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Development of digital competencies towards improving performance of ministry of agrarian and spatial planning: insight from Indonesia

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ABSTRACT

Digital competency is considered a new organizational priority in managing people in public institution. The purpose of this research was to examine the role of digital competence with support of digital leadership, transformation and digital culture can contribute for increasing ministry of agrarian and spatial performance. This research applied a quantitative approach by collecting data from 317 lecturers who worked at ministry of agrarian and spatial in Jakarta area. Purposive sampling was employed to gather data using online questionnaires. Next, partial least square structural equation modeling (PLS-SEM) was used to examine this data. The results showed that systematically developing each employee's digital competency creates a new organizational culture known as "digital culture," which in turn leads to the organization's digital transformation. To emphasize the significance of digital competence, digital culture, digital transformation, and digital culture in changing the nature and caliber of Indonesia's Ministry of Agriculture and Spatial Planning.

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Introduction

Digital transformation is a solution for sustainable performance and services in the private and public sectors (Deschamps et al., (2020). For Indonesia, digital transformation can spur an additional 0.55% growth in gross domestic product (GDP) every year for the next two decades until 2040. Equal distribution of digital literacy and skills for society in Indonesia is a prerequisite for inclusive digital transformation. Digital transformation refers to changes that are intentional and occur as a result of emerging advances in computer-related technologies (Bresciani et al.. 2021). Digital transformation, when applied to businesses, is the trend toward the adoption and use of data analysis, cloud computing, mobile mediation, social media, artificial intelligence, and data analysis in the course of conducting business and providing customer service (Jedynak et al. 2021). By incorporating digital tools and technologies, companies can adapt their operations, methods, and culture to match the demands of a constantly changing market. This is how Nasiri et al. (2020) define digital transformation.

The World Digital Competitiveness Ranking produced by the IMD World Competitiveness Center in 2022, measures the capacity and readiness of countries to adopt and explore digital technology as the main driver of organizational transformation in the business, government and wider society sectors. Indonesia was recorded as being ranked 51st out of 63 countries assessed, below Thailand (40) and Malaysia (31). Digital competencies have been used for various purposes, especially in the context of employment, education and training, and

lifelong learning (Vuorikari et al. 2016). Various countries have attempted to formulate digital competency components that must be mastered to support the implementation of digital transformation, such as DigComp, Essential Digital Skills Framework (EDSF), International Evaluation of Educational Achievement (IEA), International Computer and Information Literacy Study (ICILS), Competences, Qualifications and Occupations (ESCO) Defined the Digital Competencies, and the Irish Government's Digital Skills Framework. In Indonesia, the Government regulates Competency Standards for public worker positions based on the Minister of State Apparatus Empowerment and Bureaucratic Reform Regulation Number 38 of 2017 and is still general in nature, does not describe digital competency (Rumata and Nugraha 2020).

Many digitalization initiatives have failed to produce the expected results through policy and governance changes (Saleh and Awny 2020). Rupp (2017) argues that this may be due to a lack of digital competence. Digital transformation in the public sector requires the development of a wide range of competencies, as they play a key role in preparing future civil servants for modern governance. Kausch-Zongo and Schenk (2022) focus on public administration students and analyze their technical, social, informational and epistemological competencies. The competency identification step requires involvement from stakeholders (Kaur and Lodhia 2019).

Transforming public processes and services in the public sector within the framework of digital transformation requires comprehensive organizational efforts (Mergel 2019). Hofmann and Ogonek (2018) identified four main competency areas needed by public sector organizations, namely technical, cognitive, social awareness and impact competencies. Technical competence includes selecting information technology that is appropriate, flexible and adaptive to new technological developments. Social competence is related to ethics and self-confidence in using technology and utilizing forms of collaborative interaction that are possible through information technology. Apart from that, it can overcome challenges related to the digitization of business processes, documents and services.

