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The Relationship Between the Use of Information Technology and Work Motivation on Work Productivity of Surakarta City Government Employees

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Abstract
Purpose - This study aims to examine the influence of information technology utilization and work motivation on the work productivity of civil servants at the Surakarta City Government. It emphasizes the importance of digital transformation and internal motivation in enhancing bureaucratic performance.
Design/methodology/approach - This quantitative research employed a survey distributed to 100 respondents selected through cluster sampling across 10 government departments. Data were analyzed using Structural Equation Modeling (SEM-PLS) with the assistance of SmartPLS 4 software.
Originality - This study contributes to the ongoing discourse on public sector digitalization by simultaneously assessing the relative influence of technology adoption and work motivation on productivity outcomes in a regional government setting.
Findings and Discussion - The findings reveal that both variables significantly affect productivity. Work motivation had a stronger effect (coefficient = 0.751; $p < 0.001$) than information technology (coefficient = 0.154; $p < 0.05$). These results indicate that motivational factors are primary drivers of employee performance, while technology acts as a complementary enabler.
Conclusion - The study suggests the need for dual-strategy implementation: strengthening internal motivation through supportive policies and improving technology adoption via training and user-centered design to optimize productivity gains in public services.

Keywords - Information Technology, Work Motivation, Productivity, Employee

Introduction

In this era of rapidly evolving digitalization, information technology usage has become key element in increasing work effectiveness and efficiency across various sectors, including government. Digital transformation enables organizations to manage data more systematically, accelerate communication flows, and increase employee productivity in executing their assigned dutis.

Indonesian government has demonstrated a strong commitment to digital acceleration, as reflected in the 2024 UN E-Governance Survey, "Accelerating Digital Transformation for Sustainable Development" In the report, Indonesia achieved a score of 0.7991, for the first time entering the

Very High E-Government Development Index (VHEGDI) category. This achievement indicates that the implementation of information technology in the public sector, including at the regional level, has developed significantly to support an adaptive and responsive bureaucracy.

The Surakarta City Government is supporting this transformation through various digital initiatives, such as the implementation of the Personnel Management Information System (SIMPEG), e-Office applications, and digital-based public service platforms. The use of information technology in this context includes the adoption hardware and software that support the collection, processing, storage, and dissemination of information to enhance employee effectiveness.

However, the adoption of information technology alone does not automatically guarantee increased work productivity. According to the Surakarta City Investment and One-Stop Integrated Services Agency (DPMPTSP)'s first-quarter 2025 Public Satisfaction Survey (SKM) report, the quality of public services received an excellent score of 98.98. However, the report's follow-up plan identified the need for improvements in simplifying digital service flows and enhancing employee adaptability to system changes. These findings suggest that other factors, such as work motivation, influence the extent to which information technology can be optimized to increase work productivity.

Employee productivity is a key indicator in assessing organizational performance, particularly in government environments, which are required to provide public services quickly, accurately, and transparently. Work productivity reflects an individual's ability to complete work efficiently and effectively, encompassing both the quality and quantity of output produced (Abdullah et al., 2024) . Employees with high productivity are able to optimize available time and resources to achieve organizational goals (Saputri, 2023).

Various studies have shown the use of information technology enhances increased productivity. Talumewo et al., (2023) , for example, identified information technology positivity and significant influence on employee work productivity, where technological developments accelerate work processes and facilitate access to relevant information. However, these findings are not always consistent. Research by Suratno et al., (2025) also stated that information technology significantly increases work productivity. Meanwhile, Indah et al., (2021) in their study showed no significant influence between information technology and work productivity, with the t-statistic and p-value indicating an insignificant relationship.

On the other hand, work motivation is also a crucial factor influencing work productivity. Highly motivated employees generally demonstrate initiative, discipline, and dedication in completing assigned tasks. (Henriani et al., 2021) state that work motivation exerts a meaningful and beneficial impact onwork productivity. Employes who're acknowledged and supported conducive work environments are more results-oriented, demonstrate optimal performance, and are able to adapt to change, including the challenges of bureaucratic digitization.

