



The Effect of Digital Competence on Employee Performance: The Mediating Roles of Self-Efficacy and Job Satisfaction (A Case Study of the Tangerang City Regional Revenue Agency)

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Abstract

This study examines the influence of digital competence on employee performance through the mediating roles of self-efficacy and job satisfaction at the Tangerang City Regional Revenue Agency. Employing a quantitative research design with a saturated sampling technique involving eighty one employees, the data were analyzed using partial least squares structural equation modeling. The empirical results demonstrate that digital competence exerts a positive and significant direct effect on employee performance, self-efficacy, and job satisfaction. Furthermore, both self-efficacy and job satisfaction act as significant partial mediators in the relationship between digital competence and employee performance. These findings contribute to human resource management theory by highlighting cognitive and affective pathways in digital workplace transformation, while providing practical insights for public sector organizations seeking to optimize administrative efficiency and service delivery quality through targeted capability building and supportive work environments.

Keywords : Digital Competence, Employee Performance, Self Efficacy, Job Satisfaction, Public Administration.



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INTRODUCTION

Global public sector administration is undergoing an unprecedented digital transformation, shifting traditional bureaucratic frameworks toward technology driven governance models that prioritize agility, transparency, and operational efficiency. Contemporary state institutions increasingly rely on sophisticated digital ecosystems to manage public resources, streamline administrative workflows, and deliver responsive services to citizens. Within this macro level paradigm shift, regional revenue agencies operate at the forefront of digital integration, deploying complex electronic platforms to optimize taxation and municipal revenue collection. However, the successful realization of these technological advancements depends fundamentally on the behavioral adaptation and technical readiness of human capital, as employees serve as the primary execution agents operating these digital infrastructures. This intersection between emerging digital mandates and public sector workforce dynamics highlights a critical area of inquiry within international economic development and public administration literature.

Scholarly investigations into contemporary workforce capabilities emphasize that digital proficiency serves as a critical determinant of organizational productivity and individual adaptability in modern institutional settings. Recent empirical evaluations demonstrate that mastering digital tools significantly enhances operational workflows, yet the magnitude of this effect varies considerably across different organizational contexts and institutional frameworks (Tomczak et al., 2023). While several studies document a direct positive relationship between technological capabilities and workforce productivity (Ulum & Wulansari, 2025; Wardhana et al., 2026), other investigations report negligible or statistically insignificant direct links between digital proficiency and output quality (Widyastuti et al., 2025). This divergence in empirical findings suggests that technological adoption alone does not automatically guarantee superior performance, as the translation of digital competence into tangible operational output is likely governed by complex internal psychological mechanisms and affective employee states that require deeper theoretical unpacking.

Despite the growing body of literature examining digital transformation in public organizations, significant conceptual and empirical gaps persist regarding the underlying psychological pathways connecting digital competence to individual performance outcomes. Previous research frequently isolates technical capabilities from motivational constructs, overlooking how cognitive self-appraisals and emotional job responses jointly mediate the relationship between technological mastery and productivity (Salisu et al., 2025). Furthermore, existing empirical models rarely investigate dual mediation pathways involving both agentic self-beliefs and affective job satisfaction within a single structural framework, particularly within municipal revenue authorities where administrative pressure and digital demands intersect acutely (Zakir et al., 2025). Consequently, the literature lacks a comprehensive understanding of how technical proficiencies convert into psychological resilience and motivational satisfaction to ultimately drive employee output in high demand public sector environments (Zhan et al., 2024).

Addressing these unresolved theoretical ambiguities carries profound scientific and practical urgency for modern public governance, especially in transitional economies striving to optimize local revenue administration. Practically, regional revenue agencies face persistent challenges regarding fluctuating employee performance metrics and varying levels of technological assimilation among personnel, which directly threatens regional financial targets and public service delivery quality. From an academic perspective, clarifying the exact mediating mechanisms of self-efficacy and job satisfaction resolves prevailing inconsistencies in human resource literature by moving beyond simplistic direct effect models. Uncovering these nuanced behavioral pathways enables researchers and institutional leaders to design targeted interventions that simultaneously build digital capabilities and foster positive psychological climates, thereby bridging the chasm between macro level digital policies and micro level workforce execution.

Positioned squarely within the nexus of human resource management, digital economics, and organizational behavior, this research advances a sophisticated conceptual framework that integrates cognitive social theory with public administration practices. By examining the Tangerang City Regional Revenue Agency as a strategic case study, this inquiry investigates how digital competence influences employee performance not merely as an isolated technical input, but through the dual intervening lenses of self-efficacy and job satisfaction. This approach challenges traditional deterministic views of technology adoption by embedding human agency and emotional well-being at the core of the analytical model. Consequently, the study contributes to a more holistic understanding of how public sector organizations can leverage digital tools to enhance workforce productivity while maintaining psychological sustainability.

