

THE INFLUENCE OF MOTIVATION AND WORK ENVIRONMENT ON WORK PRODUCTIVITY WITH TECHNOLOGICAL SUPPORT AS A MEDIATING VARIABLE (A STUDY ON ARCHIVIST EMPLOYEES AT BIRO UMUM SEKRETARIAT DAERAH PROVINSI BALI)

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Abstract

This study aims to analyze the effects of training, motivation, and work environment on employee productivity, with technology support as a mediating variable. The research was conducted on archival officers at Biro Umum Sekretariat Daerah Provinsi Bali (General Bureau of the Regional Secretariat of Bali Province) using a quantitative approach. Data were collected through questionnaires and analyzed using path analysis to examine both direct and indirect effects among variables. The results show that training, motivation, and work environment each have a significant positive influence on productivity. Technology support significantly mediates the relationship between training and productivity, as well as between work environment and productivity, indicating that employees perform better when equipped with adequate technological tools and competencies. However, the mediating role of technology on the effect of motivation is less substantial. The study implies that improving digital infrastructure and providing continuous technology-based training are essential strategies for enhancing productivity in public-sector archival institutions.

Keywords: *Training, Motivation, Work Environment, Technology Support, Employee Productivity.*

INTRODUCTION

Work productivity is one of the essential elements in improving organizational performance, especially in public institutions that are required to provide administrative services effectively, efficiently, and accountably. According to Pujianto (2024), employee productivity can be understood as an individual's ability to consistently enhance performance through mastery of skills and work competencies gained from effective training. In the context of archival work, productivity is reflected in the archivists' ability to manage, store, retrieve, and present records quickly, accurately, and in accordance with archival standards, thereby contributing significantly to administrative smoothness and the quality of organizational services. In today's digital era, government organizations are required to develop human resources through various competency improvement programs, the creation of a conducive work environment, and the utilization of technology as a key support in work processes. This condition is also experienced by archivists at the General Bureau of the Regional Secretariat of Bali Province, who play a strategic role in supporting government administrative governance, particularly in managing dynamic documents, official correspondence systems, and archival services that form the foundation of public service delivery within the Provincial Government of Bali.

According to Law Number 43 of 2009 concerning Archiving, an archivist is an employee who has competencies in the field of archiving obtained through education, training, and competency certification, and who carries out functions and responsibilities in archival activities. This definition emphasizes that archivists are a specialized profession that demands technical expertise as well as the ability to adapt to developments in information technology, especially in the implementation of archival information systems and electronic correspondence systems that have now been adopted in many government institutions. Empirically, archivists at the General Bureau of the Regional Secretariat of Bali Province still face various challenges in carrying out their duties, such as limited technical competence, high administrative workload, varying levels of work motivation, and a work environment that has not fully supported optimal use of technology. Although the local government has provided various technological facilities and archival information systems, not all archivists are able to utilize them to the fullest,

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resulting in work processes that have yet to demonstrate significant productivity improvement. The suboptimal productivity in archival work has the potential to reduce the quality of administrative services, particularly in providing information and documents that are fast, accurate, and accountable. Considering that the General Bureau is a work unit responsible for coordinating correspondence services, official document management, and government document administration, the work quality of archivists plays a critical role in ensuring smooth internal and external service flows. If productivity declines, it may affect public perceptions of the performance quality of the Bali Provincial Government. To improve archivist productivity, training is a fundamental factor that directly contributes to enhancing technical competence and the ability to adapt to technological developments. For archivists, training on digital archiving, record classification, digital preservation, and the use of archival applications is essential to increase work efficiency, accelerate record retrieval, and ensure compliance with archival standards. In addition, work motivation also has a significant influence on productivity. Archivists with high motivation tend to be more meticulous, disciplined, and responsible in managing documents and providing information services. In a job that requires high accuracy, motivation becomes a determining factor in producing quality archival outputs.

A supportive work environment, both physically and non-physically, also contributes to increased productivity. Physical aspects such as well-organized storage rooms, adequate work equipment, and ergonomic workspace layout can accelerate archival processes. Non-physical aspects such as harmonious work relationships, a positive organizational culture, and leadership support can enhance comfort and work enthusiasm among archivists. On the other hand, technological support plays a strategic role in facilitating archival tasks. The use of archival applications, digital information systems, and document processing devices can increase work efficiency when utilized optimally. However, technology cannot provide significant impact without adequate training, motivation to adapt, and a work environment that supports its implementation. Thus, technology becomes a mediating variable that strengthens the influence of training, motivation, and work environment on archivist productivity. Previous studies have shown that training, work motivation, and work environment influence productivity. However, there remains a research gap regarding how these factors work simultaneously in the context of local government bureaucracy, particularly when technology is included as a mediating variable. Therefore, this study aims to analyze the influence of training, motivation, and work environment on archivist productivity and examine the role of technological support as a mediating variable among archivists at the General Bureau of the Regional Secretariat of Bali Province.

