

The Impact of Work Environment on Employee Productivity: The Mediating Role of Motivation and Moderating Role of Work Experience in Afghanistan

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Abstract

This research studies the impact of the work environment on Employee Productivity, considering motivation as a mediating factor and work experience as a moderating factor, within Afghanistan's educational sector. Using a quantitative survey and questionnaire research design, data were collected from university employees and teachers in Kabul. This study confirms earlier research by revealing a strong and positive association between Job Satisfaction and Employee Productivity. Task Variety showed a potential negative impact, while Organizational Culture had a positive and statistically significant influence. Autonomy and Workload Balance had limited and non-significant effects. Motivation had no statistically significant influence, according to the mediation study. Also, Moderation analysis did not find evidence of Work Experience playing a significant role. The research highlights the importance of promoting job satisfaction and positive organizational culture for enhancing Employee Productivity in this context. The study recommends that educational institutions in Afghanistan prioritize efforts to enhance job satisfaction and foster a positive organizational culture to optimize Employee Productivity. Further research should explore additional factors and potential interventions to comprehensively address productivity concerns in this unique context. While this research provides valuable insights, it also acknowledges the need for further exploration. Future research endeavors should delve into additional factors that may impact Employee Productivity within the unique context of Afghanistan's educational sector. Additionally, interventions and strategies to comprehensively address productivity concerns warrant further investigation, ensuring a holistic and tailored approach to enhancing workplace effectiveness in this specific setting.

Keywords: Work environment, employee productivity, motivation, work experience, Afghanistan

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INTRODUCTION

Employee productivity is a crucial measure of organizational performance and effectiveness, reflecting the extent to which employees fulfill their tasks and contribute to the attainment of organizational objectives within specified time parameters. Research by suggests that enhancing employee productivity and engagement can be achieved through fostering learning and growth opportunities, establishing a strong connection between employees and the company's mission and purpose, and prioritizing employee well-being. Moreover, emphasizes the significance of productivity as a key driver of organizational success, influenced by factors such as flexibility, employee engagement, and organizational

practices. provides a comprehensive definition of employee productivity as the evaluation of value created by individual employees in a explicit timeframe, while also highlighting the interplay between productivity, business outcomes, and return on investment, with variations based on internal benchmarks and expected outputs within organizations.

However, employee productivity is influenced by various aspects of the work environment, such as the physical, social, and psychological conditions. The work environment can have an impact on employees' health, well-being, motivation, satisfaction, engagement, and performance. In today's dynamic and diverse work context, organizations face the challenge of creating and maintaining a work environment that attracts, retains, and motivates their workforce. argued that the quality of the work environment is the main determinant of employees' motivation and performance and that organizations cannot afford to waste the potential of their human resources.

Several researchers have examined the impact of different dimensions of the work environment on employee productivity. For instance, McRae, and Aykens, P. (2022) presented nine 2023 future of work trends for HR leaders to address, including quiet hiring, hybrid flexibility for frontline workers, nontraditional candidates, pandemic trauma healing, and addressing algorithmic bias in recruiting tech. Kropp, and McRae (2022) emphasized the importance of proactive and strategic measures by executives to effectively address these trends and create a mutually beneficial workplace environment for both employees and employers. Bakó-Biró et al. (2012) conducted a field study in 12 office buildings in Europe and found that indoor environmental quality (IEQ), which includes factors such as temperature, humidity, air quality, lighting, and noise, had a major effect on employees' self-reported productivity and sick leave. They estimated that improving IEQ could increase productivity by 2.8% and reduce sick leave by 35%. Chandrasekar (2011) reviewed the literature on workplace environment and its impact on employee performance and identified five physical factors that can enhance employee productivity: adequate lighting, comfortable temperature, proper ventilation, noise reduction, and ergonomic furniture. He suggested that managers should pay attention to these factors and provide a conducive workplace environment for their employees [1–8].

The challenge is to make the workplace attractive, engaging, and motivating for employees. Managers need to make a positive environment where people enjoy their work, feel a sense of purpose, and grow. This affects morale, productivity, and engagement. Strategies like performance pay, involvement, work-life balance, and communication inspire employees.

The impact of physical workspace on employee productivity is widely studied in the literature. For instance, developed a model that links four dimensions of office design (functionality, comfort, stimulation, and individualization) to three mechanisms of productivity (performance, satisfaction, and behavior). Vischer (2007) proposed a framework for assessing the influence of physical workspace on employee productivity based on three levels of user needs (physical, functional, and psychological). Both authors suggested that managers should consider these aspects of office design when creating or evaluating work environments and involve employees in the process.

While physical attributes are influential, they are not exclusive determinants of workforce productivity. Organizational culture, knowledge handling, communication technology, employee empowerment, innovation, and creativity are additional determinants highlighted by research (Anitha, 2013; Pawirosumarto et al., 2017; Tuffaha et al., 2020). These elements encompass facets of the work setting that impact employees' psychological and motivational conditions [9–15].

While we understand the significance of non-physical factors in boosting employee productivity, there's limited research on how they interact with physical aspects across various cultures. Current studies mostly concentrate on physical work environment effects, leaving room to explore non-physical influences. The study aims to address this gap by examining factors like job satisfaction, autonomy,

culture, and motivation's impact on productivity. Additionally, it will explore how motivation mediates and work experience moderates these effects, enhancing our understanding of employee productivity dynamics in organizational settings [16].

This paper examines non-physical factors influencing employee productivity in Afghanistan, considering job satisfaction, workload balance, autonomy, culture, task variety, motivation, and work experience. The study contributes to understanding the effect of these factors on productivity within a challenging and opportunistic context [17].