Considering the varying results of previous studies regarding the relationship between information technology, work motivation, and

productivity, further investigation is needed to understand how these two variables simultaneously influence employee productivity, particularly in the public sector. The Surakarta City Government was selected as the research site, as it is one of the regions actively implementing digital reforms through various information technology initiatives within its bureaucracy.

Therefore, this study explicitly aims to examine the extent to which the use of information technology and work motivation jointly contribute to improving employee productivity in the Surakarta City Government. The specific objective is to analyze and compare the relative influence of both variables in order to identify the dominant factor that drives employee productivity in a digital public service environment.

Literature Review

Information Technology

IT is a tool used for data processing that produces timely and accurate information, supporting individuals, organizations, and governments in making informed decisions (Simartama et al., 2021). Within the Technology Acceptance Model (TMT) concept, two factors influence IT use: Perceived Usefulness and Perceived Ease of Use. In the context of this research, the TAM serves as the basis for explaining how information technology (X1) is accepted and used by Surakarta City Government employees, and its relationship to their work productivity.

Previous research has shown mixed results. Talumewo et al., (2023) and Suratno et al., (2025) stated that information technology significantly improves work productivity, while Indah et al. (2021) showed that without user readiness and proper integration, IT adoption may not have a significant impact. This suggests that contextual factors—such as organizational culture and employee capabilities—can moderate this relationship.

Work Motivation

Motivation is an internal drive that directs a person to act in achieving a specific goal. According to Robbins & Judge (2024), motivation is a process that explains the magnitude, orientation, endurance of an individual in pursuing a goal. Meanwhile, motivation can be categorized into intrinsic motivation (drive from within the individual) and extrinsic motivation (drive from external factors) (Dunn & Zimmer, 2020). Abraham Maslow's hierarchical theory of human needs explains that individual motivation is formed through the gradual fulfillment of 5 stages of needs: physiological, protection, belongingness, self-worth, personal fulfillment. In an organizational context, work motivation tends to increase when employees' basic needs are met, they receive recognition, and they have opportunities for development.

Compared to the motivation theory by Dunn & Zimmer (2020), which distinguishes between intrinsic and extrinsic motivation, Maslow's hierarchy of needs is more foundational but less adaptive to the dynamics of modern work environments such as digital bureaucracy. Therefore, both approaches should be applied complementarily when evaluating the motivational structure of employees. Research conducted (Hermananta et al., 2023) shows

that fulfilling basic needs, such as adequate compensation, a safe work environment, and appreciation for performance, contributes significantly to increasing employee work motivation in the public sector.

Work Productivity

Productivity can be defined as the results obtained from the use or expenditure of resources in carrying out an activity (Galih Prayoga & Suseno, 2023) . Simply put, the concept of productivity is the comparison between the output produced and the input used. According to Sedarmayanti (2017), work productivity refers to an individual's ability to create maximum output in the form of goods or services, with efficient and optimal use of resources.

According to Sedarmayanti, labor productivity is influenced by several main factors, namely individual capacity (knowledge, skills, and experience), work motivation, work environment conditions, leadership effectiveness, structured managerial systems, and the provision of awards in the form of compensation or other forms of appreciation.

Sedarmayanti (2017) places greater emphasis on structural and managerial factors, while Galih Prayoga and Suseno (2023) highlight technical efficiency. This difference indicates that productivity is not solely the result of individual effort, but also highly dependent on the support of organizational systems.

Methods, Data, and Analysis

Quantitative methods are applied. It's a scientific research approach carried out systematically to analyze various aspects of a phenomenon and the relationships within it. (Muftiyanto, 2024). The population in this study is the number of Civil Servants (PNS) in the Surakarta city government. Information reported by Central Java Office of Statistics (BPS) in 2024, last updated on March 27, 2025, the number of Civil Servants (PNS) in the Surakarta city government was recorded at 4,756. This population was chosen because it is relevant to the focus of the research related to the digitalization of public services. The sample was taken using probability sampling with a cluster sampling method, where the cluster unit is the agencies (OPD). Ten agencies were selected randomly, and from each agency a random sample of employees was taken.