This study aims to empirically analyze the intricate structural relationships linking digital competence to employee performance while rigorously evaluating the mediating roles of self-efficacy and job satisfaction within a municipal revenue context. Methodologically, the research deploys Partial Least Squares Structural Equation Modeling to analyze primary data collected from the entire population of the Tangerang City Regional Revenue Agency, ensuring robust empirical precision through rigorous measurement and structural model evaluations. The theoretical contribution lies in establishing a comprehensive dual mediation framework that reconciles conflicting prior findings regarding digital competence and performance outcomes. Ultimately, this research provides actionable empirical evidence to guide public sector leaders in formulating human-centric digital transformation strategies that elevate organizational effectiveness and employee well-being simultaneously.

RESEARCH METHODS

This empirical study employs a quantitative research design to examine the relationships among digital competence, employee performance, self efficacy, and job satisfaction at the Tangerang City Regional Revenue Agency. The population comprises all eighty one employees of the agency, and a saturated sampling technique is utilized to include every member of the population as a respondent, ensuring comprehensive data collection. Data are gathered through structured questionnaires using an interval scale ranging from one to ten to capture employee perceptions across all variables. The operationalization of variables encompasses digital competence as the independent variable measured through information, communication, content creation, safety, and problem solving dimensions, employee performance as the dependent variable evaluated via quality, quantity, responsibility,

cooperation, and initiative, alongside self efficacy and job satisfaction functioning as mediating variables.

The analytical procedure relies on partial least squares structural equation modeling executed through smartpls software to evaluate both measurement and structural models. The measurement model phase assesses convergent validity through outer loadings and average variance extracted values, discriminant validity via cross loadings, and internal consistency reliability using composite reliability and cronbach alpha coefficients. The structural model phase evaluates r square values to determine the proportion of variance explained and conducts hypothesis testing through bootstrapping procedures. Statistical significance is established by comparing t statistics against critical threshold values and evaluating probability values to confirm direct effects as well as serial multiple mediation pathways.

RESULTS AND DISCUSSION

Empirical Evaluation of Digital Competence and Employee Performance Dynamics

Contemporary public sector administration increasingly necessitates a profound understanding of how technological proficiency translates into organizational productivity and operational excellence. Within the institutional framework of the Tangerang City Regional Revenue Agency, the structural transition toward digital workflows demands a rigorous investigation into the direct and mediated pathways influencing workforce output. Advanced quantitative modeling executed through structural equation modeling provides a robust methodological foundation for evaluating these complex behavioral and technical interactions among municipal civil servants. By assessing empirical data collected via structured interval scales, the research establishes critical statistical validations regarding the predictive capacity of technological adaptability in public revenue administration. Scholarly inquiry into human resource management consistently highlights that technological integration alone remains insufficient without accounting for internal cognitive and motivational drivers. Consequently, examining the direct associations between technological mastery and administrative effectiveness forms the foundational layer of this empirical assessment. Empirical validation of these structural relationships requires adherence to strict measurement criteria, ensuring that indicator reliability and convergent validity meet internationally recognized standards for reputable academic publication. Through the application of partial least squares path modeling, the structural relationships are scrutinized to determine the magnitude and statistical significance of coefficients linking digital proficiencies to core employee outputs. The analytical evaluation begins by establishing measurement model adequacy through convergent validity thresholds, where factor loadings and average variance extracted metrics confirm construct unidimensionality across all evaluated dimensions. Furthermore, discriminant validity assessments ensure that distinct theoretical constructs maintain empirical separation within the structural equation framework. Internal consistency reliability is rigorously established utilizing composite reliability coefficients and Cronbach alpha values that surpass established academic benchmarks for social science research. Following the establishment of measurement quality, the structural model evaluation proceeds to examine path coefficients and coefficient of determination values to understand the explanatory power of the exogenous variables. Hypothesis testing via bootstrapping procedures allows for the empirical verification of direct effects, confirming whether technological proficiencies meaningfully elevate administrative productivity within regional revenue institutions. Scholarly discourse emphasizes that digital competence encompasses multifaceted dimensions including information processing, digital communication, content generation, data security, and technological problem solving. In the specific operational context of regional revenue agencies, employees interact continuously with sophisticated taxation portals and electronic governance platforms to execute daily fiscal responsibilities. The empirical findings derived from the structural model estimation regarding these direct relationships are detailed in the subsequent quantitative overview.

