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**Enhancing Employee Commitment and Performance Levels in Nigeria Public Sector
through Ability-Motivation-Opportunity (AMO) Framework**


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Abstract

Purpose: This research work was driven by the need to improve performance in Nigeria's public sector, where challenges such as limited resources and bureaucratic inefficiencies often hinder employee productivity. The study aimed to examine the effects of learning and skills development (Ability), financial and non-financial incentives (Motivation), and a supportive work environment (Opportunity) on employee commitment and performance. The study investigated the application of the Ability-Motivation-Opportunity (AMO) framework to enhance employee commitment and performance of a Nigerian public sector entities

Methodology: A quantitative research design was adopted, data were collected through a structured questionnaire administered to a sample of 128 staff, selected from a total population of 183 in the selected public entities using simple random sampling. Descriptive statistics were employed to summarise demographic characteristics and key variables, while multiple regression analysis was conducted to examine the relationships among variables. The analysis was carried out with the aid of Jamovi Statistical software (version 2.3.28).

Findings: The results revealed that all three components of the AMO framework significantly influence employee commitment and performance. Specifically, Opportunity had the strongest positive effect ($\beta = 0.290$, $p < 0.001$), followed by Ability ($\beta = 0.186$, $p = 0.002$) and Motivation ($\beta = 0.157$, $p = 0.040$). These findings underscore the importance of providing not only skills and incentives but also an enabling environment in driving employee effectiveness in the public sector. The study concluded that the AMO framework offers a viable strategy for improving workforce outcomes in public institutions.

Unique Contribution to Theory, Practice and Policy: The study extends the applicability of the AMO framework to developing country, particularly the Nigerian public sector., It provides empirical evidence for HR managers on how to balance ability-building, motivation, and opportunity creation for optimal workforce performance. The findings advocate for the integration of AMO principles into public sector HRM policies, emphasizing training initiatives, equitable incentive systems, inclusive workplace culture, and strong leadership support as drivers of institutional effectiveness.

Keywords: *Learning and Skills Development, Financial and Non-financial Incentives, Work Environment, AMO Framework, Employee Commitment, Performance*

JEL Classification Codes: J24, M52, M54

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INTRODUCTION

The pursuit of employee performance has become a central concern for public institutions worldwide, given its pivotal role in achieving organisational goals, enhancing service delivery, and ensuring operational efficiency. In Nigeria's public sector, where institutions serve as critical drivers of national development, improving employee performance is not only a strategic necessity but also a pathway to strengthening institutional relevance and responsiveness. However, factors such as limited resources, bureaucratic bottlenecks, and skill mismatches continue to undermine performance outcomes in many public sector entities (PSEs).

One such institution is the Centre for Geodesy and Geodynamics (CGG) under the National Space Research and Development Agency (NASRDA), which plays a vital role in space geodesy research, seismic monitoring, crustal deformation monitoring, subsidence and global mean sea level monitoring.

Despite its strategic mandate, CGG - like many other Nigerian public sector enterprises—continues to grapple with performance deficits, which have been linked to low employee morale (Dauda & Bradford, 2023)), misaligned training and development efforts (Oyelude, 2023), ineffective incentive structures (Akerele, 2023), and unsupportive organisational environment (Omisore & Adeleke, 2015).

A growing body of literature recognises that employee performance is shaped by multiple dimensions, including skill acquisition, motivation, and access to enabling work environments (Tuffaha, 2020; Radu, 2023). These dynamics are well-captured in the Ability-Motivation-Opportunity (AMO) framework, originally proposed by Boxall and Purcell (2003), which posits that performance is a function of employees' abilities, their motivation to work, and the opportunity to apply their skills effectively ($P = f(A, M, O)$). Ability refers to employees' knowledge, competencies, and skills shaped by recruitment, onboarding, and continuous training efforts (Armstrong & Brown, 2019). Motivation includes both intrinsic and extrinsic drivers—ranging from performance incentives to leadership influence—that inspire employees to engage meaningfully with their roles (Gerhart & Fang, 2015). Opportunity encompasses the structural and cultural conditions that empower employees to perform, including autonomy, clarity of roles, and access to resources (Anwar & Abdullah, 2021).

Statement of the Problem

Employee performance remains a critical yet persistent challenge in Nigerian public sector entities (PSEs), including the Centre for Geodesy and Geodynamics (CGG), which plays a strategic role in geodesy and geodynamics research. Despite its mandate, CGG faces inefficiencies, skill mismatches, and suboptimal working conditions that hinder effective service delivery. In many PSEs, training programmes often fail to align with job-specific needs, resulting in competency gaps (Oyelude, 2023; Omale et al., 2023). Inadequate and inconsistent incentive systems -disrupted by economic and bureaucratic challenges - have also weakened employee motivation (Akerele, 2023; Abah & Nwokuwu, 2016), while unsupportive work environments limit employees' opportunities to perform optimally (Osawe, 2015; Dauda & Bradford, 2023).

Although reform efforts have aimed to address public sector inefficiencies, their success has been limited, partly due to the lack of an integrated performance framework. The Ability-Motivation-Opportunity (AMO) framework offers a comprehensive approach to enhancing

employee outcomes and has shown positive results in various contexts (Kellner, Cafferkey & Townsend, 2019; Bos-Nehles et al., 2023). However, its relevance and application within the Nigerian public sector remains underexplored (Abboh, Majid & Fareed, 2019). Given CGG's technical demands and national importance, a context-specific application of the AMO framework is urgently needed to bridge the performance gap. Thus, this study addresses that gap by investigating how the AMO framework can be operationalised to improve employee commitment and performance at CGG.

To address the identified gaps, the study seeks answers to the following research questions:

- i To what extent do learning and skill development programmes (Ability) affect performance at CGG?
- ii How do financial and non-financial incentives (Motivation) influence employee commitment?
- iii What role does a supportive work environment (Opportunity) play in enhancing overall performance?
- iv How do these elements interact to influence employee outcomes?

Accordingly, the study tests the following null hypotheses:

H₀₁: Learning and skills development (Ability) do not significantly influence employee commitment and performance at CGG.

H₀₂: Financial and non-financial incentives (Motivation) do not significantly affect employee commitment and performance at CGG.

H₀₃: A supportive work environment (Opportunity) does not significantly affect employee commitment and performance at CGG.

H₀₄: The combined interaction of ability, motivation, and opportunity does not significantly affect employee commitment and performance at CGG.

This study contributes theoretically and practically by contextualising the AMO framework within Nigeria's public sector. Its findings will inform HR reforms, enhance employee engagement, and support evidence-based policymaking. Public sector managers, HR practitioners, and policymakers will benefit from practical insights to improve workforce productivity, institutional performance, and national development.

The remainder of this paper is organised as follows: Section 2 reviews relevant literature on employee performance and the AMO framework. Section 3 describes the research methodology. Section 4 presents the analysis and results. Section 5 discusses key findings and implications, while Section 6 concludes with recommendations for policy and practice.

LITERATURE REVIEW

Ability-Motivation-Opportunity (AMO) Framework

The AMO framework by Boxall and Purcell (2003) explains employee performance as a function of ability, motivation, and opportunity: $P = f(A, M, O)$. Employees must have the skills (ability), drive (motivation), and a supportive environment (opportunity) to perform effectively (Bos-Nehles et al., 2023). It is widely applied in HRM to understand performance variations (Kellner et al., 2019).

a. Ability: Ability encompasses the knowledge, skills, and traits needed for effective job performance (Armstrong & Taylor, 2020). Competent employees are more likely to meet expectations and support organisational success (Supriya et al., 2023). Ability includes:

- i **Technical skills** : e.g., GIS, spatial data analysis in geodesy (Omale et al., 2023).
- ii **Cognitive abilities** : critical thinking and decision-making (Lepak et al., 2006).
- iii **Interpersonal skills** : communication, teamwork, and leadership (Deepalakshmi et al., 2024).

Training improves ability by bridging skill gaps and boosting performance (Al Aina & Atan, 2020; Noe, 2017). Continuous learning enhances adaptability and innovation, especially in technical fields (Anwar & Abdullah, 2021). It also signals an organisation's commitment to development, fostering employee satisfaction (Boselie, 2010).

However, in the public sector, training often mismatches job demands due to outdated curricula and limited resources (Omale et al., 2023), hindering performance. Aligning training with actual needs ensures skill relevance and improved outcomes.

b. Motivation: Motivation drives behaviour toward achieving goals (Urhahne & Wijnia, 2023). It energises and sustains employee performance (Kanfer, 1990; Abusharbeh & Nazzal, 2024). A motivated workforce is more productive, committed, and satisfied (Ekundayo, 2018).