Using Slovin's formula, Sampel size derived with 10% precision level and a 95% confidence level, resulting in 98 respondents, which was then rounded up to 100 respondents as recommended for SEM analysis (Yusuf, 2022). The sample distribution per department used proportional allocation based on the number of employees in each department, with a total sample size of 100 people.

$$ni = \frac{Ni}{N} \times n =$$

ni = number of samples from the i-th service
Ni = number of civil servants in the i-th service
N = total population of 10 services
N = total number of samples

So the number of samples for each service is as follows:

Table 1. Number of Research Samples

No	Name of Service	Population	Sample Calculation	Sample
1.	Social Services	39	$ni = \frac{39}{449} \times 100$	9
2.	National and Political Unity Agency	26	$ni = \frac{26}{449} \times 100$	6
3.	Library and Archives Service	37	$ni = \frac{37}{449} \times 100$	8
4.	Department of Public Works and Spatial Planning	66	$ni = \frac{66}{449} \times 100$	15
5.	Department of Communication and Information	33	$ni = \frac{33}{449} \times 100$	7
6.	Regional Research and Innovation Agency	20	$ni = \frac{20}{449} \times 100$	4
7.	Fire Department	80	$ni = \frac{80}{449} \times 100$	18
8.	Population and Civil Registration Service	26	$ni = \frac{26}{449} \times 100$	6
9.	Department of Transportation	80	$ni = \frac{80}{449} \times 100$	18
10.	Department of Women's Empowerment, Child Protection, Population Control and Family Planning	42	$ni = \frac{42}{449} \times 100$	9
TOTAL		449		100

Source: Data processing, 2025

The questionnaire instrument in this study was developed by referring to indicators that have been previously established and validated in earlier research. For the information technology variable, the indicators were constructed based on the Technology Acceptance Model (TAM) and findings from Asbihani (2024), focusing on perceived ease of use, usefulness, efficiency, and the impact of technology on employee productivity. The eight indicators include: ease of learning and use, skill enhancement, task simplification, workload reduction, perceived benefits, productivity improvement, effectiveness and efficiency, and the encouragement of creativity.

Regarding the work motivation variable, the indicators were derived from Hasibuan's (2020) theory of human needs, emphasizing the fulfillment of employees' basic needs. The five indicators include: physical needs, safety and security, social belonging, recognition based on competence, and self-actualization in the workplace. For the work productivity variable, the indicators were adapted from the study by Rohim & Irayanti (2022), which assessed productivity from both qualitative and quantitative dimensions. The six indicators used include: job competency, output improvement, work enthusiasm, self-development, work quality, and efficiency.

All items were measured using a five-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS version 4 software.

Results

Outer Model

Outer model testing verifies the validity and reliability of measurement instruments. The outer model includes 3-primary models: convergent validity, which is assessed by factor loading values or outer loadings; discriminant validity, which is assessed by cross-loading values for construct measurements; and composite reliability, which is assessed by indicator blocks that measure Cronbach's alpha values. Here result the measurement model:

Table 2. Outer Model Test Results

Variable	Cross Loading				Cronbach's alpha	rho_a	rho_c	Average Variance Extracted (AVE)
	Indicator	Information Technology	Work Motivation	Work Produvtivity				
Information Technology	IT1	**0.751**	0.595	0.512	0.940	0.941	0.951	0.709
	IT2	**0.744**	0.491	0.564				
	IT3	**0.902**	0.381	0.466				
	IT4	**0.899**	0.432	0.461				
	IT5	**0.902**	0.376	0.471				
	IT6	**0.879**	0.425	0.424				
	IT7	**0.728**	0.569	0.449				
	IT8	**0.906**	0.439	0.450				
Work Motivation	WM1	0.479	**0.859**	0.812	0.920	0.924	0.940	0.756
	WM2	0.515	**0.869**	0.790				
	WM3	0.454	**0.881**	0.681				
	WM4	0.464	**0.860**	0.653				
	WM5	0.509	**0.879**	0.672				
Work Produvtivity	WP1	0.517	0.672	**0.876**	0.942	0.945	0.954	0.776
	WP2	0.506	0.791	**0.886**				
	WP3	0.473	0.780	**0.880**				
	WP4	0.507	0.672	**0.878**				
	WP5	0.508	0.686	**0.861**				
	WP6	0.519	0.802	**0.902**				