Broomfield and Reutter (2021) reveal the three most important challenges in considering competency in the public sector, namely skills in managing changes in organizational culture, issues related to privacy and security, and overcoming obstacles related to regulation. Mergel et al. (2019) analyzed the competencies currently needed by the government and found five main competency categories, namely, technical, socio-technical, organizational, managerial and political-administrative competencies. Research from Nwankpa and Roumani (2016) states that digital transformation plays a more colorful role by mediating the impact of digital skills or data technology and bodily capabilities. The industry must understand the importance of digital transformation and how to use data technology capabilities to improve corporate capabilities.

Leader competency is a strength for the organization and employees. Leadership style has its own importance in increasing employee motivation and performance. Employee motivation is negatively influenced by an authoritarian leadership style. Meanwhile, a preference for a democratic and laissez-faire leadership style can increase business output. Both leadership styles increase employee morale and voluntary behavior so that they can increase organizational efficiency and effectiveness (Fiaz et al., 2017). Soane et al. (2015) stated that transformational leaders are effective leaders because they are able to increase followers' awareness, provide vision and strategy, encourage followers to contribute more and increase the portfolio of followers' needs to improve themselves and achieve their desires (Soane et al. 2015). Transformational leaders, with innovative and charismatic behavior, will produce more innovative and productive employees (Khan et al. 2020).

Changes in digital transformation can lead change in culture can be seen from the influence of organizational processes that have utilized digital transformation. Generally, these organizations have also created a digital culture that is structured in line with organizational values. In this case, the concept of digital culture and organizational culture or values becomes a new social ecology and cultural development. According to Khan et al. (2020) digital culture is based on factors; 1) Innovation: Disruptive thinking and new ideas. 2) The organization's ability to adapt. 3) Utilizing customer feedback, 4) Open culture between internal and external customers. 4) The decision making process is based on data. 5) Digital mindset, such as timely decision making.

The Digital Transformation Road Map targets strengthening digital competency/literacy to be implemented in 2024, so it is hoped that it will encourage the digital transformation process and improve service performance in the land and spatial planning sector. According to Sunrizal (2022), low digital competence can create opportunities for misuse of the digital land management system and result in the loss of guaranteed civil rights over land for the community. This situation has an impact on the increase in disputes, conflicts, and cases as well as the organizational performance of the Ministry of Agraria and Spatial Planning. This study was conducted in Ministry of Agraria and Spatial Planning in Indonesia, where most the case of program error or corruption due to lack of human resource competence. This study have objective to examine the role of digital competence, digital leadership, transformation and digital culture towards Ministry of Agraria and Spatial Planning performance. A quantitative survey was used to collect data from the public institution.

The resource-based view theory (RBV) used in this study emphasizes the critical role of resources and capabilities in creating competitive advantage. The 1990s were when strategic organizational management shifted from an external focus to an internal focus (Lubis, 2022). An external guide is based on the strengths, weaknesses, opportunities, and threats of the firm's industry. An internal focus shifts managerial attention to internal resources by identifying the assets, competencies, and capabilities to create a competitive advantage (Lubis, 2022).

The Resource Based View (RBV) philosophy has been adopted as a key philosophy to explore how energy resources can influence an public sector by encouraging competitive advantages and improving its performance (Mansour et al. 2022). The body needs the resources of innovative people to create something new that has a positive impact on the body. In the RBV perspective, an entity can achieve a competitive advantage by having an important legacy, whether tangible or intangible. The perspective taken by this research states that digital capabilities are valuable resources that can influence other resources or capabilities in the organization. Handling this problem requires a holistic strategy that involves coordination between various stakeholders, including government, the private sector and civil society. In addition, full commitment from organizational leadership and political support can be the key to success in facing this challenge. So this research is needed in order to create a digital competency model for State Civil Apparatus within the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency. Digital competency development is an ongoing process that requires long-term commitment and support from all levels within the organization.

