Factors Influencing Employee Motivation among Technical University Employees

Samuel Boadi[1], Richard Amoako[2], Stephen Sarfo Adu-Yeboah[3], Akwasi Asare[4]*

[1,2]Department of Human Resource Management, School of Graduate Studies, All Nations University, Koforidua, Ghana
[3]Department of Management, School of Business, University of Cape Coast, Ghana

[4]Department of Computer Science, Ghana Communication Technology University, Accra, Ghana

***Corresponding Author**

DOI: https://dx.doi.org/10.47772/IJRISS.2025.9010256

Received: 14 January 2025; Accepted: 18 January 2025; Published: 17 February 2025

ABSTRACT

Employee motivation is a critical determinant of organizational success, particularly in educational institutions where staff productivity is directly linked to institutional performance. This study examines the factors influencing employee motivation among technical university staff, emphasizing both intrinsic and extrinsic motivators. The research focuses on key elements such as remuneration, leadership practices, opportunities for professional growth, and the work environment. Data were gathered through structured questionnaires distributed to academic and administrative staff, followed by analysis using descriptive and inferential statistical methods. The findings reveal that while extrinsic rewards like remuneration and career development opportunities play significant roles, intrinsic factors such as the organizational climate and leadership practices are more impactful in fostering motivation. Regression analysis identifies the work environment as the strongest predictor of employee motivation, followed by leadership style, professional growth, and remuneration. Furthermore, the study highlights barriers such as unfavorable work conditions, inadequate remuneration, limited career advancement opportunities, and ineffective leadership practices, which undermine motivation levels. These results align with established motivational theories, including Herzberg's Two-Factor Theory and Maslow's Hierarchy of Needs, affirming the importance of balancing hygiene factors and intrinsic motivators to enhance employee engagement. The paper concludes with practical recommendations for technical universities to address motivational barriers, fostering a more engaged and productive workforce and improving institutional outcomes.

Keywords: Employee Motivation, Technical Universities, Leadership Style, Professional Development, Work Environment

INTRODUCTION

Motivation can be understood as the internal process that drives an individual's effort, focus, and determination toward achieving a specific objective and also viewed it as the force that shapes and guides behavior in a particular direction (Weiner, 1972). In many cases, motivation helps to explain and forecast how individuals perform in their roles. Guay et al. (2010)emphasizes that motivation encompasses the underlying factors that influence and give purpose to human actions.

Work motivation is widely recognized as a fundamental determinant of organizational performance, serving as a driving force that enhances workforce output, elevates labor productivity, and fosters overall organizational efficiency and employee satisfaction (Uka & Prendi, 2021). Beyond facilitating task completion, motivation embodies a deeper commitment among employees toward both personal and organizational goals (Qu et al., 2024). It plays a critical role in sustaining and improving institutional effectiveness across various sectors by fostering innovation, promoting professional development, and enhancing employee well-being (Vo et al., 2022).

In this context, motivation transcends its functional purpose to become a cornerstone of organizational success, particularly in knowledge-intensive environments like educational institutions.

Within tertiary education, especially technical universities, motivation emerges as an indispensable factor. These institutions operate in diverse and complex environments characterized by dual mandates: achieving academic excellence and ensuring efficient administrative operations. The pivotal role of employee motivation in such settings extends beyond individual job satisfaction to influence broader institutional outcomes. High levels of motivation are instrumental in cultivating an engaged workforce capable of addressing the unique challenges and opportunities associated with technical education (Hanaysha & Hussain, 2018).

Technical universities differ from traditional academic institutions in their operational frameworks and primary objectives. Unlike their counterparts, which often focus on broader academic curricula, technical universities emphasize vocational and technical training tailored to industry needs. This specialization demands that faculty members possess a unique blend of technical expertise, industry engagement, and pedagogical skills. These dual responsibilities—balancing academic teaching with active collaboration with industries can be both intellectually stimulating and personally challenging for employees. Simultaneously, administrative staff face pressures to support these specialized functions effectively, creating a dynamic and often demanding work environment.

In addition to these operational challenges, technical universities grapple with systemic issues that influence motivation, including payment disparities, limited opportunities for promotion, discrimination and inconsistencies in performance reward mechanisms (Akanpaadgi et al., 2024). These factors are further compounded by the inherent diversity of the workforce, comprising both academic and administrative staff with distinct motivational drivers. Such diversity introduces a complex interplay of expectations, experiences, and needs, making the development of effective motivational strategies more intricate (Pandya, 2024).

Given this context, the need for a comprehensive understanding of the factors influencing motivation in technical universities becomes paramount. Employee motivation in such institutions is shaped by a combination of intrinsic and extrinsic factors, ranging from monetary compensation and managerial practices to professional growth opportunities and organizational culture (Puplampu, 2007). A nuanced understanding of these drivers is essential for creating targeted interventions that align with both individual aspirations and institutional goals.

This study seeks to elucidate the key factors that significantly affect employee motivation among staff in technical universities. It specifically examines the roles of internal and external rewards, including remuneration, leadership practices, opportunities for career advancement, and the overall work environment. By leveraging empirical evidence and established motivational theories, the research aims to shed light on the complex relationships between these factors and their influence on employee attitudes and productivity.