Motivation is categorised as:

i. Intrinsic Motivation: This is the internal desire to engage in tasks for personal satisfaction (Ryan & Deci, 2020). It stems from autonomy, competence, and relatedness (Deci & Ryan, 1985). When work aligns with personal values, motivation and performance increase (Pandya, 2024; Asikhia & Magaji, 2015). Leadership and supportive cultures enhance intrinsic motivation (Khan et al., 2020; Ng, 2023). Training also boosts self-worth and motivation (Mustafa & Lleshi, 2024).

ii. Extrinsic Motivation: Driven by external rewards such as pay, promotions, and recognition (Ryan & Deci, 2000). While effective (Bandhu et al., 2024), over-reliance can undermine intrinsic motivation (Deci et al., 2001). Promotions and recognition validate effort (Ng'ethe et al., 2012; Zeb et al., 2018), and fair compensation is essential for satisfaction and retention (Perry et al., 2006; Thapa, 2023). At CGG, employee incentives are largely influenced by centralised civil service structures, which may limit flexibility in rewards and performance-based recognition. This potentially contributes to low morale and retention challenges. A balanced mix of intrinsic and extrinsic motivators - enhanced by supportive leadership, transparent reward systems, and clear career paths - is essential for sustaining engagement (Gerhart & Fang, 2015).

c. Opportunity: Opportunity refers to the conditions that enable employees to apply their abilities and motivation effectively (Boxall & Purcell, 2016). This includes access to tools, autonomy, participation, and supervisory support (Bos-Nehles et al., 2023). Even skilled and motivated employees underperform without these enablers (Zhenjing et al., 2022). Supportive job design and empowering leadership foster engagement (Anwar & Abdullah, 2021). However, in rigid bureaucracies such as the Nigerian public sector, employee agency is often constrained by centralised decision-making, outdated infrastructure, and inflexible HR policies (Osawe, 2015). These systemic barriers hinder responsiveness and innovation. Conversely, organisations that promote participation, growth opportunities, and meaningful work tend to foster higher commitment and ownership (Jiang et al., 2012). High-Performance Work Systems

(HPWS) help cultivate such environments, driving improved employee and organisational outcomes.

Employee Commitment and Performance

Employee commitment and performance are vital to organisational success, influencing productivity, job satisfaction, and workplace efficiency. Committed employees are typically more engaged and motivated, while strong performance reflects how effectively roles are fulfilled. Understanding their link helps organisations improve workforce engagement and outcomes.

Employee Commitment: Employee commitment is the psychological attachment and loyalty an individual feels towards their organisation. Meyer and Allen (1991) define it as "a psychological state that binds the individual to the organization," while Mowday et al. (2013) describe it as the extent of identification and involvement in organisational goals.

Commitment is generally classified into three types:

- **Affective commitment** – emotional attachment and engagement, often linked to job satisfaction and support.
- **Continuance commitment** – based on the perceived cost of leaving (e.g., job security or financial loss).
- **Normative commitment** – a sense of obligation rooted in values or social norms (Meyer & Allen, 1991).

Factors influencing commitment include job satisfaction (Locke, 1976), perceived organisational support (Eisenberger et al., 1986), and leadership style. Transformational leaders, who offer support and vision, tend to foster stronger commitment (Bass, 1985). Work-life balance (Allen, 2001), job security (Ashford et al., 1989), and career growth opportunities (Mowday et al., 2013) also play key roles.

Commitment is particularly important in high-stress industries like banking. It helps employees remain engaged, resilient, and less likely to quit, despite pressure from tight deadlines and heavy workloads (Meyer et al., 2002; Saadeh & Suifan, 2019).

Employee Performance

Employee performance is generally evaluated through measures such as productivity, efficiency, quality of work, attendance, and adaptability to emerging technologies (Baskaran et al., 2020; Walters & Rodriguez, 2017). Asim (2013) further emphasises the influence of managerial support in shaping outcomes such as task accuracy, cost-effectiveness, and speed.

In the Nigerian public sector, inconsistent performance appraisal practices, limited feedback, and politicised evaluation processes significantly undermine employee performance. A comparative study of federal bureaucracies in Nigeria reveals that although components such as training and feedback impact efficiency and productivity, performance management systems are often poorly linked to organisational learning and development (Ijewereme, 2023). Similarly, Ijewereme and Benson (2013) found that performance appraisals in the Edo and Ondo State civil services are affected by favouritism, leniency, and fear of victimisation, leading to inflated ratings and eroded credibility.

Johnson, Fields, and Chukwuma (2019) also observed a positive relationship between training and employee commitment within Nigeria's civil service, but noted that ineffective

implementation often limits impact. Furthermore, poor appraisal practices, lack of feedback structures, and misaligned training programmes weaken accountability and reduce employee alignment with organisational goals (Opoku, Osman & Kyeraa, 2024).

To improve this, structured performance evaluation systems are needed, comparing outcomes and behaviours with organisational benchmarks. Performance is influenced by factors such as personal traits, organisational structure, environment, motivation, skills, and role clarity.

Empirical Review

This section synthesises findings from prior studies. The review is structured according to synthesise findings of previous studies on the relationship between each of the three AMO variables and employee commitment and performance in line with the research objectives.

Ability and Employee Commitment/Performance

Bos-Nehles et al. (2023) examined the conceptualisation, measurement, and interactions within the AMO framework in HRM research to address existing theoretical and empirical inconsistencies. The study conducted a systematic review of 104 quantitative HRM articles published between 1997 and 2022, analysing the distinctions between AMO variables and their levels of analysis. Findings revealed excessive heterogeneity in the conceptualisation and measurement of AMO variables, leading to inconsistencies in empirical studies. It also highlighted that Ability and Motivation mediate the relationship between AMO-enhancing HRM practices and performance, while Opportunity serves as a boundary condition. The study concluded by emphasising the need for a more integrated and standardised approach to measuring and analysing AMO variables across different levels. However, while the study provides critical insights into AMO frameworks, its reliance on secondary data limits its applicability to specific organisational contexts, such as public institutions. This highlights the need for further empirical research in diverse workplace settings.

Mohammad, Showkat and Imran (2020) assessed the impact of employee competencies on organisational performance in public and private sector banks in India. Using a cross-sectional research design, data were collected through structured questionnaires from 325 managerial and non-managerial employees. The structural equation modelling was used to test the proposed hypotheses. The study found a significant positive relationship between employee competencies and organisational performance, except for self-competence, which showed a negative and insignificant impact. It concluded that employee competencies are critical to organisational success, supporting the resource-based view that well-developed human capital enhances performance. However, the study focused solely on banking institutions, limiting generalisability to other sectors. Moreover, the exclusion of contextual factors like motivation and organizational support presents a research gap.

Al Aina and Atan (2020) investigated the effect of talent management practices on sustainable organisational performance in UAE real estate companies. Using a structured questionnaire to collect data from 306 managers and applying Structural Equation Modelling (SEM) for analysis, the study found that talent attraction and retention had no impact on sustainable organisational performance, whereas learning and development and career management had significant positive effects. The authors concluded that leveraging employee career development through training, coaching, and job rotation enhances performance. However, while the study offers valuable insights into talent management, its focus on the real estate sector may limit its applicability to other industries or sectors in Nigeria with its unique

environmental contexts. Additionally, it does not explore the potential moderating or mediating effects of motivation or organizational opportunities.

Almohtaseb et al. (2020) examined the moderating role of performance management systems in the relationship between talent management and organisational performance. Data were collected from 430 public health workers across 30 hospitals in Jordan, and SEM in AMOS was used for analysis. The study found that an effective performance management system strengthens the relationship between talent management and organisational performance by enhancing management-employee relations. Despite the study's robust methodological approach, it is limited to the healthcare sector, and findings may not be directly transferable to the Nigerian public institutions. Furthermore, the study lacks qualitative insights that could further explain the moderating effect.

Hakro, Siddiqui, and Patoli (2024) explored how talent management affects employee performance in NGOs in Sindh, Pakistan. Adopting a quantitative, cross-sectional, and explanatory research design, the study used a 7-point Likert scale survey to collect data from 100 NGO employees and analysed the data using SPSS and PLS-SEM. The findings revealed that talent management—specifically talent attraction, development, career management, and retention—was a significant predictor of employee performance. However, the study's reliance on convenience sampling raises concerns about selection bias. Additionally, while the study supports the importance of talent management, it does not examine other factors such as motivation and opportunities that may influence performance.

Anwar and Abdullah (2021) assessed the impact of HRM practices, including incentives, training, selective hiring, job security, and decentralisation, on organisational performance in Kurdistan's government institutions. Using a survey of 240 employees and multiple regression analysis, the study found that only decentralisation had a significant impact on organisational performance, contradicting prior research that suggests HRM practices generally enhance performance. The study is limited by inconsistencies in its sampling methodology and a lack of discussion on contextual factors influencing HRM practices. Furthermore, as its findings are based on a single ministry, it cannot be generalized to Nigerian public sector.

Motivation and Employee Performance

Abusharbeh and Nazzal (2024) explored how different types of motivation—moral, material, and social incentives—affect employee performance in Palestinian commercial banks. Using a survey-based approach, the study distributed questionnaires to banking employees, collecting 252 responses that were analysed through Pearson correlation and multiple regression. The findings showed that moral motivations, such as intrinsic satisfaction and an ethical work environment, had a significant positive impact on employee performance. However, financial incentives and social rewards, such as recognition and social status, did not show a notable effect. Additionally, motivation levels varied based on demographic factors, including qualifications, experience, and job titles, indicating that tailored motivational strategies may be more effective. The study concluded that moral motivations play a dominant role in enhancing employee performance in the Palestinian banking sector, recommending that banks foster a work environment that prioritises intrinsic satisfaction. While the study provides valuable insights, its focus on a single industry and geographic region limits the generalisability of the findings.