Problem Statement

Extensive research has been conducted by scholars such as Peton Zigarmi (2021), and Porter (1982) to examine the impact of the organizational work environment on employee productivity. However, these studies have predominantly concentrated on the physical aspects of the work environment, leaving room for exploration of non-physical factors that may also influence employee productivity. Peyton and Zigarmi (2021) and others have highlighted the importance of investigating additional factors such as autonomy, task variety, and workload balance, which have been recognized as potential contributors to employee productivity. Despite the existing research, gaps persist in our understanding of the complex relationship between various organizational factors and employee productivity. Therefore, there is a need for further investigation to bridge these gaps and advance our comprehension in this area. This study aims to state these gaps by examining the aforementioned non-physical factors and their impact on employee productivity. Additionally, this research will reveal the mediating role of motivation and consider work experience as a moderating variable, aiming to provide a complete and nuanced understanding of the intricate dynamics underlying employee productivity within the organizational work environment [18–23].

Research Questions

The exploration of organizational influences, the intermediary function of motivation, and the moderating impact of work experience on employee productivity will be steered by these research inquiries.

1. How do organizational culture, autonomy, task variety, and workload balance influence employee productivity in different organizational settings?
2. To what degree does motivation act as a mediating factor in the connection between the work environment and employee productivity?
3. What is the moderating effect of work experience on the correlation between the work environment and employee productivity?

Research Objectives

This study examines how organizational culture, autonomy, task diversity, and workload balance impact employee productivity across various organizations. It analyzes the mediating role of motivation and the moderating effect of work experience. This study aims to provide significant understandings into the complex dynamics of employee productivity in different organizational contexts [24].

1. To examine the impacts of organizational culture, autonomy, task variety, and workload balance on employee productivity in different organizational settings.
2. To explore the intermediary function of motivation in the correlation between the work environment and employee productivity.
3. To discover the moderating role of work experience in the relationship between work environment and employee productivity.

Research Hypothesis

H1: Work environment positively affect employee productivity

H2: Motivation play a mediating role between work environment and employee productivity.

H3: Work experience play a moderating role between work environment and employee productivity.

LITERATURE REVIEW

The role of the work environment in shaping employee productivity is widely recognized, encompassing a complex interplay of factors that mediate and moderate this connection [25]. This comprehensive literature review delves into the influence of the work environment on employee productivity, concentrating on the intermediary influence exerted by motivation and the regulatory effect of work experience. This review exclusively draws upon in-text citations to substantiate the discourse [26].

Several studies have explored the relation between the work environment and employee performance and an important positive effect of the work environment on employee performance. Similarly, demonstrated that both compensation and the work environment exert direct and indirect influences on employee productivity through motivation, indicating that a positive work environment enhances motivation and subsequently improves performance.

Furthermore, noteworthy contributors to enhanced employee performance encompass human resource planning, quality of work life, and compensation. These variables, in conjunction with work ethics, competence, and leadership, delineate a substantial proportion of the observed performance augmentation (Simbolon et al., 2023). Additionally, as posited by Putri et al. (2019), work discipline serves as a mediating factor in the linkage between the work environment and employee performance [27–30].

In the realm of the work environment, the study by Teger et al. (2023) unveiled the moderating influence of motivation. It discovered that the work environment engendered a constructive impact on work discipline and employee job satisfaction, with job satisfaction being indirectly influenced via work discipline. Furthermore, Widarko and Anwarodin (2022) highlighted the direct correlation between work motivation and both employee performance and organizational citizenship behavior (OCB). The research recommended that intrinsic motivation fosters enhanced OCB, subsequently contributing to improved performance [31–35].

The review also emphasizes the significance of organizational culture and leadership in relation to employee productivity. Abane et al. (2022) gained that organizational culture positively impacted employee productivity in the local government sector, while adaptability culture showed a negative impact. Hajiali et al. (2022) highlighted the crucial role of transformational leadership and social support in influencing employee job performance [36–40].

Additionally, the significance of fostering a conducive work environment is emphasized. Workspaces that promote healthiness have a direct correlation with employee contentment, efficiency, and economic viability [41]. This underscores the beneficial outcomes associated with appropriate structural attributes on well-being and effectiveness. The analysis indicates that allocating resources to create healthy work environments constitutes an economically prudent approach (Voordt & Jensen, 2023) [42].

Research indicates that both career advancement and an enabling work setting play a crucial role in shaping work motivation and employee efficacy. Lis et al. (2022) emphasized the intermediary function of work motivation in the nexus among career development, work environment, and performance. The influence of the work environment on employee contentment and tenure is underscored, shedding light on its substantial effect and offering valuable perspectives to bolster retention strategies and fathom intricacies within the workplace (Shafiuddin et al., 2022) [43–46].

The study also examines the impact of the work environment on employee well-being and its consequent impact on productivity. Hafeez et al. (2019) discovered a favorable association between the physical and behavioral facets of the workplace environment, employee well-being, and job performance. Similarly, Kundi et al. (2021) emphasized the link between job satisfaction and turnover

intention in healthcare practitioners, with the participation of professionals in formulating healthcare policies acting as a moderating element [47–52].

Moreover, Taheri et al. (2020) emphasized the importance of a better working environment for job satisfaction and maintaining a steady workforce. Hasanah (2022) indicated that minimizing negative psychological factors, such as work stress, contributes to a healthy work system and higher performance levels. Sauermann (2023) discussed the need for understanding different performance measures used in organizations and the public sector to make informed choices. Maben et al. (2023) emphasized the impact of staffing, psychological safety and teamwork, and staff well-being on quality care, highlighting the integration of improvement efforts into frontline work. Stonkus (2023) developed a theoretical model based on a literature review and questionnaire survey to identify the factors influencing employee performance [53–57].

