample. Overall, the findings favour a coordinated incentive strategy rather than reliance on a single reward.

## Conclusion

This study examined the relationships between six monetary and non-monetary incentive dimensions and employee performance in three public tertiary institutions in Adamawa State, Nigeria. The regression model was statistically significant and explained 79.7% of the observed variance in employee performance. Salaries and wages, fringe benefits, leave allowance, recognition, work environment and career development each had a positive, statistically significant coefficient. Recognition had the largest standardised coefficient, followed by fringe benefits and leave allowance.

The findings suggest that employee performance in the selected institutions is associated with a combination of financial rewards, welfare provisions, recognition, workplace resources and development opportunities. Human resource management should therefore consider an integrated incentive strategy rather than relying on financial compensation alone. Given the cross-sectional design, the findings support statistical relationships but do not prove causal effects. The contribution is contextual and empirical, and generalisation beyond the institutions and respondents studied should be cautious.

## Recommendations

i. Ensure prompt payment of salaries and wages and periodically review compensation arrangements in light of economic conditions and cost-of-living changes.

ii. Review fringe-benefit packages, including health, housing, transport and retirement-related provisions, and administer entitlements transparently and fairly

iii. Administer leave allowances promptly and ensure employees can access their approved leave entitlements so that rest and recovery are practicable.

iv. Establish transparent recognition systems using timely commendations, awards and other forms of acknowledgement for meaningful contributions by academic and non-academic staff.

v. Improve workplace facilities, safety, supervisory support, communication and the availability of resources needed for effective task execution.

vi. Expand career-development opportunities through relevant training, workshops, mentoring, further-study support and transparent promotion procedures.

## Limitations and Future Research

The study was limited to three tertiary institutions in Adamawa State and relied on questionnaire data. Its cross-sectional design captures respondents' perceptions at one point in time and limits conclusions about temporal order and causality. If predictors and performance were reported by the same respondents at the same time, common-method effects may also have influenced the estimates. Future studies could combine employee surveys with supervisor assessments or administrative performance records, extend the geographical scope, compare public and private institutions, and use longitudinal designs. Further research could also examine whether organisational support, motivation or job satisfaction helps explain the relationships between incentive practices and performance.

The final submission should include the questionnaire response scale, item sources, validation and pilot-testing details, the sampling allocation by institution, and the exact outlier-screening procedure. Reporting standard errors, confidence intervals and regression diagnostics would further improve transparency and reproducibility.

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