The findings of this study are intended to provide actionable insights for human resource professionals and policymakers working within technical universities. By addressing the motivational barriers and leveraging the identified drivers, these stakeholders can foster a more engaged and high-performing workforce. Ultimately, the study aims to contribute to the development of strategies that not only enhance employee motivation but also improve institutional outcomes in the unique context of technical education.

LITERATURE REVIEW

2.1 Key Factors Influencing Employee Motivation

Employee motivation is a complex and multifaceted phenomenon that involves both intrinsic and extrinsic motivators, each playing a critical role in influencing performance and job satisfaction (Forson et al., 2021). Among the various forms of extrinsic rewards, monetary compensation and financial incentives are often deemed integral, particularly in developing environments (Jam-Jam & Mbukanma, 2023; Puplampu, 2007). Research has consistently shown that insufficient wages can lead to employee dissatisfaction, reduced performance levels, and elevated turnover rates, highlighting the direct correlation between compensation and employee morale (Mahazril et al., 2012). However, it is essential to recognize that financial rewards, while crucial, may not be a

sustainable strategy for maintaining long-term motivation. Over time, reliance on monetary incentives alone tends to diminish as employees seek more profound fulfillment from their work.

Leadership, too, is a significant determinant of employee motivation (Naile & Selesho, 2014). Transformational leadership styles, characterized by open communication, genuine engagement, and the ability to articulate a compelling vision, foster positive changes in motivation and performance (Kamila Mariam Iftikhar et al., 2023) . When leaders take the time to connect with employees on a personal level and present their vision in an accessible manner, they create an environment conducive to motivation and productivity (Ye et al., 2022). In contrast, authoritarian leadership styles marked by inconsistency and lack of transparency often lead to employee disengagement, increased turnover, and declines in overall productivity.

Furthermore, professional development opportunities serve as a crucial mechanism for bridging knowledge and skill gaps within organizations. Employees who perceive a strong potential for career advancement are more likely to remain committed and engaged in their roles. Training and development initiatives not only enhance individual competencies but also signify an organization's investment in its human capital, consequently boosting employee morale and job satisfaction (Dachner et al., 2021). This is particularly pertinent in technical universities, where addressing the dynamic nature of technical and vocational education requires a workforce that is well-equipped with updated knowledge and skills.

Additionally, the work environment, encompassing organizational culture and physical working conditions, plays a fundamental role in influencing employee motivation. A positive organizational culture founded on principles of collaboration, mutual respect, and recognition can significantly enhance employee engagement and productivity. Conversely, detrimental working conditions exemplified by poor communication channels and excessive work pressures can result in increased stress levels and diminished morale among employees (Burgard & Lin, 2013). A conducive work environment not only supports employee well-being but also serves as a vital component in fostering a motivated and high-performing workforce.

In the nutshell, sustaining employee motivation necessitates a comprehensive approach that integrates extrinsic rewards, transformational leadership, professional development, and a positive work environment (Suryadi et al., 2024). Organizations must recognize the intricate interplay of these factors and actively pursue strategies that promote intrinsic motivation and long-term engagement among their workforces.

2.2 Employee Motivation in Higher Education

The motivation that drives employees in higher education institutions presents a unique paradigm that distinguishes it from motivational frameworks typically observed in other types of organizations. This divergence is primarily attributable to the intricate and multifaceted roles that academic staff undertake, alongside the distinctive management structures inherent in educational establishments. Research has elucidated those academic personnel, including faculty and researchers, place a significant emphasis on intrinsic rewards (Manzoor et al., 2021). These rewards not only serve to stimulate learners' intellectual curiosity but also play a critical role in recognizing individual accomplishments and fostering pathways that enhance societal well-being (Le et al., 2024). This intrinsic orientation underscores the importance of personal and professional fulfillment in educational contexts, contrasting sharply with the extrinsic motivators that often dominate in corporate environments.

In technical universities, the complexity of these motivational dynamics is further exacerbated by the dual responsibility’s faculty members are required to fulfill. Faculty are expected to balance their academic obligations with a broad spectrum of industrial collaborations and technical training programs (Atatsi et al., 2021). This includes, but is not limited to, engaging in cutting-edge research initiatives, spearheading development projects, innovating practical solutions for real-world industry problems, and effectively preparing students for professional careers in a competitive job market. The expectation to simultaneously excel in these disparate domains’ places significant pressure on academic staff, intensifying the potential for conflict between institutional goals and individual faculty aspirations.

This duality of responsibilities can lead to conflicting expectations within the institution, wherein the alignmentof academic and industrial objectives may be mismanaged, resulting in considerable demotivation

among staff. Empirical evidence suggests that when employees perceive their contributions to industry partnerships as undervalued or encounter a lack of institutional support for their research efforts, it can precipitate a decline in morale and overall job satisfaction ((Jamal Ali & Anwar, 2021) Such feelings of neglect may inhibit faculty engagement and commitment, ultimately undermining the institution's broader mission of scholarly excellence and innovation.