LITERATURE REVIEW

Motivation

Work motivation is one of the most fundamental psychological aspects in determining the quality and effectiveness of a person's work behavior. In every organization, motivation serves as an internal source of energy that drives individuals to perform their tasks with awareness, willingness, and commitment. Without motivation, employees' abilities and skills are often not utilized optimally, making it difficult for the organization to achieve its goals. This demonstrates that motivation is not merely a supporting factor but a primary determinant of organizational success in achieving the expected productivity and performance. Motivation is also closely related to organizational efforts in building a work culture that supports continuous learning. Studies in similar journals emphasize that employee motivation increases when organizations provide support through training, skill development, and opportunities for employees to enhance their competencies. Such conditions create self-confidence and emotional involvement, which stimulate long-term commitment to work. Thus, motivation does not solely originate from an individual's internal drive but is also influenced by external factors such as the work environment, organizational support, and opportunities for competency enhancement.

In the context of the archivist profession, motivation plays a strategic role in determining the quality and effectiveness of work outcomes. This profession requires accuracy, precision, procedural consistency, and the ability to adapt to technological advancements in archiving. Strong motivation encourages archivists to work carefully in arranging, storing, maintaining, and retrieving records. Moreover, motivation determines the readiness of archivists to adapt to information technology developments such as digital archival systems and document digitization. When motivation is high, archivists are more willing to embrace change, enhance their competencies, and adopt innovative work methods. McClelland (1961) explains that work motivation arises from three basic needs: the need for achievement, the need for power, and the need for affiliation. The need for achievement relates to an individual's drive to meet high work standards and produce excellent performance. The need for power reflects the desire to influence, direct, or control others in the work process. Meanwhile, the need for affiliation is reflected in individuals'

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desire to establish harmonious relationships with colleagues and supervisors. This perspective aligns with Sunarsi (2018), who states that motivation is an internal drive that directs an individual's behavior toward specific goals. Kamal et al. (2021) also emphasize that motivation is an internal energy that encourages someone to exert their best effort in their work. Thus, work motivation can be understood as a psychological force that drives employees to work optimally through achievement drive, social influence, and positive interpersonal relationships. In an organization, work motivation plays an important role as it becomes the primary driver of individual behavior in completing assigned tasks. Motivation determines the direction, intensity, and persistence of an individual's work efforts, making its understanding highly relevant in the study of human resource management. In this context, motivation theories provide a foundation for understanding how internal drives are formed and how they influence performance outcomes.

Work Environment

The work environment is an important factor influencing employees' comfort, health, and effectiveness in performing their tasks. Essentially, the work environment is not limited to physical aspects such as workspace design or facilities but also includes social, psychological, and organizational cultural aspects that shape individuals' daily experiences at work. A good work environment creates a supportive atmosphere that allows employees to work safely, comfortably, and with full concentration on their responsibilities. Robbins (1998) defines the work environment as the entirety of external conditions that influence individual behavior and performance in an organization, both physical and social. The physical work environment includes lighting, workspace layout, temperature, noise levels, and availability of work facilities that enhance employee comfort. Meanwhile, the social work environment includes work relationships, communication, supervisory support, and clarity of organizational policies. This view aligns with Nitisemito (2015), who states that the work environment refers to everything surrounding individuals that can affect how they perform their work. Darmadi (2020) also adds that the work environment determines how effectively individuals carry out their tasks. Therefore, a conducive work environment can be understood as a combination of physical comfort and social support that enables employees to work more optimally.

The work of archivists requires controlled physical conditions that meet archival conservation standards. Factors such as stable temperature and humidity, appropriate lighting, clean storage rooms, and adequate storage facilities are integral to a work environment that supports effective archival management (Mayasari, 2023). Adequate facilities including archival shelves, archival boxes, digitization equipment, and electronic retrieval systems directly influence the accuracy, speed, and security of archivists' work processes (Krisnandi, 2023). Poor physical conditions may cause document damage and reduce work quality. The work environment also plays an important role in shaping employee behavior and perception of the organization. When employees feel supported physically and socially they tend to exhibit higher commitment to their tasks and the organization. Conversely, a negative work environment can increase stress levels and reduce productivity. Therefore, managing the work environment is a vital part of organizational strategy to create a healthy, harmonious, and productive workplace.