In summary, a thorough review of existing literature confirms that the work environment significantly impacts employee productivity. This analysis underscores key requirements for enhancing healthcare through favorable work settings. The interaction of motivation (as a mediator) and work experience (as a moderator) further shapes this link. Notably, a positive work environment enhances motivation, leading to improved performance. While work experience alone might not strongly influence performance, its combined effect with other factors contributes to overall productivity. Additionally, organizational culture also holds a significant role in this dynamic [58–60].

Related literature and Hypothesis Development

The Relationship Between Work Environment and Employee Productivity

Employee productivity is a vital factor for organizational success, influenced not only by employee skills and motivation but also by the work environment. The work environment encompasses physical, social, and psychological aspects that impact employee well-being and performance. A positive work environment promotes safety, growth, satisfaction, and engagement, while a negative environment creates stress and turnover. Understanding the impacts of the work environment on productivity is essential for implementing strategies to improve it (Insights Success, 2021) [61].

Creating a conducive work environment involves factors like proper lighting, soothing colors, and low noise levels. These elements significantly enhance productivity (Voordt & Jensen, 2023) [62]. The work environment consists of the physical workspace, organizational culture, and social interactions among employees and managers. These components can positively or negatively affect satisfaction, creativity, innovation, cooperation, and costs Voordt & Jensen, 2023) [63–65].

A positive work environment fosters positive changes in employee attitudes, behaviors, and performance. Employees who feel valued and supported are more engaged, committed, and productive [66–69]. It also promotes a culture of learning and growth, encouraging feedback, skill improvement, and career development. The work environment plays a major role in employee performance and motivation. A conducive work environment prioritizes employee well-being, leading to improved performance, while an inadequate environment diminishes performance and reduces motivation.

Moreover, a favorable work environment reduces absenteeism and turnover. Healthy workplaces lead to fewer sick days, decreased burnout, and higher employee satisfaction and productivity (Voordt & Jensen, 2023). Inspiring work environments stimulate creativity and innovation, while learning-oriented environments facilitate continuous development of employees' knowledge and skills. Collaborative work settings promote teamwork and cooperation [70].

In conclusion, the study's outcomes validate the hypothesis that a positive workplace significantly boosts employee productivity. A conducive environment, spanning physical well-being, culture, social connections, and growth prospects, enhances contentment, engagement, and output. This promotes

innovation, teamwork, and reduces absenteeism and turnover. Creating such an enabling work environment unleashes employees' potential, driving productivity and success [71]. Therefore, it's crucial for management to invest in fostering a constructive atmosphere that empowers employees to excel and contribute significantly to organizational goals.

H1: Work environment positively affect employee productivity [72].

The Mediating Role of Motivation

The impact of the work environment on employee productivity is a notable phenomenon extensively studied in organizational research [72]. Employee productivity denotes to the efficiency and effectiveness of workers in accomplishing organizational objectives (Raziq & Maulabakhsh, 2015) [74]. performed an extensive literature review on workplace technology's impact on employee motivation. They outlined four perspectives and called for more research to create comprehensive frameworks and gather empirical evidence [75]. Their work highlighted technology's potential to link tasks with personal values, reduce stress, enhance enjoyment, and provide time off and financial rewards, contributing to motivation enhancement. the significance of employee engagement post-Covid, closely linked to motivation [76]. They devised an engagement checklist using academic sources and their own data, revealing that meaningful work, enjoyable tasks, and time off were the top three engagement drivers. explored work environment, motivation, and productivity in a Pakistan public sector study with 300 employees [77]. They used questionnaires and structural equation modeling, revealing a positive link between work environment and motivation, leading to improved productivity. Their findings also showed motivation partially mediating the work environment-productivity relationship. Thus, comprehending how the work environment can bolster work motivation and, consequently, elevate employee productivity is of paramount significance [78].

The work environment encompasses both physical and psychological aspects that envelop employees within their work setting (Raziq & Maulabakhsh, 2015) [79]. It is delineated into two dimensions: the physical environment and the psychological environment (Suifan, 2019) [80]. The physical environment encompasses tangible elements like lighting, temperature, noise, equipment, layout, and safety. A favorable physical environment provides comfort, convenience, and promotes employee well-being, ultimately mitigating stress, fatigue, and absenteeism Conversely, the psychological [81]. environment encompasses intangible aspects including organizational culture, leadership style, communication, teamwork, autonomy, and feedback. a conducive psychological environment fosters a sense of belonging, trust, respect, and recognition, engendering heightened commitment, job satisfaction, and loyalty among employees (Suifan, 2019).

Work motivation, defined as the degree of inclination to invest effort in attaining specific goals or outcomes, is influenced by various factors including individual needs, values, expectations, goals, incentives, and rewards (Tremblay, 2009). It encompasses intrinsic motivation stemming from internal sources like interest, enjoyment, curiosity, and challenge, as well as extrinsic motivation driven by external factors such as financial rewards, praise, recognition, and promotions (Ryan & Deci, 2000).

Empirical indication underscores the positive impact of work motivation on employee productivity (Tremblay, 2009). A highly motivated workforce contributes to enhanced work output quality and quantity, stimulates innovation, and cultivates creativity among employees Furthermore, robust work motivation correlates with reduced turnover intention and heightened engagement in organizational citizenship behavior, reinforcing the association between motivation and productivity.

The concept of motivation as a mediator between the work environment and employee productivity posits that motivation acts as an intermediary linking these factors. In essence, the work environment indirectly influences employee productivity by augmenting motivation.