Moreover, a constellation of external and internal challenges frequently compounds these motivational issues (Okoye & Ghapar, 2024). Limited financial incentives, complex bureaucratic structures, power struggles among various levels of management, and an imbalanced distribution of workloads often emerge as significant contributors to employee dissatisfaction within the academic ecosystem (Inegbedion et al., 2020; Okoye & Ghapar, 2024). Each of these factors can erode the intrinsic motivation that fuels academic staff, leading to a decline in the quality of education and research outputs. Therefore, it is imperative for higher education institutions to recognize and address these multifaceted challenges to cultivate an environment conducive to motivation, engagement, and ultimately, educational success.

2.3 Theoretical Framework

The exploration of motivation theories is indispensable for comprehending how various behaviors and performance levels among employees can be effectively stimulated and fostered (Bandhu et al., 2024). One of the preeminent frameworks in contemporary motivational psychology is Herzberg's Two-Factor Theory, which provides a robust analytical lens through which we can discern the distinction between hygiene factors and motivators. Hygiene factors encompass essential attributes such as salary, work environment, and job security. While these elements do not inherently drive motivation, their presence is crucial as they serve to mitigate employee dissatisfaction. Conversely, motivators such as recognition, opportunities for achievement, personal growth, and increased responsibility function as catalysts, actively enhancing employee motivation and thereby boosting overall performance (R. et al., 2024). This bifurcation of factors holds significant implications within the context of technical universities, necessitating a nuanced and balanced approach to fulfill the diverse needs of academic and administrative personnel by addressing both extrinsic and intrinsic motivators.

In addition, Maslow’s Hierarchy of Needs offers another pertinent theoretical perspective, categorizing human needs into five ascending levels: physiological, safety, social, esteem, and self-actualization needs (Kenrick et al., 2010). Maslow posits that self-actualization the realization of one's fullest potential can only be achieved when the foundational needs, such as adequate remuneration and fair treatment, along with job security, are systematically addressed (Rojas et al., 2023). This framework is particularly relevant in the milieu of technical universities, where the workforce is composed of a diverse array of academic and administrative staff; meeting these varied needs is crucial for fostering staff motivation, engagement, and commitment to their roles.

Furthermore, Self-Determination Theory (SDT), articulated by Deci and Ryan underscores the importance of intrinsic motivation through three critical elements: autonomy, competence, and relatedness (Deci & Ryan, 2012). According to SDT, when employees perceive that they have a degree of personal control over their work, they develop a heightened sense of agency regarding their skills and abilities, fostering a sense of competence. Additionally, cultivating strong interpersonal relationships within the workplace is essential for enhancing intrinsic motivation (Deci et al., 2017). These principles are especially pertinent in educational institutions, where fostering an enriching collaborative environment not only facilitates teamwork but also aligns with the broader organizational objectives aimed at continuous learning and development.

By integrating these diverse motivational theories, organizational leaders within technical universities can devise comprehensive strategies that not only target the alleviation of dissatisfaction but also actively nurture intrinsic motivation, ultimately leading to enhanced performance and commitment among staff members.

METHODOLOGY

This study employed a quantitative research methodology to systematically examine the factors that influence employee motivation among staff at a Technical University. A quantitative approach was chosen for its ability to generate reliable and replicable results based on the analysis of numerical data (Rana et al., 2021) . This

approach was particularly appropriate as the research sought to identify the relationship between specific motivational factors and employee performance. The study focused on both intrinsic and extrinsic motivation, with intrinsic factors exploring elements such as job satisfaction, personal growth, and role alignment, while extrinsic factors were concerned with external influences such as remuneration, leadership practices, professional development opportunities, and the work environmentfactors extensively discussed in the theoretical literature on employee motivation.

3.1. Research Design and Population

The target population of the study comprised both academic and administrative staff members from selected Technical Universities. The rationale for selecting these two groups was to capture potential differences in their motivational drivers, given the distinct nature of their roles. Academic staff are primarily engaged in teaching, research, and scholarly activities, while administrative staff focus on support services, management, and organizational functions. As such, it was hypothesized that these two groups might have differing motivational priorities and drivers.

A stratified random sampling technique was used to ensure proportional representation of both academic and administrative staff in the sample. This technique is particularly advantageous in studies where sub-groups, or strata, within the population may have differing characteristics. By applying stratified sampling, the study ensured that both groups were adequately represented in the sample, thus reducing the risk of sampling bias and enhancing the generalizability of the findings. Cochran's formula was employed to calculate the optimal sample size for the study, ensuring that the sample was large enough to provide reliable and statistically significant results, while also optimizing resource use.

3.2. Data Collection Instrument

A structured questionnaire was developed as the primary data collection instrument. The design of the questionnaire was guided by the research objectives and grounded in existing theoretical frameworks on employee motivation (Rana et al., 2021). The instrument was structured into multiple sections, each addressing a specific dimension of motivation. These included:

1. Remuneration and Perks – This section explored employees' perceptions of their financial compensation, benefits, and non-monetary rewards.
2. Leadership and Supervisory Behavior – This section focused on the role of leadership in motivating employees, including aspects such as managerial support, communication, and leadership style.
3. Professional Development Opportunities – This section examined the availability of training, career advancement opportunities, and support for professional growth.
4. Organizational Climate and Work Environment – This section evaluated the broader organizational environment, including the institutional culture, work conditions, and the level of support provided to staff.

