

The influence of civil servant competency dimensions on perceived usefulness and perceived ease of use of digital transformation

Fitri^{1*}, Sofyan Bekkah², and Lukman³

¹Universitas Muhammadiyah Sidenreng Rappang, Sidenreng Rappang, Indonesia, email: fitrii171103@gmail.com

²Universitas Muhammadiyah Sidenreng Rappang, Sidenreng Rappang, Indonesia, email: sofyanfiofi@gmail.com

³Universitas Muhammadiyah Sidenreng Rappang, Sidenreng Rappang, Indonesia, email: lukmansirap75@gmail.com

*Corresponding author

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ABSTRACT

Digital transformation in local bureaucracy is determined not only by technological availability but also by the readiness of human resources who operate digital systems. In regional planning organizations, civil servant competency is a crucial factor because administrative work is cross-unit, data-driven, and requires rapid service delivery. This study analyzes the influence of civil servant competency dimensions motives, traits, self-concept, knowledge, and skills on perceived usefulness, the influence of perceived usefulness on perceived ease of use, and the mediating role of perceived usefulness in the relationship between competency and perceived ease of use. This research employed a quantitative approach with a cross-sectional design. Primary data were collected through a Likert-scale questionnaire administered to 60 civil servants selected using purposive sampling. The model was tested using Partial Least Squares Structural Equation Modeling to examine causal relationships and indirect effects among constructs. The results indicate that competency dimensions, particularly traits, self-concept, and knowledge, significantly contribute to the formation of perceived usefulness. Perceived usefulness also shows a strong relationship with perceived ease of use and functions as the pathway through which competency influences perceptions of system usability. In contrast, technical skills alone do not automatically increase perceived usefulness when they are not aligned with organizational workflows, routines, and user beliefs. These findings extend the application of the Technology Acceptance Model in the public sector by emphasizing the importance of adaptive characteristics, digital self-confidence, and literacy in policy and work processes to ensure the benefits of digital transformation are effectively realized in public organizations.

Keywords:

competency; digitalization; SPBE; usefulness; ease

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INTRODUCTION

Digital transformation in government governance has become a strategic agenda in bureaucratic reform in many developing countries, including Indonesia, in line with the growing demands for effectiveness, transparency, and accountability in public sector performance (Aminah & Saksono, 2021; Gusman, 2024; Wagola et al., 2023). In the context of regional development planning, institutions such as the Regional Development Planning, Research, and Innovation Agency play a key role in managing data, formulating evidence based policies, and coordinating cross sectoral planning processes that increasingly rely on digital systems and platforms (Dewi & Zakia, 2022). However, the success of bureaucratic digitalization is not determined solely by the availability of technological infrastructure, but is strongly influenced by the competencies of civil servants as the primary actors in its use (Maizon et al., 2025). Referring to the competency framework proposed by Spencer & Spencer (1994) the ability of civil servants to adopt and utilize digital technology is shaped by a combination of motives, personal traits, self concept, knowledge, and skills, which collectively form individual readiness to cope with technological change. At the same time, the level of digital system utilization within the bureaucratic environment is also influenced by civil servants' perceptions of perceived usefulness and perceived ease of use, as explained in the Technology Acceptance Model proposed by Davis (1989). Therefore, understanding the extent to which civil servant competencies influence the use of digitalization at the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, in addition to identifying the factors that shape these competencies, is essential for explaining why the adoption of digital technology in regional development planning often exhibits performance variations, even within relatively uniform policy and infrastructure frameworks.

Several previous studies have also found that individual competencies, such as motives, traits, self concept, knowledge, and skills, have a significant influence on perceived usefulness and perceived ease of use in technology adoption. Intrinsic motivation and self efficacy are among the factors that most consistently demonstrate positive effects on both variables (Lee et al., 2011; Trang, 2024). However, in certain contexts, competencies such as self efficacy may influence perceived ease of use but not perceived usefulness (Chen et al., 2025). This inconsistency indicates the presence of theoretical and empirical gaps regarding when and why employees' self concept genuinely strengthens perceived usefulness. In addition, some studies assess competency using a single dimension, such as knowledge, without simultaneously examining a more comprehensive set of competency components. As a result, the relative contribution of the overall competency dimensions in shaping perceived perceptions within the work environment has not yet been clearly mapped.