Danish and Ali (2024) investigated the relationship between reward, recognition, and employee motivation in Pakistan, particularly their influence on job satisfaction. The study used a survey-

based method, distributing 250 self-administered questionnaires across multiple sectors, with 220 usable responses (88% response rate). Statistical analyses revealed strong correlations between reward, recognition, and job satisfaction, demonstrating that employees who felt adequately rewarded and recognised exhibited higher motivation levels. The study highlighted the importance of structured reward and recognition systems in improving organisational performance. However, its findings are limited to Pakistan's organisational context, raising concerns about applicability to other cultural and economic settings.

Thapa (2023) examined the impact of compensation on employee job performance, focusing on the mediating role of motivation in commercial banks. Using a causal-comparative research design, the study surveyed 192 employees across 20 branches of 15 commercial banks, employing regression analysis to assess relationships between compensation, motivation, and performance. The findings indicated that both financial and non-financial compensation significantly influenced job performance, with motivation serving as a key mediator. The study emphasised the need for compensation strategies that extend beyond financial incentives to enhance motivation and overall performance. However, since the research was limited to the banking sector, its applicability to other industries remains uncertain.

Asim (2013) explored the effect of motivation on employee performance in Pakistan's education sector, with a specific focus on training as a mediating factor. The study collected data from 118 university employees in the Wahcantt and Taxila regions through questionnaires, achieving a 78.67% response rate. Regression and correlation analyses revealed that motivation positively influenced performance, with training further enhancing this relationship. The study underscored the importance of both financial and non-financial incentives alongside training programmes. However, its small sample size and sectoral focus limit the broader applicability of its findings.

Pandya (2024) reviewed existing literature on intrinsic and extrinsic motivation and their impact on organisational performance in Rajkot City. The review assessed how these motivational factors influence job satisfaction, productivity, and innovation. Findings indicated that intrinsic motivation, driven by personal fulfilment, promotes long-term commitment and innovation, while extrinsic motivation, such as financial rewards, provides short-term performance boosts. However, an overemphasis on extrinsic motivators may reduce creativity and intrinsic job satisfaction. The study concluded that organisations should strategically balance both motivation types to optimise employee engagement. Despite offering a comprehensive literature review, the study lacks empirical data, limiting its applicability to real-world organisational contexts.

Relationship between Opportunity and Employee Performance

Chiang and Hsieh (2012) explored how perceived organizational support and psychological empowerment affect job performance, with organizational citizenship behaviour as a mediator. The study involved 513 hotel employees in Taiwan and used descriptive statistics, confirmatory factor analysis, and structural equation modelling. Results showed that both perceived support and psychological empowerment positively influenced citizenship behaviour. However, only psychological empowerment and citizenship behaviour directly improved job performance. Citizenship behaviour partially mediated the effects of both variables on performance. While insightful for hospitality management, the findings may not generalize to the public sector.

Chen et al. (2020) explored the relationship between organisational support and employee performance, particularly in flexible manufacturing environments. A total of 180 participants

from 36 work teams across seven large automotive manufacturing companies in China were surveyed using a questionnaire developed by the authors. Multiple linear regression analysis was conducted to test the proposed hypotheses. The study identified four novel performance indicators for frontline workers in flexible manufacturing environments: continuous learning, teamwork, problem-solving, and proactive work behaviour. Organisational support was categorised into reinforcing and inhibitive support. Reinforcing organisational support positively influenced frontline workers' performance, with a strong mediating effect of employees' sense of belonging. Conversely, inhibitive organisational support significantly impacted employees' sense of awe (SA); however, SA did not affect their performance. Additionally, organisational justice (OJ) was found to strongly moderate the relationship between organisational support and employee attitudes. However, the study primarily focused on frontline workers, restricting its applicability to knowledge-based industries where different performance drivers may be at play. Furthermore, cultural and organisational differences could limit the generalisability of the findings beyond China's automotive sector.

Long (2022) explored four key factors—motivation, ability, roles, and organisational support—and their collective impact on organisational performance. The study, which adopted a qualitative descriptive approach based on secondary data, found that these factors were interdependent and essential for sustaining performance. The research indicated that the absence of any of these factors could lead to a decline in organisational performance, while their simultaneous presence would ensure continuous improvement. However, the study's reliance on secondary sources limits the generalisability of its findings, as the absence of primary data restricts validation through empirical evidence. Additionally, the study does not specify industry-specific variations in how these factors influence performance, which is a crucial consideration for organisational studies. The lack of empirical testing and quantitative analysis further weakens the robustness of its conclusions, necessitating further research with primary data collection.

Similarly, Zhenjing et al. (2022) investigated the influence of the workplace environment on employee task performance, with employee commitment and achievement-striving ability serving as mediators. A cross-sectional research design was employed, and data were gathered from academic staff using a convenience sampling technique. A total of 314 valid questionnaires were used for analysis. Structural equation modelling (SEM) was performed using Smart PLS 3, incorporating both measurement and structural models. The findings revealed that a positive workplace environment significantly enhanced employee performance. Additionally, it contributed to higher levels of employee commitment and achievement-striving ability. Both mediating variables were also found to positively impact employee performance. Furthermore, the results indicated that the workplace environment indirectly influenced employee performance by fostering commitment and achievement-striving ability. While the study provided valuable empirical insights, it relied on convenience sampling, which may have introduced selection bias and limited the generalisability of the findings across different organisational settings.

Identified Research Gaps

Despite the valuable insights offered by previous studies on the AMO framework and employee performance, several gaps persist that justify further research. First, many of the reviewed studies are sector-specific - focusing on banking, real estate, healthcare, or manufacturing - and conducted outside Nigeria, limiting their applicability to the public sector in a developing

country context. Few studies incorporate the unique bureaucratic, political, and cultural dynamics of Nigerian public institutions. Second, while ability and motivation are often explored, the 'opportunity' component - especially organisational support, autonomy, and empowerment - is frequently under-researched or only indirectly assessed. Lastly, very few studies offer an integrated analysis of how AMO-enhancing HRM practices simultaneously influence both employee commitment and performance - particularly in hierarchical, resource-constrained public sector settings. Addressing these gaps will contribute to theory refinement, contextual applicability, and improved HRM strategies tailored to the challenges of public institutions in Nigeria.

Theoretical Review

The study is grounded in several theoretical perspectives that provide insight into how employee performance and commitment can be influenced by workplace conditions, HRM practices, and motivational factors. The four primary theoretical frameworks that underpin this study are the Ability-Motivation-Opportunity (AMO) Theory, Social Exchange Theory (SET), Expectancy Theory of Motivation (Vroom, 1964), and Organisational Commitment Theory. Each theory offers a distinct yet complementary perspective on how organisational strategies and employee perceptions shape workplace engagement, productivity, and commitment. This section provides an in-depth critical review of these theories, evaluating their strengths, limitations, and relevance to this study.

The Ability-Motivation-Opportunity (AMO) Theory

The Ability-Motivation-Opportunity (AMO) framework, introduced by Appelbaum et al. (2000) and refined by Boxall and Purcell (2003), explains employee performance as a function of ability, motivation, and opportunity ($P = f[A, M, O]$). Employees perform best when they have the right skills, are motivated, and work in supportive environments (Bos-Nehles et al., 2023). Widely used in HRM research, the AMO model underpins high-performance work systems (HPWS) and is linked to better engagement, satisfaction, and performance (Kellner et al., 2019; Boselie et al., 2005). Its strength lies in its holistic approach, integrating multiple performance drivers. Studies show AMO-based HR practices enhance citizenship behaviour and reduce turnover (Paauwe & Boselie, 2005; Jiang et al., 2012). It also supports interventions like training and career development. However, the model is critiqued for overlooking external factors like economic shifts and industry dynamics (Lepak et al., 2006). It also assumes equal weight among A, M, and O, though their influence may vary by context - for example, motivation may dominate in high-stress industries (Subramony, 2009). Additionally, its applicability may vary by organisation size, sector, and culture (Van de Voorde & Beijer, 2015).

In public sector institutions characterised by bureaucratic hierarchy and rigid structures, the application of the AMO model requires adaptation. For instance, opportunities for discretion and innovation are often limited by top-down decision-making, outdated protocols, and politicised HR processes (Osawe, 2015; Opoku, Osman & Kyeraa, 2024). Therefore, enhancing 'Opportunity' may demand systemic reforms such as decentralisation, digitalisation of HR processes, and greater line-manager empowerment. Moreover, performance-related motivation may be hampered by weak reward systems and tenure-based promotions rather than merit (Ijewereme, 2023). As such, applying AMO in this context must account for these institutional constraints to be effective.

Social Exchange Theory (SET)

The Social Exchange Theory (SET), proposed by Blau (1964), explains workplace relationships through reciprocity—employees offer effort and loyalty in return for rewards like pay, recognition, and job security. When employees feel supported and treated fairly, they are more likely to be committed and engaged (Cropanzano & Mitchell, 2005). A key strength of SET is its broad application to behaviours such as commitment, satisfaction, and turnover. Studies show that fairness, recognition, and career growth lead to stronger performance and loyalty (Shore et al., 2006). Perceived organisational support (POS), central to SET, has been linked to increased discretionary effort (Eisenberger et al., 1986).

SET is closely related to psychological contract theory, but they are conceptually distinct. While SET focuses on the informal exchange of social norms such as trust, fairness, and mutual respect, psychological contract theory concentrates on perceived mutual obligations - often implicit -between the employer and employee (Conway & Briner, 2005). A breach of these perceived obligations can lead to disengagement and reduced performance, but SET captures the broader relational dynamics beyond contractual expectations.