According to Hofmann and Ogonek (2018), "digital competence specifically refers to technological, cognitive, and social knowledge, skills, and attitudes in order to apply ICT to investigate and solve problems and further develop that knowledge." At all levels of government, public administrations must evaluate and comprehend the digital competences of the personnel they require. The European Commission (Directorate General of Informatics 2018), for instance, has emphasized at the supranational level that these capabilities entail adjustments to leadership, working methods, and mentalities. Research on personnel professional development in the Czech public sector was carried out by Krpálek et al. in 2021. Research reveals that a set of future abilities required can be formed by combining soft skills with talents from the Industry 4.0 domain.

According to Armenia et al. (2021), the Italian public administration needs new management positions like digital transition managers. The operational aspects of digital transformation are the main emphasis of this function. This includes managing relationships with the community and coordinating the development of e-Government services. Technical competency, management competency, and socio-cultural competency are the three (three) competency classes into which the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency separates competencies. Planning and carrying out the organization's strategic plans, as well as building or helping to improve the work culture including the establishment of a digital culture to boost productivity and competitiveness are the duties of a digital leader. Additionally, prior researchers discovered that digital leaders enhance organizational performance and have an impact on creative behavior among employees (Rinata et al., 2022). According to Zeike et al. (2019), prosperous digital enterprises possess robust leadership proficiencies and prosper through spearheading change. According to Rudito and Sinaga (2017), a leader exhibiting digital leadership is one who can integrate digital competencies into the process of shaping their company's culture and competencies. In light of the aforementioned circumstances, we put forth the following theory. Based on the above, this leads to the following hypothesis:

Hypothesis 1: Digital competency is positively related to digital leadership

Critical expertise and resource readiness are necessary for managing digital transformation (Wang et al. 2019). An organization must take this action, according to Ramaditya et al. (2022), in order to cultivate a wide range of abilities in many sectors, which may vary based on the demands of the business world and industry. 77% of respondents cited a lack of competence as a barrier to digital transformation, according to Westerman et al. (2012). They contend that in addition to traditional IT, digital capabilities must encompass specialized technology for using social media and mobile devices as well as the analytical skills needed to extract insights from large data sets.

Businesses are becoming more and more dependent on digital competences as a result of digital transformation to enhance their operational processes, business models, and customer experiences (Ramaditya et al., 2023). A recent study (Rupeika-Apoga et al., 2022) found that digital competence enhances the performance of an organization's digital transition. Additionally, businesses are becoming more conscious of how critical it is to adjust to the "new normal" (Loureiro et al. 2021). Businesses have been utilizing digital tools to streamline and improve processes in order to ensure business continuity. As a result, a dynamic and unstable environment may be linked to the development of digital competence. As a result, we postulate the following:

Hypothesis 2: Digital competency is positively related to digital transformation.

Digital Leadership

Experts have highlighted the role of leadership in enhancing Industry 4.0 and the digital era. For example, Chandra & Priyono et al. (2016) stated that leaders' role in helping digitalization succeed includes pursuing technological trends, formulating strategies, and leading organizations towards the appropriate implementation of new technologies. Additionally, Bresciani et al. (2021) emphasize that "digital leaders" are those who have a technology-oriented mindset and create cooperative networks to discover and apply digital competencies. Transformational leaders are those who seek to build others up, increase trust, and take on the role of moral agent to serve the needs of the work group (Renata et al., 2022). For digital transformation to be successful, it must become legally recognized and be seen as a system that the entire firm can trust, as it necessitates significant adjustments to organizational settings (Hinings et al. 2018). Accordingly, in order for a company to maintain a digital culture and digitize its business processes, it needs the consent of leaders who fund, support, and motivate different stakeholders to contribute to the advancement of technology-based business processes and increase their applicability and usefulness (Nadkarni and Prügl 2020). Consequently, we formulate the subsequent conjecture:

Hypothesis 3: Digital leadership is positively related to digital transformation.