Given the limitations of existing methodological frameworks for contextually measuring the digital competencies of civil servants, this study offers a theoretical contribution by testing an integrative model that combines the Spencer competency framework and the Technology Acceptance Model, with perceived usefulness proposed as a mediating pathway between the overall competency variables and perceived ease of use. Empirically, this study provides evidence from a regional development planning organization that is characterized by cross unit coordination and procedural compliance. Based on this background, the objectives of this study are as follows: (1) to analyze the influence of motives, traits, self concept, knowledge, and skills on perceived usefulness; (2) to analyze the influence of perceived usefulness on perceived ease of use; and (3) to examine the mediating role of perceived usefulness in the relationship between competency and perceived ease of use at the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency.

METHOD

This study employed a quantitative approach with a cross-sectional design to analyze variables measured at a single point in time. The research was conducted at the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency to examine the influence of civil servant competencies on the use of digitalization. Primary data were collected through observation and questionnaires administered to civil servants to obtain first-hand perspectives, while secondary data were gathered from government regulations on electronic-based government systems, guidelines for civil servant digital transformation, institutional performance reports, and relevant scholarly literature.

The sample was determined using a non-probability purposive sampling technique, targeting civil servants aged twenty-five years and above who utilize digital systems within the institution. Because the total population size was unavailable, the sample size followed the rule-of-thumb approach proposed by Solimun et al. (2017), which suggests a minimum sample of ten times the number of structural paths in the model. With six structural paths, the minimum sample required was sixty respondents, which was subsequently rounded to one hundred respondents to strengthen the robustness of the analysis (Sarstedt et al., 2021).

The study conceptualizes civil servant competency through five dimensions: motives, traits, self-concept, knowledge, and skills. Motives reflect the encouragement to learn and optimize digital technology (Coimbra et al., 2023), traits represent personal tendencies in responding to technological change (Soto & John, 2016), and self-concept describes individuals' perceptions of their competence and role in digital-based planning (Schauffel et al., 2021). Knowledge refers to the understanding of digital systems and their benefits in planning processes (Brucks, 1985), while skills indicate the ability to effectively use digital applications in work tasks (Deursen et al., 2016). In addition, the study adopts two constructs from the Technology Acceptance Model (TAM), namely perceived usefulness and perceived ease of use, which describe civil servants' perceptions of the benefits and ease of digital system utilization (Davis, 1989). All variables were measured using a Likert scale ranging from strongly disagree to strongly agree.

The indicators for each variable were adapted from established studies. Motivation indicators were derived from Coimbra et al. (2023), traits from Soto & John (2016), self-concept from Schauffel et al. (2021), and knowledge and skills from Brucks (1985) and Deursen et al. (2016). The dependent variables—perceived usefulness and perceived ease of use—were adopted from Davis (1989).

Data analysis was conducted using Structural Equation Modeling with the Partial Least Squares approach to evaluate relationships among constructs and their indicators. The analysis consisted of outer model and inner model evaluations. The outer model assessed measurement quality through convergent validity, average variance extracted, composite reliability, and Cronbach's alpha. Convergent validity was considered acceptable when factor loadings exceeded 0.70 and the average variance extracted was above 0.50, while composite reliability and Cronbach's alpha values were required to exceed 0.70 to ensure reliable and valid measurement of the constructs.

Table 1. Validity and reliability testing were conducted using structural equation modelling–partial least squares (SEM-PLS) analysis

Latent Variables	Codes	Outer Loading	AVE	Composite Reliability	Cronbach Alpha
Motives	X1.1	0.952	0.905	0.895	0.895
	X1.2	0.950			
Traits	X2.1	0.811	0.750	0.916	0.919
	X2.2	0.873			
	X2.3	0.853			

	X2.4	0.909			
	X2.5	0.880			
Self-Concept	X3.1	0.716	0.628	0.852	0.86
	X3.2	0.819			
	X3.3	0.809			
	X3.4	0.802			
	X3.5	0.814			
Knowledge	X4.1	0.818	0.824	0.928	0.934
	X4.2	0.947			
	X4.3	0.905			
	X4.4	0.955			
Skills	X5.1	0.825	0.726	0.814	0.842
	X5.2	0.882			
	X5.3	0.848			
Perceived Usefulness	Y1.1	0.890	0.779	0.906	0.906
	Y1.2	0.882			
	Y1.3	0.873			
	Y1.4	0.886			
Perceived Ease of Use	Y2.1	0.869	0.741	0.883	0.888
	Y2.2	0.828			
	Y2.3	0.901			
	Y2.4	0.844			

Source: data processed using SmartPLS

Based on the outer model evaluation results, all latent constructs in this study meet the required validity and reliability criteria. All indicators show outer loading values above 0.70, indicating a strong ability to represent their respective latent constructs, while the Average Variance Extracted (AVE) values for all variables exceed 0.50, demonstrating that each construct explains more than half of the variance of its indicators.