The questionnaire utilized a Likert-type scale for response options, ranging from "strongly disagree" (1) to "strongly agree" (5). This scale was selected for its ability to capture varying degrees of agreement or disagreement with statements about motivational factors. The wording of the questions was carefully crafted to ensure clarity, reduce ambiguity, and align with the key constructs under investigation.

Prior to administering the full-scale survey, a pilot study was conducted with a small group of staff members from the Technical University. The pilot study aimed to test the clarity, validity, and reliability of the questionnaire items. Feedback from this pilot sample was used to refine the survey instrument, ensuring that all items were relevant and effectively captured the intended concepts. This pre-testing process also helped identify any potential issues related to survey length, item comprehension, and item redundancy.

3.3. Ethical Considerations

The study adhered to the highest ethical standards to ensure the rights and confidentiality of participants were

protected throughout the research process. Prior to data collection, participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw from the study at any point without penalty. Informed consent was obtained from all participants, who were given detailed information about the study's objectives, data collection methods, and how the findings would be used.

To ensure the confidentiality of participant data, all responses were anonymized. Identifying information was removed from the dataset, and only aggregate data was used in the analysis. Additionally, the research adhered to the ethical principles outlined by the American Psychological Association (2020), ensuring that the study was conducted in a manner that respected the dignity, privacy, and autonomy of all participants. The study also sought approval from the institutional review board or ethics committee to ensure compliance with ethical research practices.

3.4. Data Collection Process

The data collection process was carried out over a period of three months, providing ample time for participants to complete the survey at their convenience. The questionnaire was made available in both online and paper-based formats, which allowed for greater accessibility and accommodated staff members with different preferences and technological access. The online survey was distributed via institutional email, while paper copies were made available in common areas such as staff rooms and administrative offices. To enhance participation rates, multiple reminders were sent to potential participants, encouraging them to complete the survey by the specified deadline.

During this period, the research team maintained regular communication with participants to ensure a high response rate and to address any questions or concerns regarding the survey. The data collection process was carefully monitored to track the completion rate and to ensure that the sample remained representative of the overall population of academic and administrative staff.

3.5. Data Analysis

The data collected from the survey responses were analyzed using statistical software, specifically SPSS. Initially, descriptive statistics were computed to summarize the demographic characteristics of the sample, including variables such as age, gender, academic or administrative role, and years of service. Measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation) were used to characterize the overall motivation levels among the respondents.

For the inferential analysis, correlation techniques were employed to explore the relationships between different motivational factors and employee motivation levels. Specifically, Pearson's correlation coefficient was used to assess the strength and direction of the relationship between various independent variables (e.g., leadership behavior, remuneration, and professional development) and the dependent variable (employee motivation). This helped identify the key drivers of motivation among staff and provided insights into how these factors influenced overall motivation levels.

Additionally, regression analysis was conducted to determine the predictive power of specific motivational factors on overall employee motivation. This statistical technique allowed the study to identify which factors had the most significant impact on employee motivation and to assess the relative importance of each factor in explaining variations in motivation across the sample.

3.6. Validity and Reliability

To ensure the robustness of the study's findings, several steps were taken to assess the validity and reliability of the measurement instrument. **Cronbach's alpha** was calculated for each construct to assess internal consistency. A Cronbach's alpha value above 0.70 was considered acceptable, indicating that the items within each construct reliably measured the intended dimension of motivation (Pallant, 2010). All constructs in the study exceeded this threshold, demonstrating strong internal consistency.

Furthermore, factor analysis was conducted to evaluate the dimensionality of the motivational constructs and to

confirm that the items grouped together meaningfully. This technique helped validate the theoretical underpinnings of the motivational constructs and ensured that the survey items effectively measured the latent variables they were intended to assess. Exploratory factor analysis (EFA) was performed to uncover the underlying factors that contributed to employee motivation, while confirmatory factor analysis (CFA) was conducted to test the fit of the data to the proposed model of motivation.

By utilizing this comprehensive and methodologically rigorous approach, the study aimed to provide valuable insights into the factors influencing employee motivation at a Technical University. The use of stratified random sampling, a carefully designed questionnaire, and robust statistical techniques ensured that the study produced valid, reliable, and generalizable results. The findings of this research have the potential to inform university administrators and policymakers about the key motivational drivers within their institutions, providing actionable recommendations for improving employee motivation and enhancing organizational performance.

RESULTS

The results of the study are presented below, providing insights into the demographic characteristics of respondents, key motivational factors, regression analysis, and perceived motivational barriers.