Numerous studies have confirmed motivation's mediating role in the link between the work environment and employee productivity. For instance, demonstrated motivation's effective mediation

of work environmental factors on job satisfaction among middle and top managers in Jordanian commercial banks, utilizing multidimensional measurements. uncovered significant mediation by work motivation for both work motivation and job satisfaction effects on employee productivity in PT Bank Rakyat Indonesia TBK, employing comprehensive measurements. Similarly, Alam et al. (2019) established positive mediation by work motivation for the influence of social compliance on employee productivity in Bangladeshi ready-made garment factories, utilizing diverse measurements.

In summary, the reviewed literature underscores the role of the work environment in shaping employee productivity through the intermediary mechanism of motivation. By cultivating a conducive work environment that addresses both physical and psychological facets, organizations can bolster employee motivation, subsequently enhancing productivity. Hence, organizations are advised to prioritize the optimization of the work environment and the motivation of their workforce to achieve heightened levels of productivity [82].

H2: Motivation play a mediating role between work environment and employee productivity.

Work Experience Play a Moderating Role Between Work Environment and Employee Productivity

The interaction between work experience and the work environment significantly influences employee productivity. The "work environment" includes both tangible and psychological factors affecting well-being, motivation, and job performance. Employee productivity reflects output relative to effort. In contrast, work experience encompasses skills and knowledge gained from past or current jobs. Work experience moderates the link between the work environment and productivity. The impact of the work environment on productivity depends on the depth of employees' work experience.

Gartner's report (2022) outlines nine upcoming work trends, including quiet hiring and hybrid flexibility. It equips HR leaders with practical tools to address these trends, elevating engagement, and retention. Is review (2020) delves into the link between healthy workplaces and employee outcomes like satisfaction and productivity. It explores elements like physical environment, culture, leadership, and well-being that contribute to a healthy work setting.

conducted research revealing that servant leadership, an environment emphasizing service, empowerment, trust, and collaboration, positively and significantly affected both innovation self-efficacy and employee productivity within Indonesian food and beverage SMEs. This study further unveiled that innovation self-efficacy mediated the connection between servant leadership and employee productivity, while the corporate work culture moderated the association between innovation self-efficacy and employee productivity. Corporate work culture pertains to shared values, norms, and practices that shape employee behaviors and interactions within the workplace. They also argued that work experience can enhance innovation self-efficacy by boosting employees' confidence, motivation, and involvement in decision-making. They posited that employees with more work experience possess greater knowledge and skills to generate and implement innovative ideas and are more likely to perceive servant leadership as supportive and conducive to innovation. Additionally, they suggested that corporate work culture can either strengthen or weaken the impact of innovation self-efficacy on employee productivity, depending on whether it fosters or hinders creativity, learning, and teamwork. That work experience can increase employee involvement by enabling employees to connect their work to their personal values and goals, reducing work-related stress, and providing additional time off or financial incentives as rewards. They argued that employees with more work experience have a clearer understanding of their personal values and goals, exhibit greater resilience in coping with work challenges and uncertainty, and appreciate recognition and rewards for their contributions. In their work, they developed an "employee engagement checklist" based on an academic literature review and original data, outlining three key levers managers can utilize to enhance employee engagement: (a) facilitating the alignment of employees' work with their personal values, (b) decreasing work-related stress and increasing job enjoyment, and (c) rewarding employees with extra time off alongside financial incentives. Provided practical recommendations for managers to reduce work-related stress

and enhance employee engagement, such as encouraging a culture that accepts failure, recognizing team members who think innovatively, incorporating regular break times into schedules, and providing opportunities for learning and growth.

In summary, these sources collectively suggest that work experience can act as a moderating factor between work environment and employee productivity by influencing how employees perceive and respond to various aspects of their work, including leadership, innovation, culture, stress, enjoyment, and rewards.

H3: Work experience plays a moderating role between work environment and employee productivity.

RESEARCH METHODOLOGY

This section provides a concise outline of the research methods utilized in this study, encompassing the research approach, design, methodology for data collection, and the analytical methods applied for data interpretation.

Research Design

This study employed a quantitative survey and questionnaire research design to explore the interrelation between the work environment and employee productivity. The research approach focused on numerical data analysis, incorporating multiple variables, including independent factors like organizational culture, task diversity, autonomy, and workload equilibrium. The dependent variable was employee productivity, with motivation acting as a mediating element, and work experience assuming a moderating role. Employing a case study approach, the research strategy facilitated a comprehensive examination of a specific context, offering profound insights into the work environment-productivity nexus. Methodologically, a mono method design was adopted, indicating the exclusive utilization of quantitative methods for data collection and subsequent analysis.

Research Population

This research was conducted in the context of various universities in Kabul, Afghanistan, with a focus on teachers and employees. The target population comprised university employees and teachers, who are integral to the educational framework, contributing to academic program delivery and overall institutional functioning. This specific group was chosen to investigate the influence of the work environment on productivity, job satisfaction, and overall experiences within the university environment. Encompassing administrative staff, lecturers, researchers, and other professionals, this diverse group provides a comprehensive understanding of perspectives and encounters in the university setting. The study's aim is to offer valuable insights for enhancing the work environment and well-being of these individuals, thereby contributing to the education sector. The population size for this study is 210 individuals, including human resources officers, department heads, faculty deans, teachers, and administrative staff members. This precise delineation of the population is essential to ensure research validity and the applicability of findings.

Sampling Techniques

In this study, a probability (random) sampling technique was employed to collect data. The aim was to select a sample that faithfully represents the wider population. This was achieved through the random selection of respondents for participation and questionnaire completion.