Technology

Technological developments today have brought significant changes to how organizations conduct their activities. Modern technology acts as a tool that increases efficiency, speed, and accuracy in completing administrative and operational tasks. In archival work, technology is essential because it accelerates data retrieval, improves information accuracy, and supports more systematic document management. Thus, technological support is a factor that cannot be ignored in organizations that require precision and timeliness. The use of technology also influences how employees carry out their tasks. When technology is easy to use and provides real benefits, employees tend to adopt it. Conversely, technology that is difficult, complex, or does not offer direct benefits may hinder performance and cause resistance. Therefore, employees' perception of technology becomes an important component in successful implementation. A positive attitude toward technology greatly determines the extent to which it is used optimally. The Technology Acceptance Model (TAM) by Davis (1989) explains that technology acceptance is influenced by two key components: perceived usefulness and perceived ease of use. Perceived usefulness reflects the belief that technology can enhance work effectiveness, accelerate processes, and help achieve better results. Perceived ease of use refers to the belief that technology is easy to learn and operate without excessive effort. Afandi (2018) reinforces this by stating that technology functions to simplify task completion and support organizational productivity. Herawati and Dharmayasa (2025) also emphasize that work technology includes system and device capabilities that help employees achieve speed, accuracy, and precision in administrative or operational

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tasks. Thus, technological support in modern organizations greatly depends on employees' perceptions of its usefulness and ease of use. Additionally, technological support is closely related to the organization's ability to provide adequate facilities and systems. Access to modern equipment, stable internet networks, and relevant archival management applications increases employee effectiveness and productivity. This shows that technology is not merely a tool but also concerns system readiness and user perception. Therefore, organizations must ensure that available technology is easy to understand, accessible, and truly assists employees in completing tasks more quickly and effectively. In industries requiring high precision, technology functions as a quality control tool that helps minimize human error and ensure consistent results. The use of performance monitoring software, sensor systems, or analytical applications allows organizations to monitor productivity in real time and make necessary adjustments. Thus, technology not only serves as an aid but also as a strategic factor that directs work processes toward efficiency, accuracy, and speed. These findings confirm that technology is a critical element in modern organizational structures and a key determinant in enhancing productivity and work effectiveness.

Work Productivity

Work productivity is an important indicator of the extent to which employees can produce outputs that meet organizational standards and objectives. Productivity does not merely refer to the quantity of work completed but also the quality, timeliness, and efficiency in using resources. In public service organizations, productivity is crucial because it relates directly to service speed, information accuracy, and the effectiveness of administrative tasks. Thus, understanding productivity is essential to ensure employees work optimally. Productivity is influenced by various factors such as work motivation, work environment, competence, and technological support. When employees feel motivated and supported by a conducive work environment, they are more capable of completing tasks on time with satisfactory results. Good productivity reflects the employee's ability to balance effectiveness and efficiency producing high-quality outputs using appropriate resources and time. Therefore, productivity becomes a highly relevant measure of employees' contribution to the organization.

Bernardin and Russell (1993) state that work productivity consists of six main dimensions: work quality, work quantity, timeliness, efficiency in resource use, need for supervision, and interpersonal impact. Work quality reflects conformity to standards, while quantity refers to the number of outputs completed within a given time. Timeliness indicates an employee's ability to meet deadlines. Efficiency shows the ability to optimize resource use without reducing output quality. This view is reinforced by Febrianti et al. (2019), who define productivity as a comparison between achieved results and resources used effectively and efficiently. Bate'e (2020) adds that productivity is the ability to increase work efficiency by optimizing time, effort, and techniques. Sutrisno (2016) emphasizes that productivity reflects the effectiveness of labor in achieving organizational goals. Overall, work productivity represents a combination of output quality, work process efficiency, and the employee's autonomy in meeting organizational demands. Additionally, productivity serves as a barometer of an organization's overall success. Productive employees help organizations achieve targets, improve service quality, and build a positive public image. Conversely, low productivity can hinder organizational objectives, increase workload, and reduce service quality. Therefore, organizations must understand the factors that influence productivity to implement appropriate policies and interventions.

Relationship Between Variables

The conceptual framework illustrating the relationships among variables is presented in Figure 1.

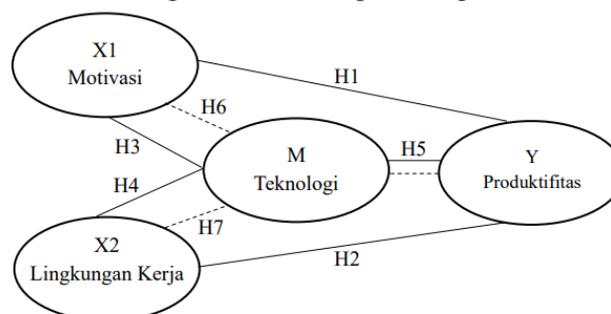


Figure 1. Conceptual Framework
Source: Processed Data (2025)

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The conceptual model of this study illustrates the relationship between motivation, work environment, technological support, and work productivity by referring to theories discussed in the literature review. Based on McClelland's theory, motivation is viewed as an internal drive arising from the need for achievement, power, and affiliation, which encourages employees to work more effectively and thereby increase productivity. The work environment in this model refers to Robbins' perspective, which emphasizes the role of physical conditions, interpersonal relationships, supervisor support, and organizational climate in shaping employee comfort and work effectiveness. Technology functions as a mediating variable as explained by Davis' Technology Acceptance Model (TAM), where perceived usefulness and ease of use influence the extent to which technology can support employees' task performance. Meanwhile, work productivity is understood through Bernardin and Russel's dimensions, which include quality, quantity, timeliness, efficiency, and work independence. Thus, employee productivity is directly influenced by motivation and work environment, and indirectly influenced through technological support that facilitates faster, more accurate, and more efficient work processes.