SmartPls 4 Data Processing, 2025

Evidence result showed the cross-loading test using SmartPLS, all indicators showed good discriminant validity, where individual indicator loadings was higher against the construct it measured compared to other constructs. In the Work Motivation variable, all indicators (MK1–MK5) had loading values above 0.85, while in the Work Productivity variable (PK1–PK6), the load values spanned from 0.861 to 0.902, reflecting excellent contribution to the construct. Meanwhile, indicators in the Information Technology variable also showed the highest loading value on the corresponding construct, although some indicators such as TI3 and TI5 had moderate correlations with other variables, but were still within acceptable limits. These results were supported by the Cronbach's Alpha and Composite Reliability values of the three variables, which were all above 0.70, as well as the Average Variance Extracted (AVE) value exceeding 0.50. In conclusion

the research instrument has nice validity and reliability, and is suitable for use in measuring the constructs in this study.

Inner Model

After the outer model test meets the criteria, the next step is to evaluate the inner model, or structural model. The inner model evaluation is conducted by considering the R-square value (to determine the contribution of the independent variables to the dependent variable) and testing the path coefficient . Moderate to high coefficients signify strong structural links between construct. Furthermore, the path coefficient is also used to assess the level of significance in hypothesis testing.

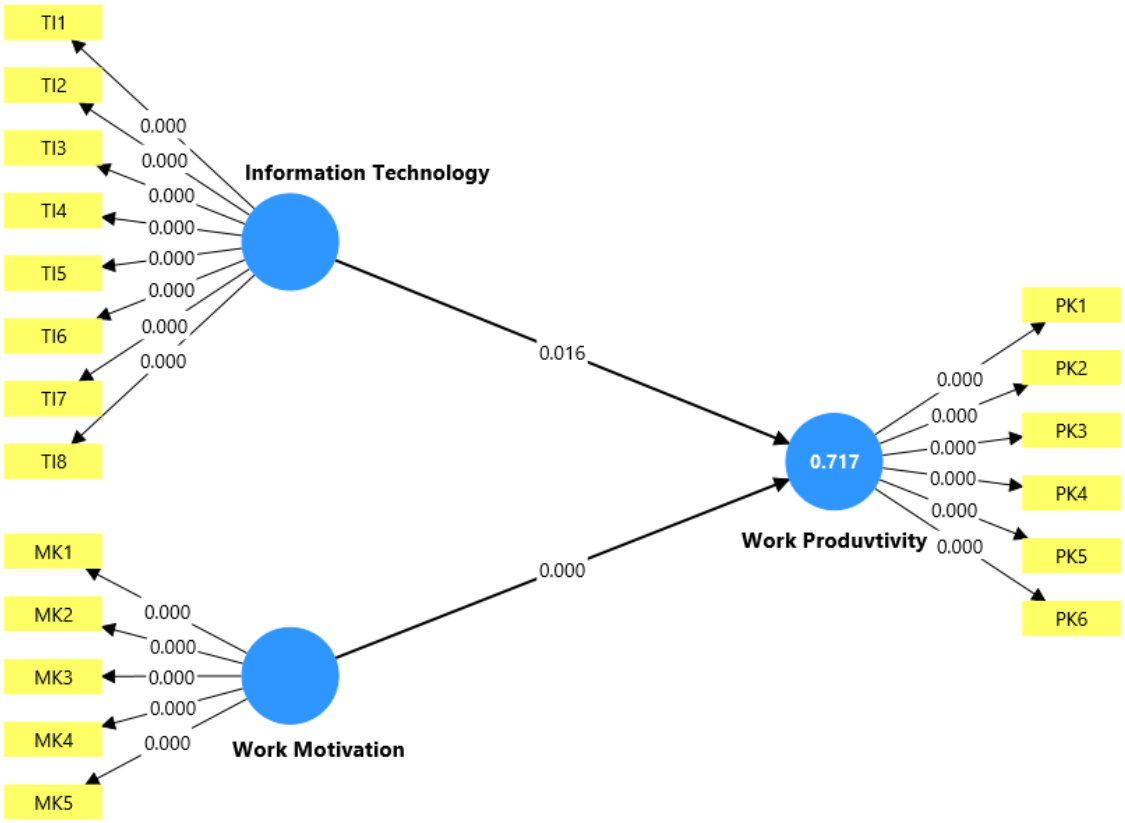

Figure 1. Path Coefficients Diagram
Source: SmartPls Data Processing, 2025

R-Square

Table 3. R-Square test results

	R-square	Adjusted R-square
Work Produvtivity	0.717	0.711

SmartPls 4 Data Processing , 2025

The R-square (R^2) value of 0.717, It indicates independent variables contribute to 71.7% of the fluctuation in the dependent variable, namely Work Productivity. In general, R^2 values above 0.70 are included in the strong category according to (Hair 2023) , so it can be concluded that the structural model used has very good explanatory power for the Work Productivity variable.

F-Square Test Results

Table 4. F square test results

	Information Technology	Work Motivation	Work Produvtivity
Information Technology			0.058
Work Motivation			1.375
Work Produvtivity			

SmartPls 4 Data Processing , 2025