Table 1. Structural Path Coefficients and Hypothesis Testing for Direct Effects

Structural Path	Original Sample (β)	Sample Mean	Standard Deviation	T Statistic	P Value	Decision
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Digital Competence → Employee Performance	0.213	0.205	0.105	2.031	0.042	Supported
Digital Competence → Self Efficacy	0.768	0.775	0.047	16.454	0.000	Supported
Digital Competence → Job Satisfaction	0.762	0.765	0.051	14.931	0.000	Supported
Self Efficacy → Employee Performance	0.432	0.428	0.150	2.880	0.004	Supported
Job Satisfaction → Employee Performance	0.305	0.317	0.136	2.241	0.025	Supported

Source: Primary data processed using SmartPLS 4 (2026).

The statistical outcomes presented in Table 1 substantiate the theoretical proposition that digital competence exerts a positive and statistically significant direct effect on employee performance within the municipal revenue sector. Specifically, the path coefficient of 0.213 accompanied by a *t* statistic exceeding the critical threshold confirms that heightened technological capabilities translate directly into superior task execution among civil servants. This empirical reality aligns closely with contemporary scholarly assertions emphasizing that digital literacy and operational agility serve as foundational catalysts for modern workforce productivity. When public sector personnel master information retrieval and digital communication protocols, administrative bottlenecks diminish substantially, thereby elevating both the qualitative and quantitative dimensions of public service delivery. Theoretical frameworks advanced by recent empirical investigations corroborate that digital competence directly equips employees with the procedural fluency required to navigate complex electronic governance platforms without excessive supervision. Furthermore, the empirical evidence demonstrates that technological proficiency reduces error rates during tax administration procedures, fostering greater institutional efficiency and public accountability. Scholars such as Sulaiman et al. (2025) and Wardhana et al. (2026) reinforce these findings by establishing that digital capabilities significantly augment employee output across diverse organizational settings. However, the modest magnitude of the direct path coefficient suggests that technological skills alone do not operate in a vacuum, necessitating the inclusion of psychological mediating mechanisms to fully comprehend the performance dynamic. Consequently, investigating how digital competence stimulates internal cognitive evaluations and affective job attitudes becomes paramount for constructing a comprehensive explanatory model of workforce behavior. The interplay between technological proficiency, self-assurance, and affective well-being ultimately dictates the sustainability of high-level performance in digitally transformed public institutions. Subsequent analytical extensions must therefore evaluate the intricate serial and parallel pathways through which these latent variables interact to shape overall organizational effectiveness.

The Direct and Mediating Mechanisms of Self-Efficacy in Digital Workplace Performance

Grounded in Bandura's Social Cognitive Theory, this subsection investigates the direct connection between digital competence and self-efficacy, alongside the structural mediating function of self-efficacy in linking competence to employee performance. Mastery experiences gained through utilizing digital tools such as electronic tax systems and performance monitors actively foster

psychological confidence among municipal personnel. This internalized self-efficacy equips administrative employees to navigate complex tasks, overcome technical barriers, and persist under professional pressure. Consequently, enhancing confidence levels translates directly into optimized task execution and heightened productivity within regional revenue administration.

The empirical estimations derived from the structural equation modeling evaluate the specific bootstrapping paths connecting digital competence, self-efficacy, and employee performance outcomes.

Table 2. Summary of Structural Path Coefficients for Self-Efficacy Mechanisms

Hypothesis / Structural Path	Path Coefficient (β)	T Statistic	P Value	Decision
Digital Competence → Self Efficacy	0.768	16.454	0.000	Supported
Self Efficacy → Employee Performance	0.432	2.880	0.004	Supported
Digital Competence → Employee Performance (Indirect Effect)	0.332	2.678	0.007	Supported (Partial Mediation)

Source: SmartPLS Output Data (2026)

The analytical output confirms that digital competence exerts a robust, direct, and statistically significant positive influence on employee self-efficacy. Personnel who master digital instruments develop stronger cognitive readiness and intrinsic assurance when facing technological integration initiatives. This empirical reality aligns with previous scholarly findings demonstrating that computer and internet self-efficacy directly shapes professional resilience and productivity. Furthermore, self-efficacy demonstrates a powerful direct impact on overall employee performance within contemporary public sector operations.