H1: Motivation influences productivity

Motivation is an internal drive that directs an individual's work energy. Sahir et al. (2022) state that motivation encourages a person to engage in goal-oriented activities. Suryani et al. (2020) emphasize that enthusiasm for work arises when individuals are driven to achieve targets using their abilities. This drive makes workers more persistent, focused, and committed, thereby improving productivity.

H2: Work environment influences work productivity

The work environment plays a crucial role in determining work effectiveness. Afandi (2018, revisited in a 2024 publication) states that lighting, air quality, noise, and spatial comfort are key factors that determine productivity. Trisnayani & Irwansyah (2024) show that the work environment has a positive effect on productivity because employees can complete tasks more efficiently when working conditions are supportive.

H3: Motivation influences technology

According to Suryani et al. (2020), motivation plays an important role in fostering work enthusiasm, including readiness to adopt modern work methods. When motivation is high, individuals are more willing to accept system upgrades, including the use of technology to improve work effectiveness. Strong motivation makes employees more adaptive and more willing to learn digital work tools.

H4: Work environment influences technology

A work environment that provides adequate facilities such as technological tools, proper lighting, and a conducive workspace encourages employees to use technology optimally. Trisnayani & Irwansyah (2024) highlight that supportive physical work conditions enhance the effectiveness of digital tool utilization in professional activities.

H5: Technology influences work productivity

The use of technology accelerates work processes, reduces manual errors, and increases efficiency. Pujianto (2024) mentions that technology and digital training improve workers' abilities, accuracy, and productivity because tasks can be performed faster and more precisely.

H6: Technology mediates the effect of motivation on work productivity

High motivation encourages employees to use technology to achieve better work results. This internal drive speeds up mastery of digital systems, making technology a pathway that strengthens the relationship between motivation and productivity. Pujianto (2024) explains that technology enhances accuracy and efficiency, enabling motivated employees to achieve optimal work outcomes.

H7: Technology mediates the effect of work environment on work productivity

A work environment equipped with digital facilities encourages employees to use technology as part of their work activities. When facilities, workspace, and resources support digital use, the intensity of technology utilization increases. Trisnayani & Irwansyah (2024) show that a conducive work environment enables employees to work more effectively, especially when technology is optimally used to enhance the quality of work results.

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METHOD

This study employs a quantitative research method. The sampling technique used is non-probability sampling with a saturated sampling method because all archivists who met the research criteria totaled only 17 individuals, resulting in the entire population being used as the sample. Data were collected through an online questionnaire distributed via Google Forms and supported by interviews and observations, with measurements using a 1–4 Likert scale. The data analysis technique was conducted using Partial Least Squares (PLS) with a Structural Equation Modeling (SEM) approach, assisted by the SmartPLS version 4.1.0.6 software.

RESULTS AND DISCUSSION

Respondent Characteristics

This study involved 16 respondents consisting of various demographic and professional categories, including gender, age, last education, years of service as archivists, and functional archivist positions. Based on the collected data, respondents were predominantly female, totaling 10 people (62.5%), while male respondents numbered 6 (37.5%). In terms of age distribution, the largest groups were those aged 31–40 years and 25–30 years, each with 6 respondents (37.5%), followed by those over 40 years old with 4 respondents (25%). Regarding educational background, most respondents held a Diploma (D3) degree, totaling 12 individuals (75%), while the remaining 4 respondents (25%) held a Bachelor's degree (S1). Based on years of experience as archivists, the majority had worked for 1–3 years, totaling 15 people (93.7%), while 1 respondent (6.3%) had less than one year of experience. In terms of functional positions, most respondents held the *Arsiparis Mahir* rank, with 8 respondents (50%). This was followed by *Arsiparis Ahli Pertama* with 4 respondents (25%), *Arsiparis Penyelia* with 3 respondents (18.75%), and *Arsiparis Terampil* with 1 respondent (6.25%). Overall, the data indicate that the study's respondents were predominantly female, aged between 25 and 40 years, held a D3 education level, had 1–3 years of work experience, and many occupied the *Arsiparis Mahir* functional position.