In practice, violations of social exchange expectations are evident in the Nigerian public sector. For example, in public sector entities, delays in salary payments, lack of recognition, and prolonged stagnation in promotions undermine employee trust and morale (Onavwie, Sokoh & Okereka, 2023). Such perceived neglect violates the reciprocity norms central to SET, weakening commitment and increasing turnover intention.

However, SET is limited by its lack of measurable constructs and predictive clarity (Emerson, 1976). Cultural and institutional factors may also affect how exchanges are interpreted. In collectivist cultures like Nigeria, loyalty may persist even in the face of poor reciprocity, complicating the theory's explanatory power (Akanji, et al., 2018). Furthermore, the model may enable unfair expectations if organisations fail to reciprocate employee contributions (Cropanzano & Mitchell, 2005). In this study, SET helps explain how HR practices - when built on trust, fairness, and recognition - enhance employee commitment and retention, supporting the development of a loyal and engaged workforce.

Expectancy Theory of Motivation (Vroom, 1964)

The Expectancy Theory of Motivation, developed by Vroom (1964), posits that employees choose their effort levels based on three factors: expectancy (effort leads to performance), instrumentality (performance leads to rewards), and valence (value of rewards). Motivation occurs when employees believe their efforts will result in desirable outcomes (Van Eerde & Thierry, 1996). A key strength of the theory is its logical, structured approach grounded in cognitive psychology. Research shows that clear links between performance and rewards boost engagement and productivity (Latham, 2007). It also helps organisations design effective incentive systems aligned with employee expectations (Isaac et al., 2001).

In the Nigerian public sector, however, frequent budgetary constraints, politicised reward systems, and inconsistent promotion processes often disrupt the expected link between effort, performance, and reward. These inconsistencies reduce employees' expectancy and instrumentality perceptions, thereby weakening motivation and commitment (Brewer, & Walker, 2013; Ogah & Akinbo, 2024).

However, the theory assumes rational decision-making, overlooking the impact of emotions, biases, and social influences (Mitchell & Biglan, 1971). It also emphasises extrinsic rewards,

downplaying intrinsic motivators like personal growth or job satisfaction (Deci & Ryan, 1985). Additionally, measuring expectancy, instrumentality, and valence can be difficult due to their subjective nature (Van den Broeck et al., 2011).

Given Nigeria's cultural and organisational context, it is important to adopt a hybrid reward strategy. This should include not only extrinsic motivators such as fair pay, promotion, and bonuses, but also intrinsic drivers such as social recognition, respect from supervisors, and meaningful work - factors that hold significant value in collectivist societies (Akanbi & Itiola, 2013; Laaser & Bolton, 2022).

In this study, Expectancy Theory is useful for understanding how performance-based rewards drive employee commitment and productivity. When employees believe their efforts will be fairly rewarded, they are more likely to stay engaged and committed.

Organisational Commitment Theory

Organisational Commitment Theory, proposed by Meyer and Allen (1991), identifies three forms of employee commitment: affective, normative, and continuance. Affective commitment refers to emotional attachment, where employees stay because they genuinely identify with the organisation's values and find satisfaction in their roles. Normative commitment arises from a sense of obligation, where employees feel morally bound to remain, often due to loyalty or concerns about team disruption. Continuance commitment, on the other hand, is based on the perceived cost of leaving, such as losing financial benefits or job security, which may lead to disengagement if employees stay only out of necessity. Although this model is widely applied, it has been criticised for limited cross-cultural relevance. Ling, Fang, and Zhang (2002), in a study of 1,500 Chinese employees, expanded the model to include five forms of commitment: affective, normative, ideal, economic, and choice commitment. Wang (2004) further refined this model in Guangdong Province, introducing value commitment, passive continuance commitment, affective commitment, normative commitment, and active continuance commitment. Value commitment, which was missing from the original model, refers to an employee's willingness to exert effort for the organisation's success. Research by Li, Wong, and Tong (2013) also highlighted that emotional attachment alone does not ensure high performance, as employees may still lack the drive to excel despite feeling connected to the organisation. Practically, affective commitment tends to yield the most positive outcomes, especially when organisational policies align with employees' personal values and lifestyles. Such alignment reinforces emotional bonds, enhances job satisfaction, and promotes long-term loyalty. Understanding these different dimensions of commitment is essential for designing HR strategies that improve employee engagement and organisational performance.

Conceptual Framework

The conceptual framework of this study is based on the Ability-Motivation-Opportunity (AMO) model, which has been widely applied in human resource management to explain how employee performance can be enhanced through the interaction of ability, motivation, and opportunity (Appelbaum et al., 2000). The framework posits that employees perform effectively when they possess the necessary skills (ability), are adequately motivated (motivation), and are provided with opportunities to apply their skills within a supportive work environment (opportunity) (Boxall & Purcell, 2016).

This study builds on the AMO model to provide a structured approach to understanding employee commitment and performance. It integrates AMO components as independent

variables and employee commitment and performance as the dependent variable. These variables are hypothesized to play a role in shaping the impact of the AMO framework on employee performance within the Nigerian public sector context. The conceptual framework is depicted in Fig 2.



Figure 2: Conceptual Framework

The independent variables comprise **Ability** (Learning and Skills Development Programmes), **Motivation** (Intrinsic and Extrinsic Incentives) and **Opportunities** (Supportive Work Environment). The dependent variables are employee commitment and performance.

Ability refers to the skills and knowledge employees need to perform well (Mohammad, Showkat & Imran, 2020). Training and development programmes help build these competencies (Jiang et al., 2012; Hakro, Siddiqui & Patoli, 2024). This study examines how skill development impacts commitment and performance at CGG.

Motivation includes internal and external factors that drive effort (Ryan & Deci, 2000). Financial rewards like salaries and bonuses, along with non-financial incentives such as recognition and career growth, significantly influence commitment and performance (Gerhart & Fang, 2015; Abah & Nwoku, 2016; Pandya, 2024). The study assesses how these incentives affect CGG employees. Opportunity refers to the work environment and resources that enable performance (Lepak et al., 2006). Supportive leadership, fair policies, and a collaborative culture boost commitment and satisfaction (Chen et al., 2020; Eisenberger et al., 2016; Long, 2022; Zhenjing et al., 2022). This research explores the impact of workplace support at CGG.

METHODOLOGY

This study adopts a quantitative research design to examine the effects of ability, motivation, and opportunity on employee commitment and performance. This approach enables objective measurement and analysis of variable relationships using numerical data (Bryman, 2016) and ensures reliability through structured methods (Creswell & Creswell, 2018). The correlational design treats AMO components as independent variables and employee outcomes as dependent variables. Quantitative methods are suitable for testing hypotheses and identifying patterns in large datasets (Saunders et al., 2016), offering generalisable results. A cross-sectional survey provides a broad overview of employee experiences, yielding practical insights for HR practices.

Population

In research, a population refers to the entire group relevant to a study (Saunders, Lewis & Thornhill, 2019). This study targets 183 staff members of the Centre for Geodesy and

Geodynamics (CGG), Toro, Bauchi State, a suitable population given its structured setting and HR relevance (Creswell & Creswell, 2018). CGG is ideal for two reasons: it requires a skilled, motivated workforce for its research role, and concerns about employee commitment are rising in Nigeria's public sector (Pepple, Akinsowon & Oyelere, 2021). Focusing on CGG allows for in-depth analysis of HR factors affecting commitment and performance. A single case study offers detailed insights into organisational dynamics, often missed in broader studies (Bryman, 2016), and can inform similar contexts (Nyimbili & Nyimbili, 2024).

Sampling Technique and Sample Size

Sampling involves selecting a subset from a population to represent the whole (Saunders, Lewis & Thornhill, 2019). It enables efficient data collection and generalisable results (Creswell & Creswell, 2018). This study used simple random sampling, a method giving each individual an equal chance of selection, reducing bias and ensuring representativeness (Taherdoost, 2016). The approach enhances validity and supports generalisation to CGG's workforce. Sample size was determined using Yamane's (1967) formula, which calculates sample size based on population and acceptable error margin. Yamane's formula is given as:

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

Where:

n = Sample size

N = Total population (188)

e = Margin of error (assumed at 5% or 0.05)

Applying the formula:

$$n = \frac{188}{1+188(0.052)}$$

$$n = \frac{188}{1+188(0.0025)}$$

$$n = \frac{188}{1.47}$$

$$\approx \underline{\underline{128}}$$

Thus, the sample size for this study is **128** employees of CGG. This ensures an adequate representation of the population while maintaining statistical reliability and efficiency (Israel, 1992).

Sources of Data

Data sources in research refer to the origin of the information collected for analysis, which can be classified into primary and secondary sources (Saunders, Lewis, and Thornhill, 2019). Primary data refers to first-hand information obtained directly from respondents, while

secondary data consists of previously collected information from existing sources such as books, journal articles, and organisational reports (Creswell & Creswell, 2018).

This study relies primarily on primary data, which will be collected through a structured questionnaire administered to employees of the Centre for Geodesy and Geodynamics (CGG), Toro, Bauchi State. The use of a questionnaire is appropriate because it allows for systematic data collection, ensuring consistency and objectivity in responses (Bryman, 2016). Given the quantitative nature of the study, a questionnaire facilitates the collection of numerical data that can be statistically analysed to examine the relationships between variables (Taherdoost, 2016).