5.1 Demographic Characteristics

The demographic distribution of the respondents is detailed in Table 1. The data indicate a gender distribution of 60% male and 40% female participants. Regarding age, the majority of respondents (34.62%) were in the 31–40 age range, followed by 26.92% in the 21–30 age group. A smaller proportion (3.85%) were aged 20 years and below or 61 years and above. In terms of educational qualifications, the largest group of respondents held a master's degree (46.15%), followed by those with a first degree (38.46%), while 15.38% possessed a PhD or doctorate. The distribution of respondents based on their years of experience within the institution showed that most had been employed for 6–10 years (30.77%), while only 19.23% had less than 5 years of experience. These findings reflect a relatively experienced workforce within the institutions studied**.**

Table 1: Demographic Distribution of Respondents

Demographic Category	**Number of Respondents**	**Percentage (%)**
Gender		
Male	78	60.00%
Female	52	40.00%
Age Category		
20 years and below	5	3.85%
21-30 years	35	26.92%
31-40 years	45	34.62%
41-50 years	30	23.08%
51-60 years	10	7.69%
61 years and above	5	3.85%
Educational Qualification		
First Degree	50	38.46%
Master's	60	46.15%
PhD/Doctorate	20	15.38%

Years of Experience in the Organization		
Less than 5 years	25	19.23%
6-10 years	40	30.77%
11-15 years	30	23.08%
16-20 years	20	15.38%
21 years and above	15	11.54%

Table 1 highlights the demographic characteristics of respondents, with an almost equal gender distribution and a predominance of academic staff. Most respondents have been with the institution for over six years, indicating their extensive experience.

5.2 Key Motivational Factors

Table 2 summarizes the mean scores and standard deviations for key motivational factors as rated by the respondents. Among the factors, the work environment achieved the highest mean score (4.2 ± 0.6), emphasizing its significant role in enhancing employee motivation. Leadership style ranked second (4.0 ± 0.8), followed by professional growth (3.8 ± 0.7). Remuneration, while still important, recorded the lowest mean score (3.5 ± 0.9). These results suggest that intrinsic factors such as the work environment and leadership practices are perceived as more influential than extrinsic factors like remuneration.

Table 2: Average Ratings for Key Motivational Factors

Factor	**Mean Score**	**Standard Deviation**
Remuneration	3.5	0.9
Leadership Style	4.	0.8
Professional Growth	3.8	0.7
Work Environment	4.2	0.6

Table 2 presents the mean scores for the key motivational factors. The work environment received the highest average score, indicating its significant role in motivating employees, followed by leadership style and professional growth. Remuneration scored comparatively lower but remains an important factor.

5.3 Regression Analysis

The results of the regression analysis (Table 3) provide a deeper understanding of the factors influencing employee motivation. The work environment emerged as the strongest predictor of motivation ($\beta = 0.502$, $p < 0.001$), followed by leadership style ($\beta = 0.451$, $p < 0.001$), professional growth ($\beta = 0.376$, $p < 0.001$), and remuneration ($\beta = 0.312$, $p < 0.001$). All variables demonstrated statistically significant positive effects on employee motivation.

Table 3: Regression Analysis of Factors Influencing Employee Motivation

Variable	**Coefficient (β)**	**Standard Error**	**t-Value**	**p-Value**
Remuneration	0.312	0.057	5.47	<0.001
Leadership Style	0.451	0.065	6.94	<0.001
Professional Growth	0.376	0.052	7.23	<0.001
Work Environment	0.502	0.045	8.82	<0.001

Table 3 illustrates the results of the regression analysis, showing the impact of various factors on employee motivation. The work environment emerged as the strongest predictor, followed by leadership style, professional growth, and remuneration. All variables showed statistically significant positive effects on motivation.

5.4 Perceived Motivational Barriers

Table 4 highlights the respondents' perceptions of barriers to motivation. The most frequently reported barrier was unfavorable work conditions (70%), followed by inadequate remuneration (65%), limited career advancement opportunities (55%), and poor leadership practices (50%). These findings highlight critical areas requiring organizational attention to enhance employee motivation and engagement**.**

Table 4: Employee Perception of Motivational Barriers

Barrier	**Percentage (%) Reporting Barrier**
Inadequate Remuneration	65.0
Poor Leadership Practices	50.0
Limited Career Advancement	55.0
Unfavorable Work Condition	70.0

Table 4 highlights the perceived barriers to motivation among respondents. Unfavorable work conditions and inadequate remuneration were the most commonly reported barriers, reflecting areas requiring immediate organizational attention.

Summary of Results

The findings underscore the significance of the work environment, leadership practices, and professional growth as key motivators, while also highlighting remuneration as a necessary but less impactful factor. The analysis further identifies key barriers to motivation, offering actionable insights for addressing challenges within technical universities to foster a more motivated and productive workforce.

DISCUSSION

This section interprets the results of the study, exploring how various factors influence employee motivation within the context of technical universities. The findings underscore the complex interplay between intrinsic and extrinsic factors in shaping employee motivation and highlight the key drivers that influence staff satisfaction, commitment, and performance.

6.1 Remuneration as a Motivational Factor

The analysis revealed that remuneration, while considered a necessary condition for employee satisfaction, was found to have a relatively weak positive correlation with overall motivation ($\beta = 0.312$, $t = 10.333$; $p < 0.001$). This finding aligns with Herzberg's (1966) Two-Factor Theory, which posits that salary is a "hygiene factor" – a critical element in preventing dissatisfaction but not a significant enhancer of motivation. Employees may view fair remuneration as a baseline expectation, and any perceived inadequacy can lead to dissatisfaction, but even higher salaries may not drastically elevate intrinsic motivation.