Reliability testing also shows that all constructs have Composite Reliability and Cronbach's alpha values above 0.70, indicating good internal consistency of the measurement instruments. The knowledge and perceived usefulness constructs display particularly strong reliability, while motives, traits, self-concept, skills, and perceived ease of use also fall within acceptable reliability levels. Overall, these results confirm that the measurement model is valid and reliable, providing a solid basis for further structural analysis and interpretation of relationships among variables in the proposed research model.

RESULT AND DISCUSSION

Path Coefficient

Path coefficients are used to measure the causal relationships between latent variables in the structural model, reflecting changes in endogenous constructs as a result of changes in exogenous constructs. The values of path coefficients range from -1 to +1 (Hair et al., 2021). Values closer to +1 indicate a strong positive relationship, whereas values closer to -1 indicate a strong negative relationship. These coefficients are denoted by the symbol β and represent the magnitude of change in an endogenous variable resulting from a one unit change in an exogenous variable (Sarstedt et al., 2021).

Based on Figure 1, the path coefficient analysis results indicate that motives ($\beta = 0.244$), traits ($\beta = 0.382$), self concept ($\beta = 0.273$), and knowledge ($\beta = 0.240$) have positive effects on perceived usefulness. Among the five civil servant competency variables, traits exhibit the strongest influence, indicating that personal characteristics such as openness to change, adaptability, and commitment to using technology are dominant factors in shaping perceptions of the usefulness of digital systems. Meanwhile, the skills variable shows a negative coefficient ($\beta = -0.132$), suggesting that technical ability alone, without being

accompanied by perceived benefits and psychological readiness, does not automatically enhance perceptions of the usefulness of digital technology.

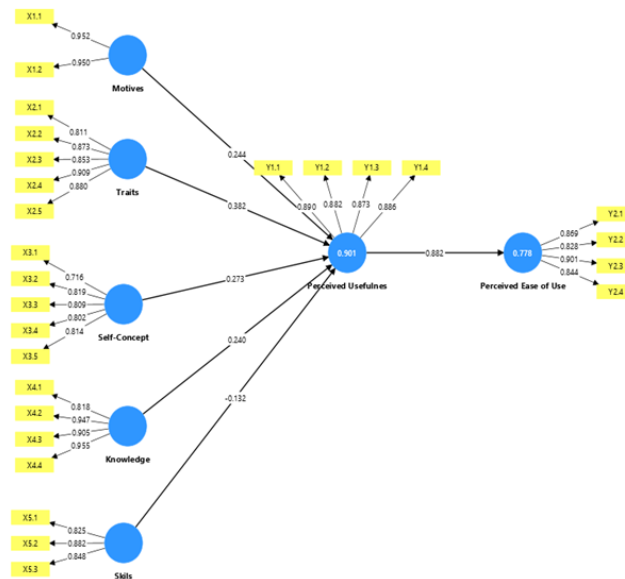


Figure 1. Relationships among variable

Furthermore, perceived usefulness has a very strong positive effect on perceived ease of use ($\beta = 0.882$). A coefficient value close to +1 indicates that the higher civil servants' confidence in the benefits of digital technology for improving work performance, the higher their perceptions of the ease of using digital systems. This finding confirms that perceived usefulness plays a crucial role in shaping perceptions of technology ease of use. Overall, the path coefficient results indicate that civil servant competencies, particularly personal traits, self concept, motivation, and knowledge, make significant contributions to shaping perceptions of the benefits of digitalization, which in turn promote the ease of use of digital systems within the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency.

R-Square Testing

The R square testing in this study was conducted to evaluate the quality and strength of the structural model in explaining the relationships among the analyzed latent variables. Values closer to +1 indicate a strong positive relationship, whereas values closer to -1 indicate a strong negative relationship. These values are represented by the beta coefficient, which reflects the magnitude of change in an endogenous variable resulting from a one unit change in an exogenous variable.