Source of Data Collection

This research investigated the impact of the work environment on employee productivity using a primary data collection approach. Through questionnaires administered to university administrative staff and teachers, the study gained firsthand insights into participants' perceptions. The questionnaire, based on Workhuman (2023), featured structured closed-ended questions and Likert scale items, ensuring clarity and relevance. This method enabled efficient and standardized data collection, facilitating systematic analysis and interpretation of the findings.

Data Analysis

This study aims to assess the correlation between the work environment and employee productivity, incorporating the mediating influence of motivation and the moderating impact of work experience. The research framework encompasses multiple equations elucidating these associations.

The first equation is:

$$EP = \beta_0 + \beta_1 W + e$$

This equation represents the relationship between employee productivity (EP) and work environment (W), where β_0 and β_1 are the coefficients to be estimated, and e represents the error term.

The second equation introduces motivation (M) as a mediator:

$$M = \beta_0 + \beta_1 W + e$$

This equation represents the relationship between motivation (M) and work environment (W), where β_0 and β_1 are the coefficients to be estimated, and e represents the error term.

The third equation describes the relationship between employee productivity (P) and motivation (M):

$$EP = \beta_0 + \beta_1 M + e$$

In this equation, β_0 and β_1 are the coefficients to be estimated, and e represents the error term.

The fourth equation incorporates both motivation (M) and work environment (W) as predictors of employee productivity (EP):

$$EP = \beta_0 + \beta_1 M + \beta_2 W + e$$

Here, β_0 , β_1 , and β_2 are the coefficients to be estimated, and e represents the error term.

Finally, the fifth equation introduces work experience (E) as a moderator:

$$P = \beta_0 + \beta_1 W + \beta_2 E + \beta_3 (W * E) + e$$

This equation represents the relationship between employee productivity (EP), work environment (W), work experience (E), and their interaction term ($W * E$). β_0 , β_1 , β_2 , and β_3 are the coefficients to be estimated, and e represents the error term.

For data analysis, a quantitative approach was utilized, and data were gathered through the administration of a questionnaire. The collected data underwent analysis using IBM SPSS, a widely employed statistical software package for data interpretation.

For the mediation and moderation analysis, the process v4.2 by Andrew F. Hayes method was employed. This method allows for the examination of the mediating and moderating effects in the relationships between variables.

By utilizing the research model and conducting the data analysis, this study aims to provide insights into the relationships between work environment, employee productivity, motivation, and work experience, and to explore the mediating and moderating roles of motivation and work experience in these relationships.

RESULT AND DISCUSSION

Descriptive Statistics for Employee Satisfaction and Organizational Factors

The descriptive statistics present the characteristics of eight variables related to employee satisfaction and organizational factors, each measured on a Likert scale from 1 to 5, where 1 signifies "Strongly Disagree" and 5 represents "Strongly Agree."

- *Job Satisfaction (JS)*: The average job satisfaction score is approximately 4.01, indicating that, on average, employees are moderately satisfied with their jobs. The scale's range allows for differentiation in satisfaction levels, with some employees expressing stronger agreement (score of 5) while others show a more neutral response (score of 3).
- *Organizational Culture (OC)*: The average score for organizational culture is 3.612, suggesting that, on average, employees find the organizational culture to be moderately convenient and positive. The scale range allows for the recognition of variations in perceptions, with some employees perceiving the culture more favorably (score of 4 or 5) and others less favorably (score of 2 or 3).
- *Task Variety (TV)*: The average score for task variety is 4.095, indicating that, on average, employees perceive a high level of task variety in their roles. The scale's range demonstrates that employees generally experience diverse and stimulating tasks, with room for some to perceive even greater task variety (score of 5).
- *Autonomy (A)*: The average score for autonomy is 3.678, suggesting that, on average, employees perceive a moderate level of autonomy in their work. The scale's range allows for differentiation, with some employees feeling they have more control and independence (score of 4 or 5) while others may desire additional autonomy (score of 3 or below).
- *Work-Load Balance (WB)*: The average score for work-load balance is 3.725, indicating that, on average, employees perceive a moderate level of balance between their workload and personal life. The scale range reflects that while some employees may find a satisfactory balance (score of 4), others may feel there is room for improvement (score of 3 or below).

Overall, these descriptive statistics provide valuable comprehensions into employee satisfaction and perceptions of various organizational factors Table 1. They highlight areas where employees generally feel more satisfied or perceive positive aspects, such as task variety, and areas where improvements or individual differences in perceptions may exist, such as autonomy and work-load balance. Understanding these factors can support organizations identify areas for targeted improvements and enhance overall employee satisfaction and engagement.

Table 1. Descriptive Statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
EP	210	4.018	.535	1.6	5
JS	210	4.01	.701	1.5	5
TV	210	4.095	.559	2.5	5
OC	210	3.612	.664	2	5
A	210	3.678	.67	1	5
WB	210	3.725	.651	1.5	5
WE	210	3.652	.568	2	4.75
MT	210	4.164	.506	1.2	5

The correlation matrix (Table 2) displays the interrelationships among various key workplace variables, namely EP, JS, TV, OC, A, WB, WE, and MT. Each cell in the table represents the Pearson correlation coefficient, capturing the strength and direction of the linear associations between the corresponding pairs of variables.

Upon analyzing the correlation matrix, it is evident that EP exhibits positive correlations with JS, OC, A, WB, WE, and MT, with correlation coefficients ranging from weak to moderate. These results indicate that enhanced employee productivity tends to align with higher levels of job satisfaction, a conducive organizational culture, increased autonomy in work, balanced workload, greater work experience, and stronger motivation.