Descriptive Statistical Analysis

Based on the results of the descriptive statistical analysis of the collected data, a general overview of the variables studied was obtained. In the aspect of work motivation, the *achievement* indicator showed a mean value of 3.56 for the statement regarding the drive to complete tasks with the best results, and 3.38 for the statement on striving to achieve work targets above the standard. These mean values fall into the high category, indicating that respondents have a strong drive to excel and perform their best at work. For the *power* indicator, the mean value of 2.88 falls into the moderate category, indicating that respondents' confidence or ability to influence or direct coworkers remains at a moderate level. Meanwhile, the *affiliation* indicator shows mean values ranging from 3.31 to 3.56, categorized as high. This reflects positive social relationships, a strong sense of togetherness, and comfort in collaborating with colleagues and superiors.

Regarding the work environment and organizational support variables, the facilities and physical conditions of the workplace show a mean score of 3.31 (high category), indicating that respondents feel reasonably comfortable with the physical working environment. Coworker relationships also show a mean value of 3.31, reflecting good-quality work relationships. Organizational support from supervisors has a mean of 3.25, falling into the moderate–high category, suggesting that guidance and assistance from superiors are perceived as adequate. Work policies and procedures received a mean of 3.00 (moderate category), suggesting that certain aspects related to clarity of rules may need further improvement. The overall organizational climate shows a mean of 3.19, indicating a fairly fair and respectful work environment.

For the technology utilization variable, the *usefulness* indicator shows relatively high mean values: 3.44 for the ability of technology to speed task completion and 3.31 for system ease in helping manage archives. This indicates that technology plays a significant role in improving work effectiveness. For the *ease of use* indicator, mean values of 3.12 and 3.19 fall into the moderate to moderate–high category, meaning the technology used is considered sufficiently understandable and operable, although there is still room for improving ease of use. The productivity indicator shows a mean of 3.38, falling into the high category, illustrating that the use of technology increases respondents' work effectiveness. For the performance variable, the *quality* indicator has a mean of 3.12 (moderate), showing that respondents' work quality meets standards but can still be improved. The *quantity* indicator has a mean of 3.19 (moderate high), indicating that the amount of work completed is fairly optimal. *Timeliness* has a mean of 3.25 (moderate high), indicating respondents' ability to meet deadlines. The *cost-effectiveness* indicator shows a mean of 3.12 (moderate category). Meanwhile, the *need for supervision* indicator has a mean of 3.31 (high category), meaning respondents can work independently without intensive supervision.

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Convergent Validity Test Results

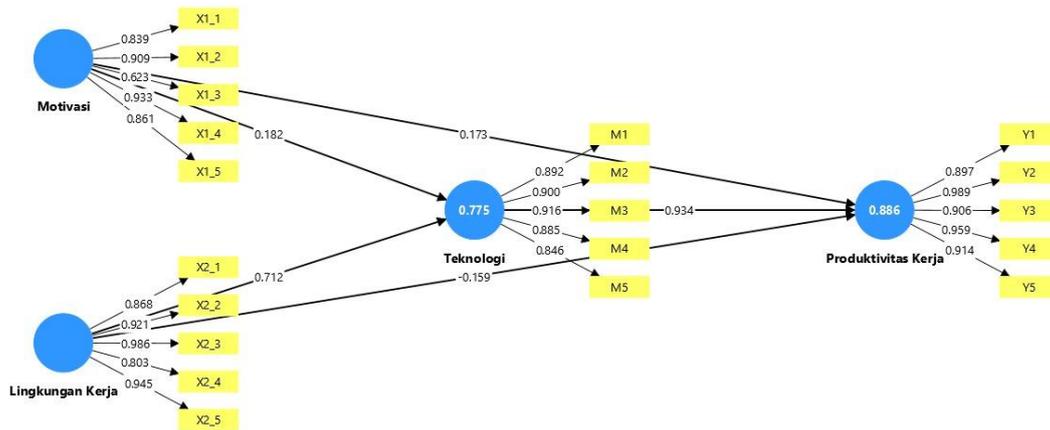


Figure 2. Convergent Validity Test Results

According to Ghazali (2014), an indicator can be considered valid if it has a loading factor value ranging from 0.50 to 0.60, as this range is regarded as meeting the minimum requirement. If the loading factor is below 0.50, the indicator should be eliminated so that the construct validity in the subsequent analysis stages can improve. Based on the test results in this study, all indicators have outer loading values above 0.50, indicating that all indicators used are valid. Composite reliability is used as a measure of internal consistency among a group of indicators that reflect a construct in the SEM model. Referring to Ghazali (2014), a good composite reliability value is one that exceeds 0.70. The results in Table 1 show that all four variables in this study have composite reliability values above 0.70, meaning all variables meet the reliability criteria. Furthermore, Cronbach’s Alpha is used to reinforce the results of the composite reliability test. A construct is considered reliable if its Cronbach’s Alpha value is greater than 0.70. Based on Table 1, all variables have Cronbach’s Alpha values that also exceed 0.70. Thus, all variables in this study meet the reliability test requirements based on Cronbach’s Alpha.