Work Motivation on Work Productivity has a value of 1.375. This value indicates a very large effect, because referring to the criteria (Hair, 2023) , an F-square value above 0.35 is categorized as a large effect. This means that work motivation has a very strong influence on employee work productivity. Meanwhile, the Information Technology variable on Work Productivity has an F-square value of 0.058, which is included in the small effect category ($0.02 \leq f^2 < 0.15$). This indicates the direct influence of information technology on work productivity is weak. Thus, it can be concluded in this model, work motivation is the dominant factor in increasing work productivity compared to information technology.

Discussion

Table 5. Results of Bootstrapping Path Coefficient Test

	Sampel asli (O)	Rata-rata sampel (M)	Standar deviasi (STDEV)	T statistik (|O/STDEV|)	Nilai P (Pvalues)
Information Technology -> Work Produvtivity	0.154	0.160	0.072	2.148	0.016
Work Motivation -> Work Produvtivity	0.751	0.747	0.069	10.864	0.000

SmartPls 4 Data Processing, 2025

1. **The Relationship between the Use of Information Technology and Work Productivity**

The results show that information technology has a significant positive effect on work productivity with a coefficient value of 0.154, a T statistic of 2.148 (>1.64), and a P value of 0.032 (<0.05). This indicates that the use of information technology can contribute to increased work productivity. These results are in line with the Technology Acceptance Model (TAM) , which explains that perceptions of the ease of use (Perceived Ease of Use) and the benefits of using (Perceived Usefulness) of technology will influence user attitudes and behavior. In the context of this study, positive perceptions of technology by Surakarta City Government employees encourage them to work more efficiently and productively.

These results also align with research by Talumewo et al. (2023) , which states that information technology supports accelerated work completion and facilitates data access, thereby increasing productivity. Research by Suratno et al. (2025) also supports these results, showing that information technology has been shown to accelerate work and improve the efficiency of public sector employees.

Although the statistical analysis shows a significant result, the relatively small effect size of information technology ($f^2 = 0.058$) suggests that its impact may be constrained by both organizational and human-related factors. Prior studies have identified several key barriers to the effective utilization of information technology in public sector environments, including employee resistance to change, insufficient training, and underdeveloped digital infrastructure (Cieslak & Valor, 2025;Alotaibi et al., 2025) These challenges highlight the critical need for comprehensive change management strategies and the adoption of user-centered system designs to ensure that technology implementation contributes more meaningfully to improved productivity outcomes.