Table 2. R-squared value

Variable Y	R-Square
Perceived Usefulness	0.901
Perceived Ease of Use	0.778

Source: Data processed using SmartPLS

Based on the results of the inner model evaluation presented in the table, the R square values indicate that the research model has very strong explanatory power. The perceived usefulness variable obtained an R^2 value of 0.901, indicating that 90.1 percent of the variation in perceptions of the benefits of digitalization can be explained by civil servant competency constructs, including motives, traits, self concept, knowledge, and skills, while

the remaining 9.9 percent is influenced by other factors outside the research model. This value demonstrates that civil servant competency dimensions make a highly dominant contribution to shaping civil servants' perceptions of the benefits of digital technology in carrying out work related tasks.

Furthermore, the perceived ease of use variable obtained an R^2 value of 0.778, indicating that 77.8 percent of the variance in perceived ease of use of digital systems can be explained by the perceived usefulness variable in the research model. This result confirms that perceptions of the usefulness of digital technology play a very strong role in determining the level of ease of use perceived by civil servants. Overall, the R square values of both endogenous variables confirm that the structural model developed has high predictive capability and is appropriate for explaining the use of digitalization within the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency.

Hypothesis Testing

Hypothesis testing in this study was conducted using the bootstrapping technique. The significance levels in this analysis were classified into several categories, where $p > 0.10$ indicates weak significance, $p > 0.05$ indicates moderate significance, and $p > 0.01$ indicates strong or very strong significance. Based on the testing results presented in Table 5, most of the relationships among variables in the research model demonstrate a strong level of significance.

The test results indicate that motives, traits, self concept, and knowledge have positive and significant effects on perceived usefulness, with p values of 0.022, 0.005, 0.002, 0.011, and 0.000, respectively, and positive original sample values. These results indicate that the proposed hypotheses are supported and confirm that civil servants' understanding of digital systems and digital related policies contributes to the formation of positive perceptions regarding the benefits of digitalization.

Meanwhile, skills have a negative effect with a weak level of significance on perceived usefulness, with a p value of 0.065, indicating that H5 is weakly supported. This finding suggests that technical skills alone do not necessarily and directly enhance perceptions of the benefits of digital technology without being accompanied by adequate motivation, personal traits, and conceptual understanding. Furthermore, perceived usefulness has a positive and highly significant effect on perceived ease of use, with a p value of 0.000, indicating that H6 is supported. A significance value in the category of less than 0.01 demonstrates that perceptions of technology usefulness exert a very strong influence on shaping perceptions of the ease of use of digital systems. Overall, the hypothesis testing results indicate that the proposed research model is acceptable.

Table 3. Result of direct effect testing among variables

	Influence between variables	Original Sample	P-Value	Remarks
H1	Motives -> Perceived Usefulness	0.244	0.022	Highly Significant
H2	Traits -> Perceived Usefulness	0.382	0.005	Highly Significant
H3	Self-Concept -> Perceived Usefulness	0.273	0.002	Highly Significant
H4	Knowledge -> Perceived Usefulness	0.240	0.011	Highly Significant
H5	Skilss -> Perceived Usefulness	-0.132	0.065	Weekly Significant
H6	Perceived Usefulness -> Perceived Ease of Use	0.882	0.000	Highly Significant

Source: Data processed using Smart-PLS

Based on the mediation effect test results presented in the table, perceived usefulness plays an important role as a significant mediating variable in the relationships between most civil servant competency dimensions and perceived ease of use. The bootstrapping results

indicate that motives have a positive and highly significant effect on perceived ease of use through perceived usefulness ($\beta = 0.215$; p value = 0.022), as do traits ($\beta = 0.337$; p value = 0.006), self concept ($\beta = 0.241$; p value = 0.002), and knowledge ($\beta = 0.212$; p value = 0.012), all of which fall within the highly significant category. These findings indicate that civil servants' motivational drive, personal traits, self concept, and knowledge first shape perceptions of the usefulness of digital technology, which subsequently enhance perceptions of the ease of use of digital systems. Meanwhile, skills show a negative mediating effect with a weak level of significance ($\beta = -0.116$; p value = 0.065), indicating that technical skills alone are not sufficient to increase perceived ease of use without being supported by positive perceptions of usefulness. Overall, these results confirm that perceived usefulness is a key mediating mechanism linking civil servant competencies and perceptions of the ease of use of digitalization within the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency.