Variable	Composite Reliability	Cornbach’s alpha	R-Square	Q-Square
Motivation	0.922	0.918		
Work Environment	0.958	0.957		
Technology	0.949	0.949	0.775	0.601
Work Productivity	0.963	0.963	0.886	0.785

Table 1. Composite Reliability, Cronbach’s Alpha, R-Square, Q-Square

Source: SmartPLS 4.1.0.6 Processed Data (2025)

Based on the results of the reliability and construct validity tests shown in Table 1, all variables in this study have met the criteria for good reliability. This is indicated by composite reliability values above the minimum threshold of 0.70. The Motivation variable has a composite reliability of 0.922, Work Environment 0.958, Technology 0.949, and Work Productivity 0.963. These values indicate that each construct has excellent internal consistency, meaning the indicators effectively and consistently measure their respective latent variables. Additionally, the Cronbach’s Alpha test results also show that all variables have values above 0.70, thus considered reliable. The Motivation variable has a Cronbach’s Alpha of 0.918, Work Environment 0.957, Technology 0.949, and Work Productivity 0.963. These findings strengthen the composite reliability results and show that all indicators have a high level of reliability in measuring their constructs.

For endogenous variables, the R-Square value indicates the predictive ability of exogenous variables toward them. The Technology variable has an R-Square value of 0.775, meaning Motivation and Work Environment together explain 77.5% of the variance in Technology. Meanwhile, Work Productivity has an R-Square of 0.886, indicating that Technology explains 88.6% of the variance in Work Productivity. Based on Hair et al. (2017), these R-Square values fall into the strong to very strong category. Furthermore, the Q-Square values used to assess predictive relevance show positive results for all endogenous variables. The Technology variable has a Q-Square of

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0.601, while Work Productivity has a Q-Square of 0.785. Q-Square values greater than 0 indicate that the model has good predictive relevance. Thus, this research model is considered to have strong predictive capability and can adequately explain data variability.

Causality Test

Based on the test results shown in the table above, not all relationships between variables show significant effects. For the relationship between Work Environment and Work Productivity, the path coefficient is -0.159 , with a t-statistic of 0.332 and a p-value of 0.740 . The p-value greater than 0.05 indicates that Work Environment does not have a significant effect on Work Productivity. Likewise, the relationship between Work Environment and Technology produces a coefficient of 0.712 with a t-statistic of 1.728 and a p-value of 0.084 . Although the direction of the effect is positive and relatively strong numerically, statistically the relationship is not significant because the p-value exceeds the 0.05 significance threshold. Next, for the relationship between Motivation and Work Productivity, the path coefficient is 0.173 with a t-statistic of 0.440 and a p-value of 0.660 . This result shows that Motivation does not have a significant effect on Work Productivity. Similarly, for the relationship between Motivation and Technology, the path coefficient is 0.182 with a t-statistic of 0.433 and a p-value of 0.665 , indicating that Motivation does not significantly affect Technology. In contrast to the relationships above, the Technology variable shows significant effects on Work Productivity. The obtained path coefficient is 0.934 with a t-statistic of 3.334 and a p-value of 0.001 . Since the p-value is far below 0.05 and the t-statistic exceeds 1.96 , it can be concluded that Technology has a positive and significant effect on Work Productivity. This means that the higher the utilization of technology in work activities, the higher the employee productivity.

Table 2. Direct Effects

Relationship Between Variables	Coefficient (O)	T-Stat	P-Value	Decision
Work Environment → Work Productivity	-0.159	0.332	0.740	Not significant
Work Environment → Technology	0.712	1.728	0.084	Not significant (approaching significance)
Motivation → Work Productivity	0.173	0.440	0.660	Not significant
Motivation → Technology	0.182	0.433	0.665	Not significant
Technology → Work Productivity	0.934	3.334	0.001	Significant

Source: SmartPLS 4.1.0.6 Processed Data (2025)

Table 3. Indirect Effects

Relationship (Mediation)	Coefficient	T-Stat	P-Value	Decision
Motivation → Technology → Productivity	0.170	0.377	0.705	Not significant
Work Environment → Technology → Productivity	0.665	1.506	0.132	Not significant

Source: SmartPLS 4.1.0.6 Processed Data (2025)

Discussion

Direct Effects

Effect of Motivation on Work Productivity

The test results show that Motivation does not have a significant effect on Work Productivity, with a coefficient value of 0.173 , t-statistic of 0.440 , and p-value of 0.660 . This indicates that employees' motivation levels are not sufficient to drive a direct increase in productivity. In other words, internal drive, achievement needs, and personal goals are not strong enough to produce a significant improvement in productivity. Theoretically, motivation is an internal drive that pushes individuals to behave in ways that achieve certain goals (Sunarsi, 2018 in Herawati & Dharmayasa, 2025). Motivation is often associated with increased effort, enthusiasm, and commitment in completing tasks. Laksmiari (2019) also found that motivation has a significant positive effect on employee productivity at The Bunga Teratai company in Seririt, where increased motivation is followed by increased productivity. Similarly, Pratama & Suwena (2022) stated that motivation is a crucial factor in supporting work performance. However, the lack of significance in this study can be explained by the idea that internal motivation