2. **The Relationship between Work Motivation and Work Productivity**

The outcome work motivation has a significant positive effect on work productivity with a coefficient value of 0.751, a T statistic of 10.864 (>1.96), and a P value of 0.000 (<0.05). This indicates that the higher an employee's work motivation, the higher the level of work productivity produced. Motivated employees tend to work with more focus, enthusiasm, and efficiency in carrying out their duties.

This aligns with Maslow's hierarchy of needs theory. Motivation arises in response to the fulfillment of five layers of human needs. If these needs can be met in the work environment, such as through adequate wages, a conducive work atmosphere, appreciation for achievements, and opportunities for development, employee motivation levels will increase. This encourages them to demonstrate maximum work productivity. This view aligns with Sedarmayanti's productivity theory. Strong motivation makes employees more focused, enthusiastic, and responsible in completing their work, thereby directly increasing work productivity.

These results are supported by research by Bassang & Sapan (2023), which confirms that work motivation plays a significant role in increasing

individual productivity. This also shows that highly motivated employees are more disciplined, responsible, and demonstrate optimal work output (Holillah, 2025).

3. **The relationship between the use of information technology and work motivation on work productivity**

Based on the analysis results using SmartPLS4, the R-square value of 0.717 reveals the Work Motivation and Information Technology variables simultaneously explain 71.7% of the variability in Work Productivity. This value is considered strong according to (Hair, 2023), which states that an R-square above 0.67 reflects a model with high predictive ability. The bootstrapping results also show that Work Motivation has a significant positive effect on Work Productivity, with a coefficient value of 0.751, a t-statistic of 10.864, and a p-value of 0.000. Similarly, Information Technology also has a significant, albeit smaller, effect, with a coefficient of 0.154, a t-statistic of 2.148, and a p-value of 0.032. Thus, both independent variables contribute significantly to increasing Work Productivity both simultaneously and partially.

Conclusion

This reserch shows information technology adoption significantly enhances work performance, although the effect is relatively small. Meanwhile, work motivation has a much stronger and more significant impact on productivity. Therefore, efforts to improve employee productivity need to focus on strengthening internal motivation, coupled with the effective use of technology.

Based on the findings of this study, it is recommended that policymakers within the Surakarta City Government adopt a dual-strategy approach. First, efforts should be directed toward enhancing employee motivation through supportive organizational practices. Second, the implementation of information technology must be accompanied by adequate training programs, continuous user support, and regular system evaluations. Furthermore, involving end-users in the digital transformation process can significantly improve system acceptance and overall effectiveness.

Suggestions for future researchers, this research can be further developed by considering other variables such as digital leadership, job satisfaction, or organizational culture deliver a comprehensive Insight into the determinants work productivity in digital era.

Limitation

Some boundaries of this investigation require consideration. Firstly, the sample was limited to 100 participants drawn from 10 departments within the Surakarta City Government, which may restrict the applicability of the results to other public institutions or broader governmental settings. Secondly, the reliance on a quantitative method using structured questionnaires might have constrained the depth of insights into the contextual and psychological elements influencing work motivation and the implementation of information technology. Thirdly, the study only examined two independent variables

namely, information technology and work motivation leaving out other possible determinants such as leadership, organizational culture, or employee satisfaction. Lastly, the influence of information technology on productivity was relatively modest, suggesting the importance of future research that considers mediating or moderating variables to better understand this relationship.

References

Abdullah, D. A. Ameen, A. K. (2024). Elevating Information System Performance : A Deep Dive into Quality Metrics.

Alotaibi, N. Traynor, M. (2025). Enhancing digital readiness and capability in healthcare: a systematic review of interventions, barriers, and facilitators. BMC Health Services Research, 25(1). https://doi.org/10.1186/s12913-025-12663-3

Bassang, Y., & Sapan, A. (2023). Pengaruh Motivasi Terhadap Produktivitas Kerja Karyawan Pada Pt. Kalimantan Mitra Persada. Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA), 7(3), 1227–1234. https://doi.org/10.31955/mea.v7i3.3534

Cieslak, V., & Valor, C. (2025). Moving beyond conventional resistance and resistors: an integrative review of employee resistance to digital transformation. Cogent Business and Management, 12(1). https://doi.org/10.1080/23311975.2024.2442550

Dunn, J. C., & Zimmer, C. (2020). Self-determination theory. Routledge Handbook of Adapted Physical Education, 55(1), 296–312. https://doi.org/10.4324/9780429052675-23

Galih Prayoga, I., & Suseno, A. (2023). Analisis Produktivitas Tenaga Kerja Terhadap Hasil Produksi di CV. Mulia Tata Sejahtera. Jurnal Serambi Engineering, VIII(2), 5528–5534.