Further, 65% of respondents highlighted the lack of reasonable wages as a significant barrier to baseline satisfaction, reinforcing the importance of fair and competitive compensation in employee motivation. These findings resonate with Mahazril et al. (2012), who found that discrepancies in pay can demoralize employees, particularly in institutions with constrained budgets. The study suggests that addressing this issue through equitable pay structures, complemented by performance-based rewards, could alleviate dissatisfaction and contribute to improved motivation. Technical universities, where faculty and staff may compare their

compensation to that of industry counterparts or peer institutions, must consider the impact of compensation on staff morale and retention.

6.2 The Role of Leadership Style

Leadership style emerged as a significant mediator of employee motivation ($\beta = 0.451$, $p < 0.001$), confirming the substantial impact that leadership behavior has on workplace dynamics and employee engagement. Specifically, transformational leadership, characterized by vision, inspiration, and personal engagement, was found to enhance employee motivation, fostering a deeper commitment to the institution (Bass, 1985). The high mean score (4.0) for leadership style indicated that employees valued leaders who actively engage with their teams and demonstrate supportive behaviors.

However, the study also revealed that 50% of respondents identified poor leadership practices as a primary cause of reduced motivation. This finding is consistent with Kawara (2014), who emphasized the crucial role of leadership in fostering organizational trust and collaboration. In the context of technical universities, where employees are often required to balance academic responsibilities with industry partnerships, effective leadership is pivotal in maintaining high levels of motivation. Leaders who provide clear direction, encourage innovation, and foster a positive organizational culture are likely to enhance employee satisfaction and overall institutional success.

6.3 Professional Growth Opportunities

The regression analysis demonstrated a significant positive correlation between professional development opportunities and employee motivation ($\beta = 0.376$, $p < 0.001$). These findings are consistent with Maslow's (1943) hierarchy of needs, where self-actualization, achieved through career advancement and skill development, is considered a key intrinsic motivator. When employees perceive opportunities for growth, they are more likely to feel valued and engaged, leading to enhanced motivation.

A mean score of 3.8 for professional development underscored the importance of career-oriented opportunities in fostering motivation. Hanaysha and Hussain (2018) argued that investing in training and skill development not only enhances employees' competencies but also signals that they are an integral part of the organization's success. For technical universities, the provision of clear pathways for career development, including professional training, mentorship programs, and opportunities for further education, could significantly enhance employee engagement and reduce motivational barriers. Aligning employees' aspirations with institutional goals can further strengthen the connection between personal and organizational growth.

6.4 Work Environment as a Dominant Factor

The work environment emerged as the most significant determinant of employee motivation in this study, with a high mean score of 4.2 on the 5-point scale and a strong positive correlation ($\beta = 0.502$, $p < 0.001$). This finding highlights the central role that the physical and psychological work environment plays in fostering employee engagement, satisfaction, and overall well-being. A supportive work environment characterized by respect, collaboration, and recognition has been shown to enhance motivation by fulfilling employees' emotional and psychological needs (Robbins & Judge, 2019).

Notably, 70% of respondents cited unfavorable work conditions as a key source of demotivation, pointing to a significant gap between their expectations and the institutional reality. This aligns with the findings of Salleh et al. (2011), who discussed how a negative work environment, marked by excessive workloads and inadequate resources, contributes to stress, disengagement, and burnout. For technical universities, addressing these environmental concerns such as by improving physical workspaces, reducing workload imbalances, and providing adequate resources can have a substantial impact on employee motivation. Furthermore, fostering a positive organizational culture that emphasizes collaboration and recognition can greatly enhance staff morale and productivity.

The results of this study emphasize the complex nature of employee motivation within technical universities.

Remuneration, while necessary for basic satisfaction, does not significantly enhance motivation, supporting Herzberg's notion of it being a hygiene factor. Leadership style and professional growth opportunities, on the other hand, emerged as key factors in fostering motivation, with transformational leadership and career development opportunities contributing significantly to employee engagement. However, the work environment was found to be the most dominant factor influencing motivation, underscoring the importance of creating a supportive and collaborative workplace culture. Technical universities must consider these findings when designing strategies for improving employee motivation, focusing on equitable compensation, effective leadership, career development, and a positive work environment to maximize employee engagement and institutional performance.