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alone is not enough to improve productivity if it is not accompanied by supporting conditions such as proportional workload, adequate work facilities, and the availability of technology that supports work processes. This is consistent with findings by Markus et al. (2023), which show that motivation does not always have a direct impact on productivity when work structure and operational systems do not align with employee needs. Thus, the findings indicate that employee motivation has not been fully converted into improved performance because organizational factors are more dominant in influencing productivity.

Effect of Work Environment on Work Productivity

The Work Environment also does not have a significant effect on Work Productivity, as shown by the coefficient of -0.159 , t-statistic of 0.332 , and p-value of 0.740 . This means that the physical and non-physical conditions of the work environment do not directly impact productivity improvement. Employees appear able to work without being strongly influenced by their work environment. Theoretically, a safe, comfortable, and conducive work environment is an essential prerequisite for supporting employee performance. Sedarmayanti (2017) asserts that the work environment is one factor that can increase productivity because a good work atmosphere allows employees to work more effectively and efficiently. Dewi & Sujana (2021) also showed that the work environment significantly influences productivity because comfort increases employee focus and performance. Pranata & Heryanda (2023) found that the work environment greatly contributes to the productivity of clove farmers in Buleleng due to its impact on timely task completion. The differing results in this study may be due to the employees' work environment being already at a standard level, resulting in insufficient variation to influence productivity. Additionally, employees may be more strongly affected by other factors such as work systems, technology availability, or bureaucratic procedures that play a more dominant role in determining their productivity.

Effect of Motivation on Technology

The test results show that Motivation does not have a significant effect on Technology (coefficient 0.182 ; t-statistic 0.433 ; p-value 0.665). Thus, it can be concluded that employees with higher motivation do not automatically make greater use of technology at work. Technological utilization tends to be influenced by factors beyond personal motivation. Theoretically, motivation can encourage individuals to learn new things, including technology usage. However, these findings align with Kumbadewi et al. (2021), who explained that technology utilization is more influenced by competence, experience, training, and organizational readiness rather than individual motivation. Khaliq et al. (2023) also found that motivation affects technology adoption only when supported by adequate training and facilities. The lack of significance can be understood because technology in organizations is structural: employees do not always have the freedom to choose whether to use technology but instead follow institutional SOPs and policies. Therefore, personal motivation is insufficient as a primary driver of technology utilization in government bureaucratic settings.

Effect of Work Environment on Technology

The Work Environment has a positive effect on Technology, with a coefficient of 0.712 , but it is not significant at the 0.05 level (t-statistic 1.728 ; p-value 0.084). Nevertheless, the positive direction of the relationship indicates a tendency that a better work environment may encourage technology utilization, although the statistical evidence is not strong enough to confirm significance. Theoretically, a supportive work environment can accelerate technology adoption, especially when facilities are available and the work atmosphere encourages innovation. Rustariyuni (2018) stated that technology can only be optimally utilized when the work environment supports it, particularly regarding adequate facilities and organizational readiness. Dewi & Sujana (2021) also emphasized that both physical and non-physical work environments play an important role in determining the success of technology implementation. However, this study shows that the work environment is not sufficient to trigger technology use. This may occur if the technological system within the institution is not fully integrated or if employees have not received adequate training, so even a good work environment does not automatically encourage optimal technology adoption.

Effect of Technology on Work Productivity

Technology is proven to have a positive and significant effect on Work Productivity, with a coefficient of 0.934 , a t-statistic of 3.334 , and a p-value of 0.001 . This indicates that technology utilization plays a very important role in increasing employee effectiveness and efficiency. Thus, the more optimal the use of technology, the higher the level of productivity achieved. These findings are consistent with Herawati & Dharmayasa (2025), who

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demonstrated that technology has a significant positive effect on productivity because it speeds up work processes and reduces administrative errors. Technology not only accelerates work but also improves output quality. Similar findings were presented by Nufriat & Rustariyuni (2018), who emphasized that technology is one of the main factors enhancing labor productivity. Sugiantara & Utama (2019) also noted that technological development can increase workers' ability to complete tasks because processes become more systematic and efficient.