Henriani Parawu, H. E. (2021). Pengaruh Motivasi terhadap Produktivitas Kerja Pegawai Kantor Kependudukan dan Pencatatan Sipil Kabupaten Enrekang. Journal Unismuh, 2(4), 1428–1441. https://journal.unismuh.ac.id/index.php/kimap/index

Hermananta, B. W. Wobowo, N. (2023). Kinerja Pegawai: Budaya Organisasi Dan Motivasi Kerja Melalui Kepuasan Kerja Pegawai. Jurnal Manajemen Dan Akuntansi Medan, 5(1), 121–133. https://doi.org/10.47709/jumansi.v5i1.2203

Holillah, S. (2025). Pengaruh Motivasi Kerja dan Disiplin Kerja terhadap Kinerja Karyawan pada Badan Kepegawaian dan Sumber Daya Manusia Kota Tangerang Selatan. AKADEMIK: Jurnal Mahasiswa Humanis, 5(2), 595–604. https://doi.org/10.37481/jmh.v5i2.1326

Indah, D. P. Salim, F. (2021). Pengaruh Motivasi dan Teknologi Informasi terhadap Kinerja Karyawan di Badan Pusat Statistik (BPS) Kabupaten Bogor dengan Produktivitas Kerja sebagai Variabel Intervening. Ekobisman, 5(3), 225–241. http://journal.univpancasila.ac.id/index.php/ekobisman/article/download/2287/1261

Joseph F. Hair Jr., G. Tomas M. Hult, Christian M. Ringle, and M. S. (2023). Review of Partial Least Squares Structural Equation Modeling (PLS-

SEM) Using R: A Workbook. In Structural Equation Modeling: A Multidisciplinary Journal (Vol. 30, Issue 1). Springer Nature Switzerland AG. https://doi.org/10.1080/10705511.2022.2108813

Muftiyanto, T. N. (2024). Metodologi Penelitian Ekonomi. BOSSSCRIPT.

P.Robbins, S., & Judge, T. A. (2024). Organizational behavior. In Choice Reviews Online (Vol. 43, Issue 01). https://doi.org/10.5860/choice.43-0421

Saputri, D. A. (2023). Pengaruh Motivasi kerja, Disiplin kerja dan Produktivitas kerja terhadap Kinerja pegawai. Jurnal Ilmu Multidisplin, 2(3), 377–383. https://doi.org/10.38035/jim.v2i3.432

Simartama, J. Amin, M. (2021). Pengantar Teknologi Informasi. Yayasan kita menulis.

Suratno, T. Safitri, D. L. (2025). Pelatihan Pemanfaatan Teknologi Informasi Pada Praktek Dokter Bersama Patimura–Kota Jambi Untuk Meningkatkan Produktivitas Kerja. Jurnal Pengabdian Kepada Masyarakat Nusantara, 6(2), 2163–2171.

Talumewo, J. Taroreh, R. (2023). Pengaruh Disiplin Kerja Dan Penguasaan Information Technology (IT) Terhadap Produktivitas Kerja Pegawai Badan Pengelola Keuangan Dan Aset Daerah …. Jurnal EMBA: Jurnal Riset 11(3), 254–263.

Yusuf, M. (2022). Pengaruh Promosi, Gaya Hidup, dan Persepsi Risiko terhadap Niat Beli Motor Listrik menggunakan Metode SEM - PLS. G-Tech: Jurnal Teknologi Terapan, 6(2), 241–248. https://doi.org/10.33379/gtech.v6i2.1685