When staff members perceive themselves as highly capable of utilizing digital interfaces, their psychological commitment to problem solving increases substantially. Academic literature confirms that professional self-efficacy serves as a vital psychological mechanism driving task completion and organizational agility. The structural path evaluation further confirms that self-efficacy acts as a significant partial mediator between digital competence and employee performance. This mediating pathway demonstrates that technical proficiencies alone are insufficient without the psychological reinforcement of personal capability.

Public sector personnel must internalize their technological mastery to successfully convert digital skills into superior administrative outputs. Recent empirical studies corroborate that capability building and digital self-efficacy heavily influence sustainable job performance across diverse operational environments. Transformational leadership and organizational backing further stimulate these cognitive pathways by providing continuous support for digital learning. Employees who maintain elevated self-efficacy exhibit greater adaptability toward shifting regulatory frameworks and automated revenue collection procedures.

The cognitive adaptation fostered by digital competence reduces workplace anxiety and minimizes resistance to technological innovation. Personnel are subsequently empowered to handle complex data management requirements without experiencing cognitive overload or operational paralysis. Administrative institutions aiming to boost overall productivity must therefore prioritize intervention programs designed to elevate employee confidence alongside technical training. Strengthening self-efficacy ensures that investments in digital infrastructure yield maximum returns in employee efficiency and service delivery.

The Affective Mediating Role of Job Satisfaction in Digitalized Public Service Delivery

Modern public administration increasingly relies on advanced digital platforms to streamline municipal revenue collection and administrative workflows. When municipal employees possess strong digital competence, operational friction and technological adaptation stress decrease significantly. This reduction in technical barriers fosters a favorable work environment that enhances psychological comfort and organizational commitment. Consequently, modernizing administrative processes directly elevates employee morale and professional fulfillment across regional revenue agencies.

The structural equation modeling results evaluate the specific affective pathways connecting digital competence, job satisfaction, and employee performance outcomes.

Table 3. Summary of Structural Path Coefficients for Job Satisfaction Mechanisms

Hypothesis / Path	Original Sample (O)	T Statistics (O/STDEV)	P Values	Empirical Result / Status
Digital Competence → Job Satisfaction	0.762	14.931	0.000	Significant
Job Satisfaction → Employee Performance	0.305	2.241	0.025	Significant
Digital Competence → Job Satisfaction → Employee Performance	0.233	2.189	0.029	Significant (Partial Mediation)

Source: SmartPLS Output Data (2026)

The statistical estimations confirm that digital competence exerts a direct and significant positive effect on employee job satisfaction. Personnel who effectively navigate digital tools experience lower role ambiguity and reduced frustration during daily task execution. Prior scholarly investigations indicate that technological proficiency directly improves affective well-being and basic psychological need satisfaction in the workplace. Furthermore, job satisfaction demonstrates a substantial direct impact on overall employee performance within contemporary institutional settings.

When public sector employees feel satisfied with their working conditions and supervisory support, their dedication to task quality increases. Academic literature highlights that job satisfaction acts as a critical emotional mechanism linking organizational innovations to individual productivity. The structural path evaluation confirms that job satisfaction functions as a significant partial mediator between digital competence and employee performance. This mediating pathway illustrates that technical proficiency must be accompanied by emotional well-being to achieve optimal organizational outcomes.

Municipal staff members who experience high job satisfaction display greater institutional loyalty and superior task execution standards. Recent empirical studies corroborate that digital transformation initiatives successfully elevate performance metrics only when affective employee needs are fully met. Supportive leadership and harmonious peer interactions further amplify this positive affective cycle within public service environments. Employees who enjoy favorable working conditions are better equipped to handle demanding administrative schedules without suffering burnout.

The emotional comfort derived from streamlined digital workflows minimizes counterproductive workplace behaviors such as cyberloafing. Personnel are subsequently motivated to maintain high standards of accountability and cooperative teamwork across all revenue departments. Regional administrative bodies seeking long-term operational success must therefore prioritize holistic workplace environments alongside technical training programs. Cultivating robust job satisfaction ensures that digital modernization efforts translate into sustained service excellence and heightened public trust.

CONCLUSION

The empirical findings collectively establish that digital competence serves as a critical foundational driver of enhanced workforce productivity within municipal revenue administration, operating through both direct channels and psychological mechanisms. Specifically, the integration of

digital tools significantly strengthens individual self-efficacy and job satisfaction, which subsequently function as essential partial mediators bridging technical capabilities and overall task performance in public service delivery. Administrative institutions aiming to optimize organizational effectiveness must therefore implement comprehensive strategies that simultaneously foster technical mastery, psychological confidence, and affective well-being among all personnel.

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