In addition, secondary data will be used to support the analysis. This includes relevant literature, organisational records, and industry reports related to employee commitment and organisational performance. Secondary data helps provide context and background for the study, supporting the interpretation of primary data findings (Bell, Harley, and Bryman, 2022).

Instrument of Data Collection

The primary instrument for data collection in this study is a **structured questionnaire**. A structured questionnaire is a widely used tool in quantitative research as it allows for standardised data collection, ensuring consistency in responses across participants (Saunders, Lewis, & Thornhill, 2019). The questionnaire is designed to capture data on the key variables under study—learning and skills development (ability), financial and non-financial incentives (motivation), and supportive work environment (opportunity)—as they relate to employee commitment and performance at the Centre for Geodesy and Geodynamics (CGG), Toro, Bauchi State.

The questionnaire consists of closed-ended questions measured using a five-point Likert scale, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). The Likert scale is suitable for measuring attitudes and perceptions, enabling the quantification of responses for statistical analysis (Bryman, 2016). This approach enhances the reliability and validity of the data collected (Taherdoost, 2016).

The questionnaire is divided into the following sections:

- a) **Demographic Information:** Includes age, gender, level of education, job role, and years of experience.
- b) **Learning and Skills Development Programmes (Ability):** Assesses access to training, skill development opportunities, and their impact on performance.
- c) **Financial and Non-Financial Incentives (Motivation):** Examines the influence of salary, bonuses, recognition, and career advancement on employee commitment.
- d) **Supportive Work Environment (Opportunity):** Evaluates leadership support, organisational policies, and workplace culture.
- e) **Employee Commitment and Performance:** Measures the overall level of engagement and job performance.

This structured approach ensures the collection of relevant and precise data necessary for testing the study's hypotheses

Method of Data Collection

A cross-sectional survey method was employed, using a structured questionnaire as the primary instrument for data collection. Cross-sectional surveys are widely used in organisational studies

as they facilitate the collection of data at a single point in time, allowing researchers to analyse existing conditions and relationships between key variables (Saunders, Lewis, & Thornhill, 2019).

The questionnaire was distributed using Google Forms, an online survey tool that enables efficient and structured data gathering. Google Forms is chosen due to its accessibility, ease of use, and ability to collect responses in real time. As organisations increasingly adopt digital tools for communication and data management, online survey methods provide a convenient way to reach respondents while minimising logistical constraints.

Google Forms streamlines data collection by automatically recording and organising responses, reducing human error and enhancing accuracy (Vasanth Raju & Harinarayana, 2016). It also allows respondents to complete surveys at their convenience, improving response rates and reducing non-response bias compared to paper-based methods (Bell, Harley, & Bryman, 2022).

Anonymity in online surveys encourages honest responses, minimising social desirability bias, which is crucial in organisational research (Dillman, Smyth, & Christian, 2014). Additionally, Google Forms is cost-effective, eliminating printing and distribution expenses while maintaining data quality (Bryman, 2016). Its integration with Microsoft Excel and Jamovi further facilitates efficient data analysis.

To maximise participation, the survey link was shared via official organisational communication channels, particularly the internal messaging platforms – WhatsApp and Telegram. Periodic reminders were also sent to encourage respondents to complete the survey within the stipulated timeframe. By leveraging Google Forms, this study ensures a systematic, reliable, and cost-efficient approach to data collection, ultimately strengthening the validity and credibility of the research findings.

Data Analysis

The data collected was analysed using both descriptive and inferential statistical techniques. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were used to summarise and present the demographic characteristics of respondents and key study variables. This approach provides a clear overview of the data distribution and trends (Creswell, 2014).

Inferential statistics were employed to test the study's hypotheses and examine relationships between variables. Specifically, multiple regression analysis was used to determine the impact of ability, motivation, and opportunity on employee commitment and performance. This technique is appropriate for analysing the strength and direction of relationships between independent and dependent variables (Ghanad, 2023).

Jamovi, a user-friendly statistical software, was used for data analysis. The software's robust analytical capabilities ensure accuracy and efficiency in handling large datasets, making it a suitable choice for quantitative research (Ahmed and Muhammad, 2021).

RESULT AND DISCUSSION

This chapter presents and analyses the primary data collected from employees at the Centre for Geodesy and Geodynamics (CGG) regarding the influence of the Ability-Motivation-Opportunity (AMO) framework on their commitment and performance. The chapter is structured into four sections. The chapter is organised into four key sections. Section 4.2 presents the data analysis and results are presented, including demographic characteristics of

respondents and findings related to the key variables of the study. It also presents the reliability analysis, the descriptive statistics, normality and distribution analysis, and inferential statistical methods, including and regression outputs. This is followed by a summary of the main findings. Section 4.3 provides a summary of key findings based on the study's objectives. Finally, Section 4.4 discusses these findings in the context of relevant literature and theoretical perspectives, identifying how they align or contrast with previous studies on the AMO model. The overall aim is to draw insights on how learning and skills development (**Ability**), financial and non-financial incentives (**Motivation**), and a supportive work environment (**Opportunity**) impact employee outcome within the context of the Nigerian public sector.

Data Analysis and Presentation

This section presents the analysis of the data collected from employees of the Centre for Geodesy and Geodynamics (CGG), Toro, Bauchi State. It begins with an overview of the demographic profile of participants to provide context for the responses. This is followed by a reliability analysis to confirm the internal consistency of the research instrument. Descriptive statistics are then presented to summarise participants' perceptions of learning and skills development, motivation, and workplace opportunities. In addition, a distribution analysis is carried out to examine the spread of responses across variables. Furthermore, the test of normality assumptions is conducted to assess whether the data meet the requirements for parametric statistical analysis. Finally, the results of inferential statistical analyses, specifically Pearson correlation and multiple regression, are presented to examine the relationships between the AMO components and employee commitment and performance.

Demographic Profile of Respondents

This section presents the demographic characteristics of the respondents who participated in the study. The variables considered include gender, age, educational qualifications, years of work experience, and departmental affiliation within the case study. Understanding these demographic features provides essential context for interpreting the results and assessing the diversity and representativeness of the sample. These characteristics also help in identifying any patterns or trends that may influence employee commitment and performance in relation to the AMO framework.

Gender

The gender distribution indicates that the majority of respondents were male, accounting for 77% ($n = 99$) of the total sample. Female participants made up 23% ($n = 29$). This suggests a male-dominated workforce within the Centre for Geodesy and Geodynamics, which may reflect broader gender imbalances often observed in technical and scientific institutions in Nigeria. The result is presented in fig. 3.

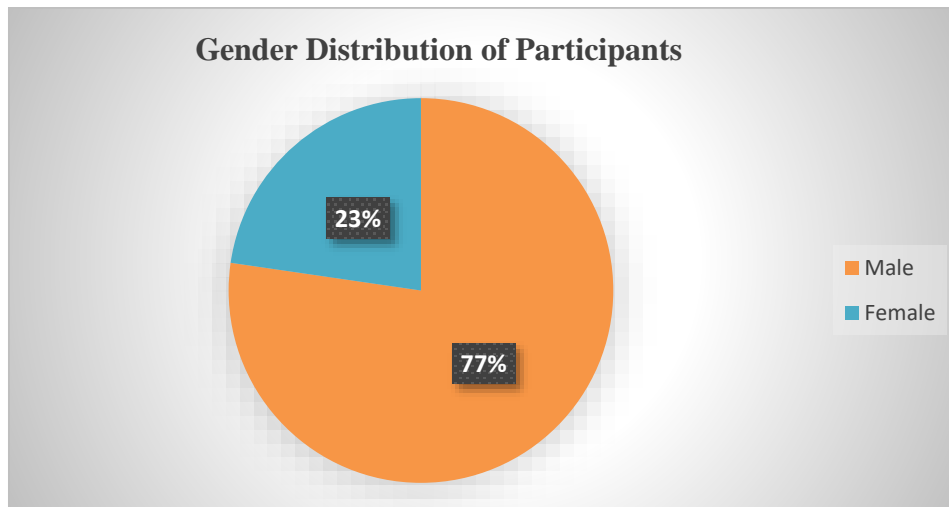


Figure 3: Gender Distribution of Participants

Age

The result in figure 4 reveals that the largest proportion of participants (43.0%) are within the 36–45 age group, followed by those aged 46–55, who make up 37.5% of the sample. Participants aged 26–35 account for 14.1%, while only 5.5% are aged 56 and above. This suggests that the participant pool is predominantly composed of mid-career individuals, with fewer early-career and senior-level participants

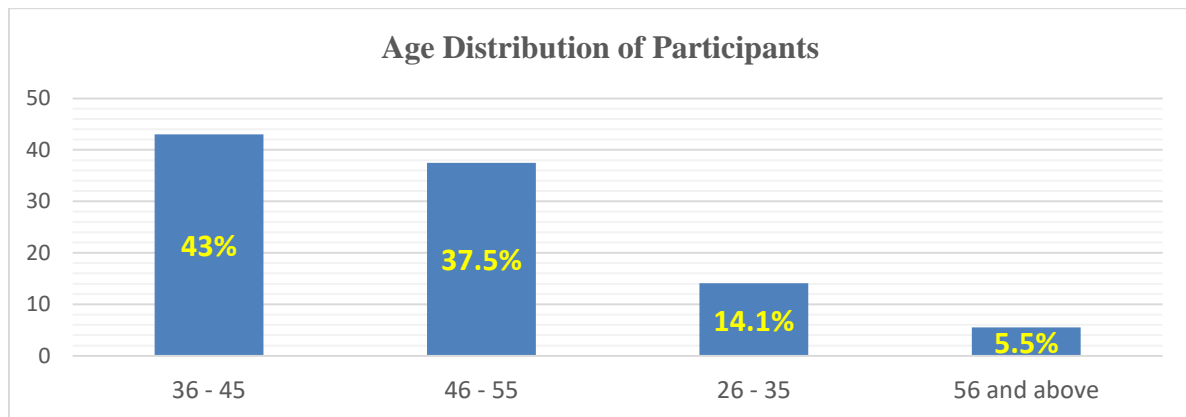


Figure 4: Age Distribution of Participants

Level of Education

The result in figure 5 show the majority of participants (48%) hold a Master's degree, followed by 31% who have a Higher National Diploma (HND) or Bachelor's degree. A smaller portion of participants (15%) have a diploma, while 5% hold a PhD, and only 2% fall into the "Others" category, which likely includes various non-standard certifications. This distribution suggests that the sample includes a well-educated workforce, with a significant proportion of employees possessing higher-level degrees and certifications.