CONCLUSION

This study provides a comprehensive examination of the multifaceted factors influencing employee motivation within technical universities. It underscores the crucial role that both extrinsic and intrinsic motivators play in shaping employee engagement, satisfaction, and performance. While extrinsic factors such as salary and benefits serve as foundational elements for meeting basic employee needs and preventing dissatisfaction, intrinsic motivators specifically, opportunities for professional growth and supportive leadership—are pivotal in fostering long-term motivation and commitment. These findings suggest that technical universities must recognize the interplay between both sets of factors in cultivating a motivated and productive workforce. Among the various factors explored, the work environment emerged as the most significant determinant of employee motivation. This highlights the importance of creating a positive, collaborative, and supportive organizational culture that promotes respect, recognition, and engagement. A conducive work environment not only enhances employee satisfaction but also strengthens their sense of belonging and commitment to the institution's broader mission. Technical universities should prioritize initiatives that improve physical and psychological workplace conditions, reduce stressors such as excessive workloads, and foster strong interpersonal relationships among staff members. The study's findings not only validate established motivational theories such as Herzberg's Two-Factor Theory, Maslow's Hierarchy of Needs, and the principles of transformational leadership but also offer practical insights for addressing motivation-related challenges specific to technical universities. By addressing the barriers to motivation identified in this research, such as inadequate compensation, poor leadership practices, and a lack of professional development opportunities, institutions can enhance employee satisfaction, reduce turnover, and increase productivity. Finally, the strategic implementation of policies and practices that focus on both extrinsic rewards and intrinsic motivators will be crucial for improving employee motivation within technical universities. By fostering a supportive work environment, empowering leadership, and offering meaningful professional development opportunities, these institutions can enhance the overall performance of their staff, aligning individual goals with the institution's long-term objectives. This approach will not only drive productivity and engagement but also contribute to the broader success and sustainability of technical universities in the evolving educational landscape.

ACKNOWLEDGEMENTS

We sincerely acknowledge the Almighty God for His continuous guidance, health, and protection throughout the course of this research. Our gratitude extends to the faculty, staff, and administrators of the participating technical universities for their invaluable cooperation. We also thank the managers and respondents who contributed their time and insights through the completion of questionnaires. Special thanks to our families and friends for their unwavering emotional and financial support. Finally, we appreciate all those who contributed in various ways to the success of this study.

Ethical Considerations

Ethical Approval: Ethical approval for this research was obtained from the relevant ethics committee at the participating technical universities. The study followed ethical guidelines for research involving human subjects, ensuring the protection of participants' rights and well-being.

Conflict of Interest: The authors declare that there are no conflicts of interest associated with this research. The study was conducted with full transparency and integrity, with no external influence affecting the results or

conclusions.

Data Availability

The data used in this study is available upon request. Due to confidentiality agreements with the participating institutions, access to the raw data is restricted. However, aggregated and anonymized data, as well as relevant findings, will be made available for future research upon request.

REFERENCES

1. Akanpaadgi, E., Kuuyelleh, E. N., & Adam, A. (2024). Performance management and contextual performance in technical universities. Social Sciences & Humanities Open, 9, 100788. https://doi.org/10.1016/j.ssaho.2023.100788
2. Atatsi, E. A., Stoffers, J., & Kil, A. (2021). Team Learning, Work Behaviors, and Performance: A Qualitative Case Study of a Technical University in Ghana. Sustainability, 13(24), 13703. https://doi.org/10.3390/su132413703
3. Bandhu, D., Mohan, M. M., Nittala, N. A. P., Jadhav, P., Bhadauria, A., & Saxena, K. K. (2024). Theories of motivation: A comprehensive analysis of human behavior drivers. Acta Psychological, 244, 104177. https://doi.org/10.1016/j.actpsy.2024.104177
4. Burgard, S. A., & Lin, K. Y. (2013). Bad Jobs, Bad Health? How Work and Working Conditions Contribute to Health Disparities. American Behavioral Scientist, 57(8), 1105–1127. https://doi.org/10.1177/0002764213487347
5. Dachner, A. M., Ellingson, J. E., Noe, R. A., & Saxton, B. M. (2021). The future of employee development. Human Resource Management Review, 31(2), 100732. https://doi.org/10.1016/j.hrmr.2019.100732
6. Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-Determination Theory in Work Organizations: The State of a Science. Annual Review of Organizational Psychology and Organizational Behavior, 4(1), 19–43. https://doi.org/10.1146/annurev-orgpsych-032516-113108
7. Deci, E. L., & Ryan, R. M. (2012). Self-Determination Theory. In Handbook of Theories of Social Psychology: Volume 1 (pp. 416–437). SAGE Publications Ltd. https://doi.org/10.4135/9781446249215.n21
8. Forson, J. A., Ofosu-Dwamena, E., Opoku, R. A., & Adjavon, S. E. (2021). Employee motivation and job performance: a study of basic school teachers in Ghana. Future Business Journal, 7(1), 30. https://doi.org/10.1186/s43093-021-00077-6
9. Guay, F., Chanal, J., Ratelle, C. F., Marsh, H. W., Larose, S., & Boivin, M. (2010). Intrinsic, identified, and controlled types of motivation for school subjects in young elementary school children. British Journal of Educational Psychology, 80(4), 711–735. https://doi.org/10.1348/000709910X499084
10. Hanaysha, J. R., & Hussain, S. (2018). An Examination of the Factors Affecting Employee Motivation in the Higher Education Sector. Asia-Pacific Journal of Management Research and Innovation, 14(1–2), 22–31. https://doi.org/10.1177/2319510X18810626
11. Inegbedion, H., Inegbedion, E., Peter, A., & Harry, L. (2020). Perception of workload balance and employee job satisfaction in work organisations. Heliyon, 6(1), e03160. https://doi.org/10.1016/j.heliyon.2020.e03160
12. Jamal Ali, B., & Anwar, G. (2021). An Empirical Study of Employees' Motivation and its Influence Job Satisfaction. International Journal of Engineering, Business and Management, 5(2), 21–30. https://doi.org/10.22161/ijebm.5.2.3
13. Jam-Jam, S., & Mbukanma, I. (2023). Significance of Motivation on Employee Optimal Performance: A Study of Amendu Manufacturing Industry in Mthatha, Eastern Cape, South Africa. Journal of Educational and Social Research, 13(5), 106. https://doi.org/10.36941/jesr-2023-0124
14. Kamila Mariam Iftikhar, Faraz Ahmed Waide, Muhammad Aijaz Haroon Ladhani, Fauzia Imtiaz, & Anosh Tahir. (2023). An Impact of Motivational Factors to Enhance Human Productivity: A Case study of Private Healthcare Institution of Karachi. Voyage Journal of Educational Studies, 3(4), 73–93. https://doi.org/10.58622/vjes.v3i4.96
15. Kenrick, D. T., Griskevicius, V., Neuberg, S. L., & Schaller, M. (2010). Renovating the Pyramid of