JS also demonstrates positive correlations with TV, OC, A, and WE. However, a weak negative correlation exists between JS and MT, implying that higher job satisfaction may be marginally associated with decreased motivation levels.

Regarding TV, it exhibits weak positive correlations with OC, A, WB, and WE, while its association with MT is negligible.

The analysis further reveals that OC positively correlates with A, WB, WE, and MT, with associations being predominantly weak to very weak.

A displays a moderate positive correlation with WB and very weak positive correlations with WE and MT. WB indicates a weak positive correlation with WE and a weak negative correlation with MT.

Finally, WE exhibits a weak positive correlation with MT.

Table 2. Matrix of correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) EP	1.000							
(2) JS	0.335	1.000						
(3) TV	0.133	0.476	1.000					
(4) OC	0.368	0.376	0.316	1.000				
(5) A	0.236	0.433	0.352	0.356	1.000			
(6) WB	0.229	0.246	0.288	0.258	0.466	1.000		
(7) WE	0.212	0.354	0.125	0.294	0.126	0.138	1.000	
(8) MT	0.383	-0.062	0.050	0.086	-0.061	-0.133	0.012	1.000

Normality Test

Table 3 indicates the output of normality test. The normality test was performed on the residuals of the regression analysis, with EP as the dependent variable and other variables as independent variables. The test aimed to assess whether the residuals follow a normal distribution. The results indicated that the residuals show no significant skewness ($p = 0.259$) or excess kurtosis ($p = 0.407$), suggesting a reasonably symmetric and normally distributed pattern. The joint test, combining skewness and kurtosis, also supported the absence of substantial deviations from normality ($p = 0.407$). Hence, the assumption of normality for the residuals in the regression model appears valid, supporting the reliability of the analysis and its interpretations. However, it's essential to consider other assumptions and perform further checks for a comprehensive assessment.

Skewness/Kurtosis tests for Normality
—joint

Table 3. Indicates the output of normality test.

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	adj_chi2(2)	Prob>chi2
residual	100	0.486	0.259	1.800	0.407

Multicollinearity Test

The findings of the multicollinearity test, as shown in Table 4, were obtained through the Variance Inflation Factor (VIF) for the regression model's independent variables. VIF values, ranging from 1.052 to 1.664, remain below the threshold of 5, indicating the absence of noteworthy multicollinearity concerns. The average VIF of 1.367 further underscores the lack of significant multicollinearity among independent variables. This outcome strengthens the stability and dependability of the regression

analysis, facilitating precise interpretations of relationships between independent variables and the dependent variable, Employee Productivity (EP).

Table 4. Variance inflation factor.

	VIF	1/VIF
JS	1.664	.601
A	1.555	.643
TV	1.409	.71
WB	1.351	.74
OC	1.334	.749
WE	1.205	.83
MT	1.052	.95
Mean VIF	1.367	.

Heteroscedasticity Test

The output of the Breusch-Pagan / Cook-Weisberg test for heteroscedasticity indicates that there is evidence of non-constant variance in the fitted values of EP. The test statistic, $\chi^2(1) = 7.64$, yields a p-value of 0.0057, which is less than the significance level (0.05). This result tips to the rejection of the null hypothesis, suggesting the presence of heteroscedasticity in the data.

To address the issue of heteroscedasticity, robust regression was employed. By utilizing robust regression, the impact of heteroscedasticity on the parameter estimates was minimized. The robust regression approach allows for more reliable and unbiased results, even in the presence of heteroscedasticity. Therefore, the analysis is conducted in a robust manner, ensuring the validity and accuracy of the regression model despite the detected heteroscedasticity in the data.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of EP

$\chi^2(1) = 7.64$

Prob > $\chi^2 = 0.0057$

Regression Output

Table 5 presents the outcomes of a linear regression analysis with EP as the dependent variable and several independent variables: JS, TV, OC, A, WB. The linear regression model shows a reasonable fit to the data, as evidenced by an R-squared value of 0.20. This indicates that approximately 20% of the variance in Employee Productivity can be explained by the independent variables included in the model. Additionally, the F-test is highly significant (p-value = 0.001), suggesting that the overall regression model is statistically significant.

The results of the regression analysis reveal a significant and positive relationship between Job Satisfaction (JS) and Employee Productivity (EP). An increase in Job Satisfaction (coefficient = 0.19) is associated with improved productivity, indicating that higher job satisfaction leads to increased employee productivity (p-value = 0.029). This finding aligns with previous studies by Voordt and Jensen (2023) which emphasized the influence of positive job perceptions on job satisfaction, subsequently impacting performance and retention [33].

On the other hand, Task Variety (TV) shows a potential negative impact on Employee Productivity, but this effect is not statistically significant (coefficient = -0.108, p-value = 0.302). Some studies, such as Morf et al. (2017) and Singh et al. (2021), suggest positive effects of task variety on motivation,

learning, creativity, and job satisfaction. However, other research by Griffin et al. (1981) and Morf et al. (2017) reports negative and non-significant effects, likely due to increased complexity, stress, and role conflict. The impact of task variety on productivity may vary based on individual preferences, task characteristics, organizational context, and environmental conditions, requiring further investigation.

Moreover, Organization Culture (OC) shows a positive and statistically significant influence on Employee Productivity (coefficient = 0.22, p-value = 0.01). A conducive and positive organizational culture has been linked to higher productivity levels, consistent with the findings of Indeed.com (2023). Nzuva and Kimanzi (2022) highlight its association with overall workforce productivity, motivation, commitment, and leadership effectiveness.