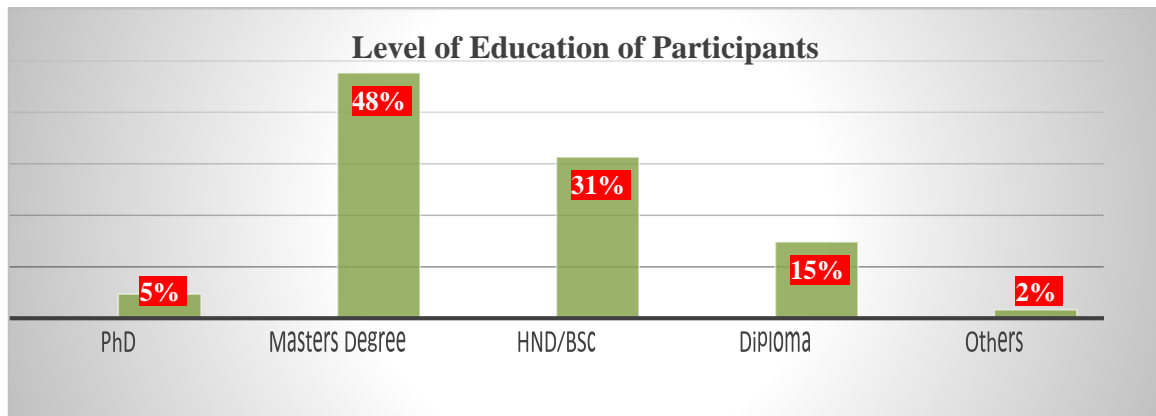


Figure 5: Level of Education

Level of Experience of Participants

The analysis of participants' level of experience presented in figure 6 shows that majority (53.1%) have over 10 years of work experience, followed by 32.8% with 6 to 10 years of experience. Those with 1 to 5 years of experience constitute 13.3% of the sample, while only 0.8% have less than one year of experience. This suggests that the workforce at the Centre for Geodesy and Geodynamics is largely composed of seasoned professionals with substantial experience, which may have implications for their performance, adaptability, and engagement with institutional processes.

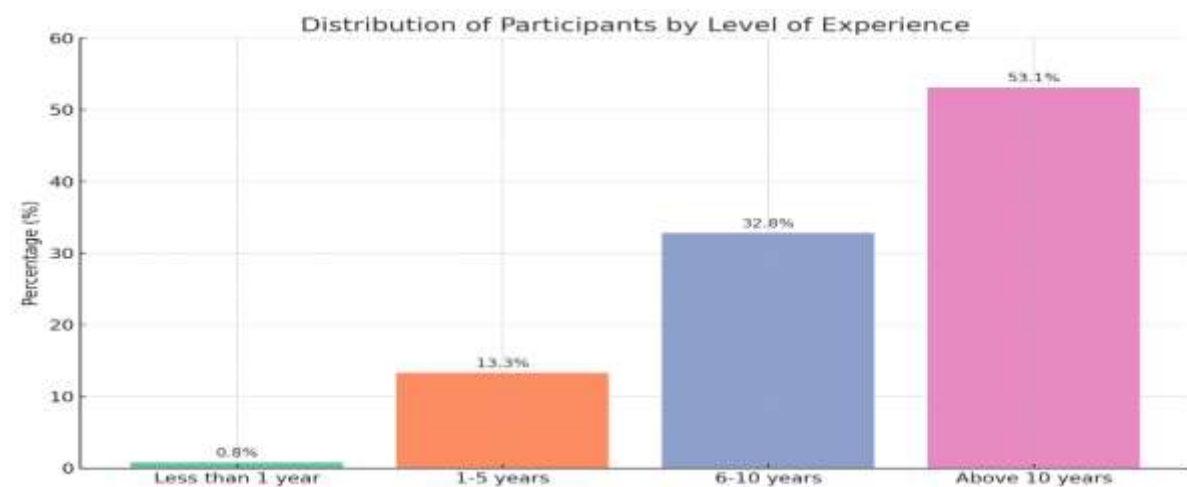


Figure 6: Distribution of Participants by Level of Experience

Divisional Distribution of Participants

The distribution of participants across different divisions with the Centre as shown in figure 7 reveals a diverse representation within the organisation. The majority of participants (32.8%) work in the Administration department, followed by those in Finance and Research, each accounting for 22.7% of the total respondents. Participants from ICT/Technical Services and Other departments make up 10.9% each. This distribution indicates that insights were gathered from a wide range of functional areas, providing a balanced perspective across departments within the Centre for Geodesy and Geodynamics.

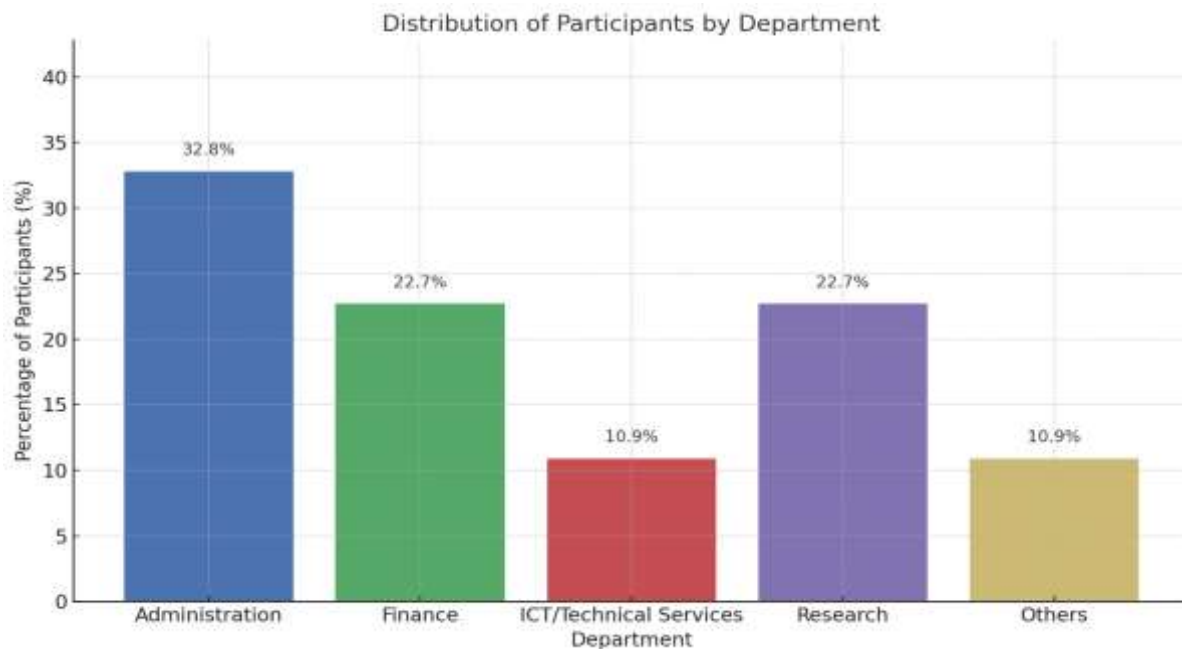


Figure 7: Distribution of Participants by Division

Reliability Analysis

To evaluate the internal consistency of the research instruments, reliability analysis was carried out using Cronbach's alpha. According to Nunnally and Bernstein (1994), a Cronbach's alpha (α) value of 0.70 or above is deemed acceptable for assessing the reliability of measurement scales in behavioural research. The results show that all constructs - ability, motivation, opportunity, and employee performance - met the required threshold, indicating that the measurement items used in the questionnaire are reliable and consistent for further statistical analysis. The result of the analysis is presented in table 1.