Table 4. Results of indirect effect testing among variables

	The Effect of Intervariable Mediation	Original Sample	P-Value	Remarks
H7	Motives -> Perceived Usefulness -> Perceived Ease of Use	0.215	0.022	Highly Significant
H8	Traits -> Perceived Usefulness -> Perceived Ease of Use	0.337	0.006	Highly Significant
H9	Self-Concept -> Perceived Usefulness -> Perceived Ease of Use	0.241	0.002	Highly Significant
H10	Knowledge -> Perceived Usefulness -> Perceived Ease of Use	0.212	0.012	Highly Significant
H11	Skilss -> Perceived Usefulness -> Perceived Ease of Use	-0.116	0.065	Weekly Significant

Source: Data processed using Smart-PLS

Effect of Motive on Perceived Usefulness

Motives have a positive and significant effect on perceived usefulness; therefore, H1 is supported. This finding indicates that civil servants' internal drive to learn and use technology shapes their belief that digital systems enhance work performance. Civil servants with high motivation tend to be more actively involved in training activities, explore system features, and integrate digital applications into their workflows, making the benefits of digitalization more readily identifiable in task completion. This result is consistent with the study by [Damanik et al. \(2025\)](#) which found that public sector work motivation contributes significantly to performance improvement through the use of technology and digital work environments. Similarly, [Maizon et al. \(2025\)](#) emphasize that motivation to learn technology is one of the main determinants in shaping perceived usefulness of digital systems among civil servants.

In addition, this finding aligns with the Technology Acceptance Model proposed by [Davis \(1989\)](#) which states that perceptions of technology usefulness are influenced by individuals' psychological readiness and attitudes toward system use. Motivation theory helps align digitalization opportunities with employees' intrinsic and extrinsic driving factors, thereby increasing their commitment and productivity in the digital technology adoption process ([Borsato et al., 2025](#)). In the context of the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, civil servants with high motivation tend to perceive digitalization as an instrument for improving coordination efficiency, work output quality, and planning accountability. Therefore, strengthening motivation should be strategically designed through continuous job based training, incentive systems that recognize digital work achievements, and organizational support such as standard operating procedures, mentoring, and leadership role modeling, so that digital adoption does not stop at administrative compliance but results in substantive and effective use.

Effect of Traits and Self-Concept on Perceived Usefulness

Traits have a positive and significant effect on perceived usefulness; therefore, H2 and H3 are supported. This finding indicates that civil servants' perceptions and beliefs regarding their own digital capabilities play an important role in shaping their assessment that digital technology is beneficial for improving work performance. A positive digital self concept, characterized by confidence in using systems, belief in the ability to learn new technologies, and independence in completing digitally based tasks, tends to lead civil servants to perceive digitalization as useful for enhancing work effectiveness and productivity. This finding is consistent with [Trang \(2024\)](#) who explains that individual characteristics such as intrinsic motivation, transformational leadership, and digital skills positively influence perceived usefulness and perceived ease of use of digital technology. In addition, [Setyawan et al. \(2025\)](#) found that civil servants with a positive self concept related to digital skills are better able to integrate technology into work processes and achieve higher performance outcomes. Higher levels of self efficacy increase confidence in using digital tools, which in turn enhances perceptions of the usefulness of these tools ([Thuy et al., 2023](#)). Within the framework of the Technology Acceptance Model, perceived usefulness is identified as the primary factor influencing employees' intentions to adopt digital technology ([Ngwenya, 2025](#)) Accordingly, in the context of the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, strengthening digital self concept can be practically achieved through hands on training, structured self directed learning, and a safe to learn work environment that allows civil servants to experiment without fear of making mistakes, thereby increasing their confidence in using digital systems".