Regarding Autonomy (A), the coefficient of 0.01 suggests a limited and non-significant impact on Employee Productivity (p-value = 0.91). This finding is in line with some previous studies by Johannsen and Zak (2020) and Thilagavathy and Geetha (2021) that report weak or no effects. However, other research by Turanlıgil and Farooq (2019) and HBR (2021) indicates positive effects on productivity through enhanced employee motivation, satisfaction, and well-being.

The analysis also considered Workload Balance (WB) and its impact on Employee Productivity. The coefficient of 0.102 suggested a potential positive influence of a balanced workload on productivity. However, this relationship lacked statistical significance (p-value = 0.245), warranting further investigation. Previous studies by Asana (2020) and GainApp (2016) supported the idea that a balanced workload positively affects productivity by enhancing focus, confidence, and satisfaction. The optimal level of WB may depend on factors like team size, task complexity, employee skills, and organizational culture (Dovico, 2021). Thus, considering Workload Balance is crucial in enhancing Employee Productivity within the organization.

In conclusion, this research conducted in Afghanistan, specifically within the educational sector, highlights the significance of Job Satisfaction and Organizational Culture in positively influencing Employee Productivity. The study reveals that a conducive organizational culture and higher job satisfaction lead to increased productivity among employees. However, further examination is needed to gain comprehensive insights into the relationships between Task Variety, Autonomy, and Workload Balance with productivity. Understanding these factors can contribute to the enhancement of Employee Productivity and overall organizational performance in the unique context of Afghanistan's educational sector.

Table 5. Linear regression.

<i>EP</i>	<i>Coef.</i>	<i>St.Err.</i>	<i>t-value</i>	<i>p-value</i>	<i>[95% Conf</i>	<i>Interval]</i>	<i>Sig</i>
JS	.191	.086	2.21	.029	.02	.362	**
TV	-.108	.104	-1.04	.302	-.314	.098	
OC	.22	.083	2.64	.01	.055	.386	***
A	.01	.091	0.11	.913	-.172	.192	
WB	.102	.087	1.17	.245	-.071	.274	
Constant	2.483	.437	5.68	0	1.615	3.351	***
Mean dependent var	4.018		SD dependent var			0.535	
R-squared	0.201		Number of obs			100	
F-test	4.722		Prob > F			0.001	
Akaike crit. (AIC)	147.247		Bayesian crit. (BIC)			162.878	
*** $p<.01$, ** $p<.05$, * $p<.1$							

Mediating Analysis

The regression analysis results indicate that out of all the independent variables, only Job Satisfaction and Organizational Culture have a vital impact on Employee Productivity. Consequently, in our subsequent analyses, we focused solely on examining the mediation effect of Motivation and the moderation effect of Work Experience on the relationship between Job Satisfaction and Organizational Culture with Employee Productivity. The mediation and moderation analyses were conducted using SPSS Process v4.2 by Andrew F. Hayes, a well-established method for exploring these effects in the context of regression models.

Job Satisfaction

The mediation analysis reveals several key findings regarding the relationship between JS and EP. The total effect of JS on EP is significant (effect: 12.7547, $p < .0001$), indicating a substantial overall impact. Additionally, the direct effect of JS on EP is also significant (effect: 13.4136, $p < .0001$), highlighting an independent influence. However, the mediation effect through the mediator (MT) is not statistically significant (effect: -0.6589, $p > .05$). Notably, the bootstrapped confidence interval (BootLLCI: -3.6817, BootULCI: 1.5870) does not include zero, suggesting a possibility of a non-zero indirect effect. While the direct relationship between JS and EP is significant, the role of MT as a mediator requires further investigation to understand its contribution fully.

Organization Culture

Looking to the output given in Table 6, The mediation analysis reveals several important findings regarding the relationship between OC and EP. The total effect of organization culture on employee productivity is significant (effect: 11.4188, $p = .0010$), indicating a meaningful overall impact. Furthermore, the direct impact of organization culture on employee productivity is also significant (effect: 10.6043, $p = .0016$), highlighting an independent influence.

However, the mediation effect through the mediator MT is not statistically significant (effect: 0.8145, $p > .05$). Despite this, the bootstrapped confidence interval (BootLLCI: -1.7232, BootULCI: 4.9096) does not include zero, suggesting the possibility of a non-zero indirect effect. This implies that the mediating role of MT in the relationship between organization culture and employee productivity might have some influence, even though it is not statistically significant. Further investigation is needed to fully comprehend Motivation role as a mediator in this context.

Table 6. Mediation Analysis.

Variables	Effect	se/BootSE	t-value	p-value	LLCI/BOOTLLCI	ULCI/BOOTULCI
Total Effect of JS on EP	12.7547	3.1192	4.089	0.0001	6.5646	18.9447
Direct Effect of JS on EP	13.4136	2.9481	4.5498	0	7.5623	19.2648
Indirect Effect of JS on EP	MT: -0.6589	1.2979			-3.6817	1.587
Total Effect OC on EP	11.4188	3.3687	3.3896	0.001	4.7336	18.104
Direct Effect of OC on EP	10.6043	3.2593	3.2535	0.0016	4.1355	17.0731
Indirect Effect of OC and EP	MT: 0.8145	1.6527			-1.7232	4.9096

Moderation Analysis

Table 7 analysis reveals that the predictors JS and WE, along with their interaction term (Int_1), do not exhibit a significant relationship with the outcome variable, EP. Despite the overall model being statistically significant ($p = 0.0006$), the individual coefficients for JS, WE, and Int_1 are not statistically significant ($p > 0.05$). These results indicate that the combined effect of Job Satisfaction and Work Experience on Employee Productivity does not significantly explain the variance in the outcome.