Needs. Perspectives on Psychological Science, 5(3), 292–314. https://doi.org/10.1177/1745691610369469

16. Le, A. T. T., Tran, T. V., Tran, T. M., & Phan, T. H. (2024). Intrinsic and Extrinsic Factors as Motivation Roles in Scientific Research Activities of Professors at Several Vietnamese Universities. Sage Open, 14(1). https://doi.org/10.1177/21582440241230838
17. Manzoor, F., Wei, L., & Asif, M. (2021). Intrinsic Rewards and Employee's Performance with the Mediating Mechanism of Employee's Motivation. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.563070
18. Naile, I., & Selesho, J. M. (2014). The Role of Leadership in Employee Motivation. Mediterranean Journal of Social Sciences. https://doi.org/10.5901/mjss.2014.v5n3p175
19. Okoye, S. O., & Ghapar, F. (2024). A Study on the Impact of Financial Incentives and Work Environment on Employee Motivation to Work: A Case Study of Employees of Paradise Estate Management Company. International Journal of Management, Finance and Accounting, 5(2), 1–25. https://doi.org/10.33093/ijomfa.2024.5.2.1
20. Pandya, J. D. (2024). Intrinsic & extrinsic motivation & its impact on organizational performance at Rajkot city: A review. Journal of Management Research and Analysis, 11(1), 46–53. https://doi.org/10.18231/j.jmra.2024.009
21. Puplampu, B. B. (2007). Employee motivation in Ghana: A factor structure and measurement tool. Acta Commercii, 7(1). https://doi.org/10.4102/ac.v7i1.30
22. Qu, Y., Liu, W., Tan, Y., & Gao, H. (2024). Organizational Commitment and its Relationship to the Employees' Work Performance of an Oil Company. Journal of Business and Management Studies, 6(1), 110–126. https://doi.org/10.32996/jbms.2024.6.1.6
23. R., S., R., M., & R., F. (2024). Impact of recognition on employees` performance in the Manufacturing Industries in Tanzania: A Case of Tanga Cement Company. International Journal of Scientific Research and Management (IJSRM), 12(03), 6059–6073. https://doi.org/10.18535/ijsrm/v12i03.em11
24. Rana, J., Gutierrez, P. L., & Oldroyd, J. C. (2021). Quantitative Methods. In Global Encyclopedia of Public Administration, Public Policy, and Governance (pp. 1–6). Springer International Publishing. https://doi.org/10.1007/978-3-319-31816-5_460-1
25. Rojas, M., Méndez, A., & Watkins-Fassler, K. (2023). The hierarchy of needs empirical examination of Maslow's theory and lessons for development. World Development, 165, 106185. https://doi.org/10.1016/j.worlddev.2023.106185
26. Suryadi, Y., Dewi, N. L. Y., Trisnawati, T., & Al-Amin, A.-A. (2024). The Impact of Transformational Leadership on Organizational Performance and Employee Motivation. Transform Jurnal Manajemen, 2(2), 65–76. https://doi.org/10.56457/tjm.v2i2.129
27. Uka, A., & Prendi, A. (2021). Motivation as an indicator of performance and productivity from the perspective of employees. Management & Marketing. Challenges for the Knowledge Society, 16(3), 268–285. https://doi.org/10.2478/mmcks-2021-0016
28. Vo, T. T. D., Tuliao, K. V., & Chen, C.-W. (2022). Work Motivation: The Roles of Individual Needs and Social Conditions. Behavioral Sciences, 12(2), 49. https://doi.org/10.3390/bs12020049
29. Weiner, B. (1972). Attribution Theory, Achievement Motivation, and the Educational Process. Review of Educational Research, 42(2), 203–215. https://doi.org/10.3102/00346543042002203
30. Ye, P., Liu, L., & Tan, J. (2022). Influence of leadership empowering behavior on employee innovation behavior: The moderating effect of personal development support. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.1022377