Effect of Knowledge on Perceived Usefulness

Knowledge has a positive and significant effect on perceived usefulness; therefore, H4 is supported. This finding indicates that civil servants' knowledge of digital systems and digital related policies, such as an understanding of planning and performance accountability applications, electronic based government system procedures, and digitalization implementation regulations, shapes how civil servants evaluate the usefulness of technology for work performance. Civil servants who understand the functions and consequences of using digital systems tend to utilize them more strategically, not merely for administrative purposes but also as tools to support decision making and improve planning quality. This result is consistent with the findings of [Maizon et al. \(2025\)](#) which show that knowledge of digital systems and supporting policies is an important determinant of technology use in the public sector. Similar empirical evidence was reported by [Chasana et al. \(2024\)](#), who found that civil servants' understanding of the mechanisms and objectives of digital transformation has a significant influence on perceived usefulness and work performance. In addition, [Setyawan et al. \(2025\)](#) emphasize that civil servants with higher levels of digital knowledge tend to demonstrate more effective and results oriented use of digital systems. Within the framework of the Technology Acceptance Model, knowledge functions as a cognitive factor that strengthens the formation of perceived usefulness, as explained by [Davis \(1989\)](#) Accordingly, in the context of the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, efforts to enhance knowledge should be pursued through structured dissemination of digital policies, training that emphasizes process logic and system objectives rather than only technical steps, and the strengthening of institutional digital literacy to ensure that perceived usefulness is formed consistently.

Effect of Skills on Perceived Usefulness

Skills have a negative and weakly significant effect on perceived usefulness; therefore, H5 is supported in a limited manner. This finding indicates that operational abilities, such as using applications, managing data, and engaging in digital collaboration, are not always interpreted as value adding when technology has not been strategically integrated into work processes. Under such conditions, skills may be perceived merely as administrative routines rather than as performance drivers. This suggests that technical operational skills, when not accompanied by conceptual understanding, internal motivation, and positive attitudes toward technology use, tend to be regarded as routine administrative activities instead of strategic instruments that create added value.

In addition, more digitally skilled civil servants may be more sensitive to system limitations, such as redundant data entry, lengthy approval workflows, or suboptimal inter application integration, leading to more critical evaluations of perceived usefulness. This finding is consistent with [Mittal \(2021\)](#) who emphasizes that improvements in public officials' technological skills do not necessarily correspond to higher perceptions of benefits when they are not supported by the strategic integration of technology into work processes and decision making. [Chasana et al. \(2024\)](#) similarly show that although civil servants may possess adequate technical skills, the benefits of digitalization are optimally realized only when these skills align with organizational needs and are supported by an understanding of digital transformation objectives. Furthermore, [Maizon et al. \(2025\)](#) find that digital skills contribute more strongly to performance when mediated by psychological and cognitive factors, such as perceived usefulness and interpersonal communication. From the perspective of the Technology Acceptance Model, these results reinforce the view that technical skills alone are not the primary determinants of perceived usefulness, but must be combined with other internal factors that shape how individuals interpret technology. Therefore, in the context of the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, skills development should be accompanied by efforts to strengthen understanding of the strategic value of technology, clarify system purposes and supported performance indicators, improve business processes, and provide organizational support so that skills truly generate perceived usefulness rather than merely operational competence.

Effect of Perceived Usefulness on Perceived Ease of Use (Digitalization)

Perceived usefulness has a positive and highly significant effect on perceived ease of use; therefore, H6 is supported. This finding indicates that when civil servants perceive digital systems as genuinely enhancing work performance, such as accelerating task completion, facilitating coordination, and improving output quality, perceived barriers related to system complexity tend to decrease. As a result, digital systems are regarded as easier to learn and use. Civil servants who have experienced tangible benefits from digitalization are more likely to perceive digital systems as intuitive, user friendly, and comfortable to use in their daily activities. This result is consistent with the framework of the Technology Acceptance Model proposed by [Davis \(1989\)](#), which emphasizes that perceived usefulness is a key determinant in shaping perceptions of ease of use. Empirical evidence from [Aji et al. \(2025\)](#) *also supports this relationship, showing that performance expectancy strongly influences effort expectancy in the context of technology adoption.* Similarly, studies by [Maizon et al. \(2025\)](#) and [Chasana et al. \(2024\)](#) in the civil servant context find that once public officials experience the positive performance impacts of digitalization, perceived obstacles related to system complexity tend to decline significantly. Accordingly, in the context of the Regional Development Planning, Research, and Innovation

Agency of Sidenreng Rappang Regency, enhancing perceived ease of use should not rely solely on interface simplification, but also on clearly demonstrating the tangible benefits of digital systems in work processes, as perceived usefulness functions as a key cognitive trigger that reinforces perceptions of ease of use.