Table 1: Reliability Analysis Result

Construct/Variable	No- of items	Cronbach's α
Ability (ABT)	5	0.723
Motivation (MTV)	8	0.712
Opportunity (OPT)	5	0.786
Employee Commitment and Performance (ECP)	16	0.835
All Variables	34	0.907

Source: Jamovi Output

The reliability analysis results presented in Table 1 show that the internal consistency of the various constructs measured in the study is generally satisfactory. The construct **Ability (ABT)**, with 5 items, has a Cronbach's α of 0.723, indicating acceptable internal consistency. **Motivation (MTV)**, consisting of 8 items, also shows a similar Cronbach's α of 0.712, which is considered acceptable for research purposes. The construct **Opportunity (OPT)**, with 5 items, demonstrates a stronger internal consistency with a Cronbach's α of 0.786, which is regarded as good. The **Employee Commitment and Performance (ECP)** construct, which has 16 items, shows a high Cronbach's α of 0.835, reflecting excellent internal consistency. Finally, when considering all 34 items across the variables, the combined Cronbach's α is

0.907, which is very high and indicates that the overall set of variables is highly reliable. These results suggest that the constructs and the entire measurement tool are consistent and reliable for assessing the intended dimensions.

Descriptive Statistics

Table 2 displays the descriptive statistics for the study variables. Every variable received complete responses from 128 participants, with no instances of missing data.

Table 2: Descriptives Statistics of the Study Variables

	ABT	MTV	OPT	ECP
N	128	128	128	128
Missing	0	0	0	0
Mean	4.19	4.00	3.97	4.06
Median	4.30	4.06	4.00	4.13
Standard deviation	0.555	0.450	0.568	0.408
Minimum	2.60	2.75	1.60	3.06
Maximum	5.00	5.00	5.00	5.00

Source: Jamovi Output

The results from the descriptive statistics in om Table 2 indicate a generally positive perceptions among the participants regarding their abilities, motivation, and opportunities in their work environment. The **mean scores** show generally positive perceptions across all variables: employees report high ability (4.19), motivation (4.00), and opportunity (3.97), all contributing to strong employee commitment and performance (4.06). These positive scores suggest that learning and skills development programmes, financial and non financial incentives, and a supportive work environment are effective in enhancing employee outcomes.

However, the **variability** in responses indicated by standard deviations suggests room for improvement. The highest variability is in **Ability (0.555)**, indicating that while many employees feel competent, some feel they require additional support or training. Similarly, the **Opportunity (0.568)** and **Motivation (0.450)** constructs show some differences in employee perceptions, indicating that not all employees feel equally supported or motivated.

The **range** of scores further reveals that a small number of employees report lower levels of ability, motivation, and opportunity, suggesting areas where the Centre can improve. For example, the wide range in **Opportunity (1.60-5.00)** indicates that some employees feel there is a lack of resources or support, which could impact their performance.

Overall, while the statistics suggest positive outcomes, addressing the variability and ensuring more consistent support and motivation across all employees could further enhance employee commitment and performance.

Distribution of the Data

As many inferential techniques rely on the assumption that residuals are normally distributed (Field, 2018), it is crucial to assess to evaluate the distribution of the study variables, by checking the skewness and kurtosis. The results are summarised in Table 3.

Table 3: Normality of Data Distribution

	ABT	MTV	OPT	ECP
Skewness	-0.856	-0.391	-1.06	-0.305
Std. error skewness	0.214	0.214	0.214	0.214
Kurtosis	0.282	-0.260	2.13	0.0499
Std. error kurtosis	0.425	0.425	0.425	0.425
Shapiro-Wilk W	0.922	0.977	0.923	0.982
Shapiro-Wilk p	< .001	0.025	< .001	0.096

Source: Jamovi Output

The results from Table 3 indicate that the data distribution for the study variables moderately deviates from normality. Skewness values for Ability (−0.856), Motivation (−0.391), and Opportunity (−1.06) suggest a slight to moderate negative skew, meaning that responses were generally high but not perfectly symmetric. Kurtosis values show that Opportunity (2.13) is slightly leptokurtic, indicating a sharper peak than a normal distribution, while the other variables are closer to normal.

The Shapiro-Wilk test results provide more definitive evidence of non-normality. The p-values for Ability (<.001), Motivation (0.025), and Opportunity (<.001) are below the 0.05 threshold, indicating statistically significant deviations from normality. However, Employee Commitment and Performance (ECP) has a p-value of 0.096, suggesting its distribution does not significantly differ from normal at the 5% level.

Despite these deviations, the sample size (N=128) is sufficiently large for the Central Limit Theorem to apply, allowing regression analysis to proceed with robustness. However, the slight skewness and kurtosis may warrant caution in interpreting parametric test results.

Normality Assumption Tests

Given these mixed results of normality of data distribution in table 3, it is necessary to conduct further assumption checks (Durbin–Watson Test for Autocorrelation, Collinearity, and Normality Test (Shapiro-Wilk) to authenticate the validity of parametric analysis – Pearson correlation and regression analysis.

Durbin–Watson Test for Autocorrelation

The Durbin–Watson test is used to detect autocorrelation in the residuals of a regression model, which can violate the assumption of independent errors. The test statistic ranges from 0 to 4, with a value around 2 indicating no autocorrelation. Values significantly below 2 suggest positive autocorrelation, while values above 2 indicate negative autocorrelation (Field, 2018). As a general rule, a Durbin–Watson value between **1.5 and 2.5** is considered acceptable and suggests that autocorrelation is not a concern. The result of the Durbin–Watson test for this study is presented in table 4.

Table 4: Durbin–Watson Test for Autocorrelation

Autocorrelation	DW Statistic	p
-0.138	2.25	0.146

Source: Jamovi Output

The Durbin–Watson (DW) statistic of 2.25 suggests that there is no significant autocorrelation in the residuals of the regression model. According to Field (2018), normal DW values should

range between 1.5 and 2.5. Turner, et al. (2021) further affirmed that a DW value close to 2 indicates the absence of autocorrelation, with values between 1.5 and 2.5 generally considered acceptable. The p-value of 0.146 (greater than 0.05) further confirms that the observed autocorrelation is not statistically significant. This implies that the assumption of independence of errors is satisfied, supporting the reliability of the regression analysis results in this study.

Multicollinearity Test Result

Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, making it difficult to determine their individual effects on the dependent variable. It can lead to unstable coefficients, inflated standard errors, and reduced reliability of regression model (Field, 2018). Variance Inflation Factor (VIF) and Tolerance are common indicators used to assess multicollinearity in regression analysis. A VIF value below 5 is generally considered acceptable, indicating that multicollinearity is not a serious issue, while values between 5 and 10 may suggest moderate multicollinearity that requires further attention. VIF values above 10 are typically regarded as problematic, indicating high multicollinearity that could distort the regression estimates (Hair et al., 2010). Tolerance, the reciprocal of VIF, should ideally be above 0.2 to be acceptable. Values below 0.1 suggest a high level of multicollinearity and raise concerns about the reliability of the model (Menard, 2010). These benchmarks help ensure the stability and interpretability of regression coefficients. The multicollinearity test result for this study is presented in Table 5.

Table 5: Collinearity Statistics

	VIF	Tolerance
ABT	1.64	0.611
MTV	1.77	0.566
OPT	1.97	0.508

Source: Jamovi Output

Table 5 presents the Variance Inflation Factor (VIF) and Tolerance values to assess multicollinearity among the independent variables: Ability (ABT), Motivation (MTV), and Opportunity (OPT). Multicollinearity occurs when predictor variables are highly correlated, potentially distorting regression estimates. **VIF values below 5** and **Tolerance values above 0.2** suggest no serious multicollinearity issues (Field, 2018). In this study, the VIF values range from 1.64 to 1.97, and the Tolerance values range from 0.508 to 0.611 - all within acceptable limits.

The results, therefore, indicate that there is no significant multicollinearity among the predictor variables. Each independent variable contributes unique information to the model, supporting the robustness and reliability of the regression analysis.

Normality Test (Shapiro-Wilk)

The Shapiro-Wilk test is commonly used to assess the normality of a dataset. A p-value less than 0.05 indicates that the data significantly deviate from a normal distribution, suggesting a violation of the normality assumption. Conversely, a p-value greater than 0.05 suggests that the data are normally distributed, and the assumption of normality holds (Ghasemi & Zahediasl, 2012). In practice, normality is important for many statistical tests, such as regression analysis, which assume that the residuals follow a normal distribution. The Shapiro-Wilk test result is presented in Table 6.

Table 6: Normality Test (Shapiro-Wilk)

Statistic	p
0.983	0.099

Source: Jamovi Output

The result of the analysis in table 6 shows the Shapiro-Wilk test statistic as 0.983, with a p-value of 0.099. Since the **p-value is greater than 0.05**, this indicates that the data are normally distributed as they are not significantly deviated from normality. Therefore, the assumption of normality is met, suggesting that the data are appropriate for parametric statistical analyses.

Correlation Analysis

Correlation analysis was employed to evaluate the strength and direction of the relationships between the independent variables (Ability, Motivation, and Opportunity) and the dependent variable (Employee Commitment and Performance). This analysis helps to determine how changes in each independent variable are associated with changes in employee commitment and performance. The findings from this analysis are summarised in Table 7.

Table 7: Correlation Matrix

		ABT	MTV	OPT	ECP
ABT	Pearson's r	—			
	p-value	—			
MTV	Pearson's r	0.526	—		
	p-value	< .001	—		
OPT	Pearson's r	0.592	0.631	—	
	p-value	< .001	< .001	—	
ECP	Pearson's r	0.584	0.561	0.663	—
	p-value	< .001	< .001	< .001	—

Source: Jamovi Output

Table 7 shows the correlations between each independent variable (Ability, Motivation, and Opportunity) and **Employee Commitment and Performance (ECP)**:

Ability (ABT) and Employee Commitment and Performance (ECP): There is a moderate positive correlation between **Ability (ABT)** and **ECP** ($r = 0.584$, $p < 0.001$). This suggests that as employees' abilities improve, their commitment and performance also tend to increase. The correlation is statistically significant, indicating a reliable relationship between these two variables.