Consequently, we can infer that Work Experience does not play a moderating role between Job Satisfaction and Employee Productivity in this context.

Table 7. Moderating role of WE between JS and EP.

R	R-sq	MSE	F	df1	df2	p
0.4042	0.1633	472.9198	6.2473	3	96	0.0006
<i>Model</i>						
	coeff	se	T	p	LLCI	ULCI
constant	-2.9312	64.626	-0.0454	0.9639	-131.213	125.3507
JS	12.479	16.8196	0.7419	0.4599	-20.9077	45.8657
WE	7.4383	19.359	0.3842	0.7017	-30.989	45.8656
Int_1	-0.4175	4.915	-0.0849	0.9325	-10.1738	9.3388

Similarly, the findings from Table 8 suggest that the predictors OC, WE, and their interaction term (Int_1) do not demonstrate a significant relationship with the outcome variable, EP. Although the overall model is statistically significant ($p = 0.0026$), the individual coefficients for OC, WE, and Int_1 are not statistically significant ($p > 0.05$). As a result, we can conclude that the combined impact of Organizational Culture and Work Experience on Employee Productivity does not significantly explain the variance in the outcome. Consequently, we can infer that Work Experience does not play a moderating role between Organizational Culture and Employee Productivity in this particular context.

Table 8. Moderating role of WE between OC and EP.

R	R-sq	MSE	F	df1	df2	p
0.3707	0.1374	487.5633	5.0985	3	96	0.0026
<i>Model</i>						
	coeff	se	t	p	LLCI	ULCI
constant	41.8368	62.5957	0.6684	0.5055	-82.4149	166.0885
OC	-1.3365	18.9725	-0.0704	0.944	-38.9967	36.3237
WE	-2.7147	17.767	-0.1528	0.8789	-37.982	32.5526
Int_1	3.0825	5.2744	0.5844	0.5603	-7.3871	13.5521

CONCLUSION

In conclusion, this study explored the factors influencing Employee Productivity (EP) within Afghanistan's educational sector. The findings highlight a noteworthy and positive relationship between Job Satisfaction (JS) and Employee Productivity, aligning with previous studies. While Task Variety (TV) showed a potential negative impact on Employee Productivity, the effect lacked statistical significance, necessitating further investigation due to conflicting evidence in the literature.

Organizational Culture (OC) emerged as a vital determinant of Employee Productivity, showing a positive and, but contradictory findings.

The study conducted mediation analysis to examine the intermediary function of Motivation (MT) in the associations between Job Satisfaction and Employee Productivity, as well as between Organizational Culture and Employee Productivity. Although the direct links between Job Satisfaction and Employee Productivity, and between Organizational Culture and Employee Productivity, displayed significance, the mediating effect of Motivation did not achieve statistical significance, prompting the need for additional investigation.

Furthermore, the moderation analysis did not find evidence of Work Experience (WE) playing a significant moderating role between Job Satisfaction and Employee Productivity or between

Organizational Culture and Employee Productivity. Thus, Work Experience does not appear to significantly modify the impact of Job Satisfaction or Organizational Culture on Employee Productivity in this particular context.

In conclusion, this study sheds light on the elements that influence employee productivity in Afghanistan's educational sector. Job Satisfaction and Organizational Culture emerge as significant predictors, emphasizing the significance of fostering a positive work environment and organizational culture to enhance productivity. The study also highlights the complexities of Task Variety, Autonomy, and Workload Balance, underscoring the need to consider contextual factors when addressing productivity concerns.

To optimize Employee Productivity in this unique context, educational institutions in Afghanistan should focus on promoting job satisfaction and cultivating a positive organizational culture. Future research should continue investigating the mechanisms through which these factors influence productivity and explore additional variables to achieve a complete understanding of productivity in this specific context.

Recommendations

1. Educational institutions should prioritize initiatives to improve job satisfaction among employees. This may include creating opportunities for professional growth, recognition, and making a supportive work environment.
2. Efforts should be made to develop and maintain a positive organizational culture that emphasizes collaboration, transparency, and employee well-being. Training programs and leadership development can contribute to building a conducive work culture.
3. Consideration of Afghanistan's unique cultural and organizational context is crucial when implementing productivity-enhancing interventions. Customized approaches can lead to more effective outcomes.
4. Collaborate with stakeholders, including teachers, administrative staff, and university management, to actively involve them in the decision-making process and align productivity initiatives with their needs and expectations.
5. Emphasize continuous improvement in productivity-related practices by regularly collecting feedback, analyzing data, and implementing evidence-based strategies to optimize employee productivity in educational institutions.

Future Directions

1. Additional investigation is warranted to delve into the effects of task diversity on employee efficiency within Afghanistan's educational domain. Enhancing comprehension of the determinants that shape the interplay between task diversity and productivity can facilitate the development of proficient job design strategies.
2. Despite limited significance, the influence of autonomy and workload balance should be continually assessed to identify any changes in the work environment that may impact employee productivity positively.
3. Subsequent research endeavors should undertake a more profound examination of the intermediary function of motivation in the interplay among job satisfaction, organizational culture, and employee productivity. This investigative effort holds the potential to offer valuable elucidation of the fundamental mechanisms steering productivity outcomes.
4. More research is needed to determine the possible moderating impact of work experience in the relationship between job satisfaction, corporate culture, and employee productivity. Such analysis can help tailor strategies based on employees' experience levels.
5. Employing longitudinal research methodologies offers an enhanced grasp of the evolving connections between the work environment and employee productivity across temporal dimensions.

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