Indirect Effects (Mediation)

Effect of Motivation on Work Productivity through Technology

The mediation test results show that Motivation does not influence Work Productivity through Technology, as indicated by a coefficient of 0.170, t-statistic of 0.377, and p-value of 0.705. This means that Technology cannot serve as a mediating variable that bridges the effect of Motivation on Productivity. Employee motivation has no impact, either directly or indirectly via technology. This study contradicts Herawati & Dharmayasa (2025), who found that motivation and technology simultaneously influence clove farmers' productivity. The discrepancy may arise because, in bureaucratic contexts, motivation is not always oriented toward technology use but is heavily shaped by administrative, procedural, and organizational structure factors. Additionally, as Kumbadewi et al. (2021) stated, technology adoption is driven more by infrastructure, training, and system readiness than by personal motivation. Therefore, even if employees have high motivation, without technical capabilities and adequate facilities, technology utilization will not occur optimally and cannot indirectly improve productivity.

Effect of Work Environment on Work Productivity through Technology

The mediation relationship between Work Environment and Work Productivity through Technology has a coefficient of 0.665, t-statistic of 1.506, and p-value of 0.132. Although the direction of the relationship indicates a positive effect, it is not statistically significant. This shows that technology utilization cannot mediate the relationship between the work environment and productivity. Previous studies have shown different results. Dewi & Sujana (2021) stated that the work environment and technology both contribute to productivity as a good environment enhances employees' ability to use technological facilities. Similarly, Pranata & Heryanda (2023) found that a supportive work environment strengthens farmers' habits in using technological tools to increase productivity. However, the lack of significance in this study may occur if the institution's technological systems are not fully integrated or if employees lack sufficient training. As a result, even a good work environment cannot increase productivity through technology if the technological system is not maximally utilized.

CONCLUSION

Based on the results of data analysis using the Structural Equation Modeling (SEM-PLS) approach and the subsequent discussion, this study produces several important conclusions regarding the relationships among motivation, work environment, technology, and employee productivity. First, motivation is proven not to have a significant direct effect on employee productivity. This finding indicates that employees' internal motivation, although important, does not automatically translate into increased productivity unless supported by other factors such as the availability of facilities, technical competence, and adequate operational work standards.

Second, the work environment also does not have a significant direct effect on productivity. This indicates that the condition of the work environment both physical and non-physical has not become a dominant factor in determining employee work outcomes. In the context of the public sector, productivity is more strongly influenced by structural and administrative factors that are standardized, so variations in the work environment do not have a substantial impact on productivity. Third, neither motivation nor the work environment has a significant effect on technology utilization. In terms of the work environment, the relationship shows a tendency toward significance, but it is not statistically strong enough to be considered influential. This finding shows that the level of technology adoption is more affected by factors such as training, ease of use, availability of supporting facilities, and organizational policies rather than individual motivation or perceptions of the work environment.

Fourth, the only relationship proven to be significant and positive is the effect of technology on employee productivity. This confirms that technology is a key element in improving employee productivity. Technology can simplify work processes, enhance efficiency, reduce completion time, and minimize administrative errors. Thus, investment in strengthening information technology systems, improving digital facilities, and providing technology-use training becomes a strategic priority for enhancing employee performance. Fifth, the indirect (mediating) effect of technology on the relationships between motivation and work environment with productivity is also proven to be insignificant. This means that technology is unable to bridge the relationship between motivation or the work

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environment and employee productivity. This inability to mediate indicates that technology utilization within the organization is not yet fully mature and has not been optimally used by employees, thus failing to serve as an effective intermediary in improving productivity. Overall, the findings of this study illustrate that in the context of local government bureaucracy, employee productivity is more strongly determined by structural elements such as technology, while personal factors and the work environment have not yet become primary determinants. These findings carry important implications for optimizing policies and strategies to improve employee performance.

This study has several limitations that need to be considered in interpreting the results and designing future research. First, this research was conducted within a limited scope, namely employees of the General Bureau of the Regional Secretariat of Bali Province. Job characteristics, organizational structure, and work culture in this institution may differ from other government agencies, making the findings not widely generalizable. The relatively small sample size is also a limitation in producing more stable measurements of inter-variable relationships. Second, this study uses a quantitative approach through questionnaires, so the depth of information depends on respondents' perceptions. This method has limitations in exploring complex phenomena, particularly those related to motivation, perceptions of the work environment, and patterns of technology use. These variables may be better understood using qualitative or mixed-method approaches to produce richer and more reflective findings.

Third, this study does not explicitly include other intervening or moderating variables—besides technology that may be more relevant in determining employee productivity. Factors such as digital competence, leadership, organizational culture, workload, or job satisfaction may exert stronger influence on productivity and potentially strengthen the relationships between the tested variables. Fourth, the measurement of technology utilization in this study focuses more on perceptions rather than actual usage. In fact, the level of technology use can be measured more objectively through system log data, digital attendance, or other activity indicators. The absence of such objective data makes inferences regarding the role of technology dependent solely on respondents' perceptions. Fifth, the study was conducted at a single point in time, thus failing to capture changes in technology use or productivity over the long term. Considering that technology adoption within organizations is dynamic and heavily influenced by new policies, longitudinal research can provide a more accurate picture of productivity development over time.

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