Motivation (MTV) and Employee Commitment and Performance (ECP): A moderate positive correlation is also observed between **Motivation (MTV)** and **ECP** ($r = 0.561$, $p < 0.001$). This implies that higher levels of motivation are associated with higher levels of employee commitment and performance. This relationship is statistically significant, confirming the importance of motivation in enhancing employee outcomes.

Opportunity (OPT) and Employee Commitment and Performance (ECP): There is a strong positive correlation between **Opportunity (OPT)** and **ECP** ($r = 0.663$, $p < 0.001$). This indicates that employees who perceive more opportunities in their work environment are likely to demonstrate higher commitment and performance. The strength of this correlation suggests that opportunity may have a particularly strong influence on employee outcomes.

Linear Regression Analysis

Linear regression was conducted to explore the relationships between the independent variables (Ability, Motivation, and Opportunity) and the dependent variable (Employee Commitment and Performance). This analysis helps to determine how changes in the independent variables affect employee commitment and performance, and provides an estimate of the strength and direction of these relationships. The results of the analysis are presented in Tables 8 and 9.

Table 8: Model Fit Measures

Model	R	R ²	Adjusted R ²	Overall Model Test			
				F	df1	df2	p
1	0.716	0.513	0.501	43.5	3	124	< .001

Source: Jamovi Output

The model fit measures for the linear regression analysis are presented in Table 8. The **R-value** of 0.716 indicates a moderate to strong correlation between the independent variables (Ability, Motivation, and Opportunity) and the dependent variable (Employee Commitment and Performance). The **R²** value of 0.513 suggests that approximately **51.3%** of the variance in employee commitment and performance can be explained by the independent variables. The **Adjusted R²** value of 0.501 accounts for the number of predictors in the model, providing a more accurate estimate of the model's explanatory power, which is still substantial. The **F-statistic** of 43.5 (with **df1 = 3** and **df2 = 124**) and the associated **p-value < 0.001** indicate that the overall regression model is statistically significant. This means that the independent variables, collectively, have a significant impact on employee commitment and performance. overall, the model demonstrates a good fit, suggesting that Ability, Motivation, and Opportunity are important predictors of employee commitment and performance.

Table 9: Model Coefficients – ECP

Predictor	Estimate	SE	t	p	Stand. Estimate
Intercept	1.509	0.2445	6.17	< .001	
ABT	0.186	0.0588	3.16	0.002	0.254
MTV	0.157	0.0754	2.08	0.040	0.173
OPT	0.290	0.0631	4.59	< .001	0.404

Source: Jamovi Output

Table 9 presents the coefficients for the regression model, examining the relationship between the independent variables (Ability, Motivation, and Opportunity) and Employee Commitment and Performance (ECP). The intercept value of **1.509** represents the expected level of employee commitment and performance when all independent variables are at zero. This value is statistically significant (**p < 0.001**) with a **t-value** of 6.17, confirming its reliability.

Ability (ABT): The coefficient for Ability is **0.186** (**t = 3.16, p = 0.002**), indicating a statistically significant positive effect. For each unit increase in Ability, employee commitment and performance are expected to increase by **0.186** units, holding other variables constant. The **standardised estimate** of **0.254** reflects a moderate impact, showing that Ability has a meaningful influence on employee commitment and performance.

Motivation (MTV): The coefficient for Motivation is **0.157** (**t = 2.08, p = 0.040**), indicating that Motivation also has a statistically significant positive effect on employee commitment and performance. A unit increase in Motivation corresponds to an increase of **0.157** units in

employee commitment and performance. The **standardised estimate** of **0.173** suggests a moderate influence of Motivation on employee outcomes.

Opportunity (OPT): The coefficient for Opportunity is **0.290** ($t = 4.59$, $p < 0.001$), which demonstrates a highly statistically significant and substantial positive effect. For each unit increase in Opportunity, employee commitment and performance increase by **0.290** units. With a **standardised estimate** of **0.404**, Opportunity has the strongest impact on employee commitment and performance compared to Ability and Motivation.

In conclusion, all three independent variables - Ability, Motivation, and Opportunity - are statistically significant predictors of employee commitment and performance. Among these, Opportunity has the strongest effect, followed by Ability and Motivation.

Discussion

This study provides focused insights into how the AMO (Ability-Motivation-Opportunity) framework influences employee commitment and performance in the Nigerian public sector, using the Centre for Geodesy and Geodynamics (CGG) as a case study. Consistent with prior research, the findings confirm that all three AMO components significantly impact employee outcomes, though contextual differences emerge.

Ability, defined as learning and skill development, showed a significant positive relationship with employee commitment and performance ($r = 0.584$, $\beta = 0.186$, $p < 0.001$). This aligns with Mohammad et al. (2020), who emphasised competencies as strategic assets. Like banking innovations where ATMs enhanced efficiency, upskilling staff in public institutions contributes to improved performance. Unlike Bos-Nehles et al. (2023), who noted inconsistent measurement of AMO variables, this study offers consistent, context-specific evidence from a resource-constrained environment.

Motivation also showed a significant effect ($r = 0.561$, $\beta = 0.157$, $p = 0.040$), supporting Abusharbeh and Nazzal's (2024) findings on the value of intrinsic rewards. In contrast to Thapa (2023), who highlighted the need for both financial and non-financial incentives, this study finds intrinsic motivators—such as recognition and growth—more influential in underfunded public sectors, similar to how trust and access helped agency banking thrive despite limited infrastructure.

Opportunity emerged as the strongest predictor ($r = 0.663$, $\beta = 0.290$, $p < 0.001$), echoing Chen et al. (2020) and Zhenjing et al. (2022), who stressed organisational support and empowerment. Much like regulatory support boosted POS use in Nigerian banks, structured support systems in CGG drive stronger employee outcomes. While Long (2022) argued that all enablers must coexist, this study suggests that, in constrained environments, opportunity can compensate for gaps in motivation or ability.

The findings reinforce the AMO framework's core idea that employee outcomes result from a combination of skills, incentives, and supportive environments. However, the dominant effect of Opportunity signals that context matters—particularly in public sector settings with rigid systems. These results also support Social Exchange Theory (Blau, 1964), as employees respond positively when they perceive organisational investment. Motivation's significance aligns with Expectancy Theory (Vroom, 1964), though its weaker coefficient may reflect limited financial incentives. The findings also relate to Organisational Commitment Theory, particularly in promoting affective commitment, though further work is needed to distinguish commitment types.

Overall, the study confirms the relevance of the AMO model for public HRM, while highlighting that the weight of each element is shaped by institutional realities. As with all innovatives drives, effectiveness depends on infrastructure, regulation, and environment—calling for tailored HR strategies that prioritise opportunity, capability, and intrinsic motivation.

CONCLUSION AND RECOMMENDATIONS

This study examined the application of the AMO (Ability–Motivation–Opportunity) framework in enhancing employee commitment and performance at the Centre for Geodesy and Geodynamics (CGG), Toro, Bauchi State. The findings provide empirical support for the model’s relevance in the Nigerian public sector context. Results show that all three AMO components—learning and skills development (Ability), financial and non-financial incentives (Motivation), and a supportive work environment (Opportunity)—individually and collectively exert significant positive effects on employee commitment and performance.

The study reaffirms that employees who are better equipped through training, adequately motivated by fair incentives, and provided with an enabling environment are more likely to remain committed and perform at optimal levels. These outcomes are consistent with existing literature and reinforce the importance of strategic human resource practices in public institutions. Furthermore, the study emphasises the importance of integrating the AMO framework into HR policies to foster sustainable organisational performance.

To build on these insights, the following recommendations are proposed:

1. **Invest in Continuous Training and Development:** CGG should prioritise structured learning programmes that address skill gaps and promote career growth. Regular training, mentoring, and capacity-building initiatives will enhance employee competence and commitment.
2. **Implement a Balanced Incentive Scheme:** The Centre should establish a well-defined reward system combining financial benefits (e.g., bonuses) and non-financial recognition (e.g., awards, career advancement). Such a system should be transparent and tied to measurable performance indicators.
3. **Enhance the Work Environment:** A supportive and inclusive workplace that provides access to tools, information, and participation in decision-making will foster greater engagement. Management should encourage feedback through forums like town hall meetings and suggestion boxes.
4. **Institutionalise the AMO Framework:** CGG should embed the AMO model into HR policies and practices, including recruitment, performance appraisals, and promotions, to ensure consistent alignment with employee development and organisational goals.
5. **Establish a Monitoring and Evaluation System:** A robust M&E framework should be created to assess the impact of HR practices on ability, motivation, and opportunity. Regular surveys, audits, and feedback loops will inform continuous improvement.
6. **Strengthen Leadership Commitment:** Senior management must lead by example, allocate adequate resources, and hold departmental heads accountable for implementing employee-focused strategies. Leadership buy-in is critical for sustaining high performance and commitment levels.

By adopting these recommendations, CGG and similar public sector organisations can strengthen employee engagement, reduce turnover, and enhance institutional effectiveness through strategic HRM anchored in the AMO framework.

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