Indirect Effect of ASN Competency (X1–X5) on Perceived Ease of Use through Perceived Usefulness as a Mediating Variable

The research findings indicate that civil servant competencies, including motives, traits, self concept, knowledge, and skills, have a significant indirect effect on perceived ease of use through perceived usefulness as a mediating variable; therefore, the seventh hypothesis (H7) is supported. This finding confirms that civil servant competencies do not automatically make digital systems feel easy to use. Instead, competencies first shape perceived usefulness, which subsequently enhances perceived ease of use. In other words, perceived usefulness functions as a key mechanism that bridges individual factors and the acceptance of digitalization. Civil servants with high motivation, adaptive personal traits, a positive self concept, and adequate knowledge are more capable of recognizing and experiencing the tangible benefits of digital systems, which in turn leads them to perceive these systems as easier to use. This result is consistent with the Technology Acceptance Model, which positions perceived usefulness as a central construct mediating the relationship between individual factors and technology acceptance (Davis, 1989). The empirical findings are also aligned with Aji et al. (2025) who emphasize that performance expectancy mediates the influence of individual characteristics on perceived business value in technology use. Studies by Maizon et al. (2025) and Setyawan et al. (2025) in the civil servant context further demonstrate that digital competency has a stronger impact on digital system use when mediated by clear perceptions of performance related benefits.

The weak support for the skills pathway indicates that technical skills alone are insufficient to enhance perceived usefulness when civil servants do not yet interpret technology as a tool that genuinely improves work performance. Therefore, competency development should be directed not only toward improving technical skills but also toward strengthening perceived usefulness through alignment of work processes, organizational support, and internalization of the strategic value of technology. Accordingly, in the context of the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, perceptions of technology benefits serve as the primary mediating mechanism linking civil servant competencies and the perceived ease of use of digitalization, suggesting that capacity building efforts should focus not only on technical proficiency but also on fostering strong perceptions of the benefits of technology in supporting bureaucratic work effectiveness.

CONCLUSION

Based on the results of the analysis and discussion on the acceptance of digitalization at the Regional Development Planning, Research, and Innovation Agency of Sidenreng Rappang Regency, the findings indicate that civil servant competency dimensions with psychological and cognitive characteristics, with traits as the most dominant determinant followed by motives, self concept, and knowledge, play a more substantial role in shaping perceived usefulness. In contrast, the skills dimension exhibits a negative coefficient with limited statistical support. This pattern confirms that the acceptance of digital systems among civil servants is not determined solely by operational capacity, but rather by internal readiness and conceptual understanding that encourage individuals to perceive digitalization as valuable and beneficial. Furthermore, perceived usefulness emerges as a

central mechanism, as civil servant competencies influence perceived ease of use primarily through indirect effects mediated by perceived usefulness. From a theoretical perspective, these results strengthen the contribution of this study by integrating the Spencer and Spencer competency framework as an upstream antecedent shaping perceived usefulness within the Technology Acceptance Model, while also reaffirming perceived usefulness as the explanatory pathway toward perceived ease of use. As such, the Spencer–TAM integration receives empirical support and highlights the dominant role of psychological and cognitive competency foundations in bureaucratic contexts. The novelty of this study within the context of a regional development planning agency is particularly relevant, given that planning and development accountability work is highly regulated, requires cross unit coordination, and emphasizes process legitimacy. These characteristics differentiate digital acceptance dynamics from those in the private sector and make them highly dependent on the formation of perceived usefulness grounded in work related values. Accordingly, digital transformation strategies should prioritize strengthening adaptive characteristics, learning motivation, digital self concept, and literacy in policies and electronic based government system processes, accompanied by alignment of work processes and standard operating procedures as well as organizational support, so that technical skills genuinely translate into perceived benefits. For future research, it is recommended to extend the model by incorporating behavioral and contextual variables, such as satisfaction, continuance intention, trust, subjective norms, management support, digital work culture, system quality, and information security, as well as to conduct cross institutional and cross level government testing. Conceptually, this study affirms that the sustainability of digital transformation in the public sector is more likely to be ensured when psychological and cognitive competencies are able to form strong perceptions of usefulness, as belief in benefits represents the primary gateway to ease of use, sustained utilization, and substantive digital performance.

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