Digital Culture

After traditional work activities are transformed into digital, employee competence to adopt and apply technological developments becomes important (Warner and Wager, 2019). The development of digital technology requires human resources who are able to utilize it more efficiently and can increase work activities (Warner and Wager 2019). An organizational culture that supports digital transformation (digital culture) can increase resource competency to ensure institutional activities run well (Ramaditya, et al., 2023b). According to several studies, digital culture is an important indicator for the preparation of organizations that will implement digital transformation (Renata et al., 2021). The author assumes that a good level of understanding about digitalization will influence the way and work culture of the employees concerned. Consequently, we propose the following hypothesis:

Hypothesis 4: Digital competencies is positively related to digital culture

Organizational Performance

In order to motivate individual workers and foster a strong sense of community, leaders must embrace a transformational leadership style. vision and ownership of the firm; this might inspire workers to adopt creative work practices (Ramaditya, et al., 2022). Digital competency will help staff members analyze data more effectively in order to come up with and execute fresh concepts (Syamsari et al., 2022). Furthermore, Afsar et al. (2019) suggest that managerial HR management can positively impact behavior and performance improvement through digitally focused training and development, rewards for employees who achieve in the digital business, and input about digital practices. Organizations can enhance employee digital experiences and boost organizational performance by investing in the development of leaders' digital knowledge and competencies in the context of using technology. Considering the aforementioned, our hypothesis is:

Hypothesis 5: Digital leadership is positively related to organizational performance.

Prior studies on firm performance have looked at financial performance as well as market performance (Kim and Lee 2010). According to Singh et al. (2019), a composite index that takes into account sales growth, profitability, customer retention, and return on investment can be used to assess financial performance. On the other hand, market performance is determined by breaking into new markets, launching new goods and services, and measuring the market share and success rate of those efforts. Research has shown that there is a clear and beneficial correlation between the use of IT and business success. Significant changes have been made to infrastructure, structures, processes, and products as a result of the usage of IT.

According to Bharadwaj et al. (2013), the research evaluates that digital transformation is anticipated to be able to mobilize digital resources to create distinct value. Performance can be continuously improved by digital transformation projects (Tortorella et al. 2020). Businesses can gain better customer offerings through personalization, more customer happiness, and lower sales costs as digital transformation grows (Brynjolfsson and Hitt 2000). Prior studies on the effects of digital technology have demonstrated that digitalization can have a favorable impact on business performance. Businesses that employ digital business processes see improvements in their IT performance (Ramaditya et al., 2023b). Companies such as Best Buy and Starbucks have utilized digital technology in an effort to improve performance through transformation of business processes for customers, accompanied by synchronization of data, information and new ideas (Ramaditya et al., 2022a). With the above review, we develop the following hypothesis:

Hypothesis 6: Digital transformation is positively related to organizational performance.

The use of technology accompanied by digital culture such as shared values in collaborating and communicating online can build good social relationships between employees (Tortorella et al. 2020), the consequence of which is increased organizational performance including digital transformation. Digital culture encourages stronger social participation from every part and unit of the organization (Syamsari et al., 2022), such as the ease of creating transparency and networking among employees. Likewise, a healthy digital culture will encourage employees to use the convenience of technology in order to establish good collaboration with customers (Ramaditya et al., 2023), and of course have a positive impact on company performance. Therefore, we expect the following relationship to be true of the following hypothesis: Accordingly, we develop the

Hypothesis 7: Digital culture is positively related to organizational performance

Previous research shows that digital innovation is the impact of digital competence and contributes to company performance and has a positive effect on financial and non-financial performance. other research shows that digital competence makes it easier for companies to adapt and save money (Drnevich & Croson 2013). However, there is still very little data that can determine how strong the influence of digital competence has on company performance. Therefore, this research aims to address this gap by examining the impact of digital competencies on digital organizational performance. As a consequence, we propose the following hypothesis:

Hypothesis 8: Digital Competence is positively related to organizational performance

To integrate digital technology into an organization, it is necessary to improve and change business processes. Managerial facilitates proposals for new business processes to be aligned with organizational culture (digital culture) as well as new ways of integrating them with human resources (Kindermann et al. 2021). The connection between organizational culture in the digital transformation literature is not something new. Many literature and digital transformation studies mention the importance of digital culture as a factor for the success of digital innovation and digital strategy (Gerster et al. 2018). Several studies on digital transformation also often conclude about the need to adapt work culture and emphasize organizational values which can demand the success of digital transformation (Hartl & Hess 2017). Digital culture is the most crucial determining factor for the success of digital transformation. Organizations can change technology to the latest, new infrastructure, new processes, but it is difficult to implement it without the help of human resources (HR). With the above review, the author develops the following hypothesis:

Hypothesis 9: Digital Culture is positively related to digital transformation

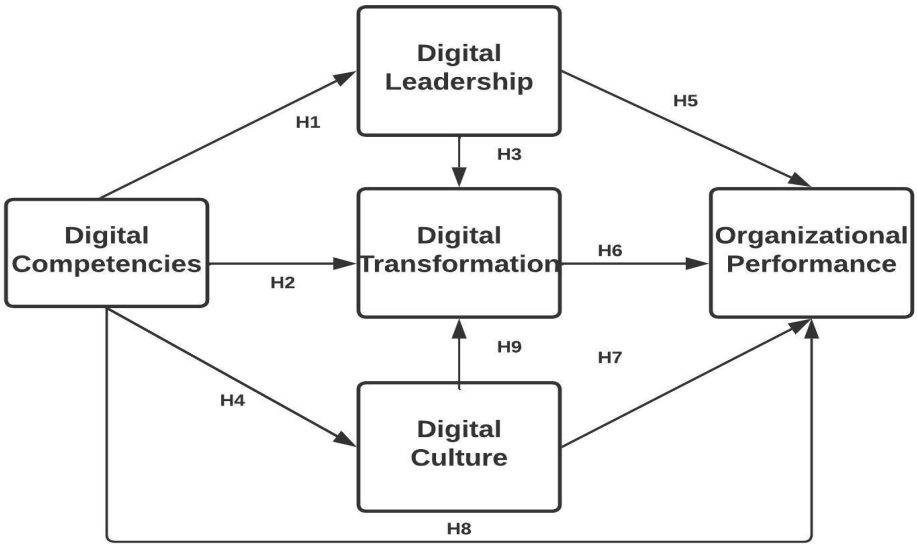

Figure 1. The Conceptual Research Model

Method

This study used a quantitative design with correlational and descriptive explanations. Indonesia is notable for having a large number of islands, which makes it difficult to get data from every person owing to time and resource constraints. For this reason, data collection and analysis were done using random sampling. The majority of the business districts are concentrated in the area, which is why Jakarta was selected as the regional office. Out of 325 questionnaires completed, 318 were deemed useful for this study, which focused on four regional offices located in Jakarta and its surrounding areas.

Table 1. Demographic Table

Office (Qty)		Length of Work (Qty)		Education (Qty)		Age (Qty)	
Headquarter	70	1-8 year	67	Junior High School	4	Gen Z (23-26)	20
Central Jakarta	35	9-16 year	113	Senior High School	75	Millenials (27-42)	113
West Jakarta	62	17-24 year	47	Diploma 1	13	Gen X (43-54)	137
East Jakarta	75	25-32 year	65	Diploma 2	28	Boomers (55-64)	48
North Jakarta	46	33-35 year	26	Degree	153		
South Jakarta	30			Master	45		

51.7% of the workers in the age range of 23 to 58 were female, while 46.3% of the workers were male. They also had an average work tenure of five to twenty years, and their educational attainment included diploma and master's degree holders. A cross-sectional design was also used in the investigation. Five points were assigned to each category on the Likert scale—one being "strongly disagree" and five being "strongly agree." This was how the data was obtained. The reliability of the questionnaire was established using Cronbach's alpha, which is acceptable above the threshold of 0.7. The purpose of the pilot study was to confirm that the questionnaire was valid for larger-scale research.

Results and Discussions

The factors that were employed in this study were organizational performance, digital competency, digital leadership, digital transformation, and digital culture. For technical digital competences including digital technical, managerial, and sociocultural capabilities, digital competency is adapted from Digicomp (2023). Data on digital transformation dimensions, including technology assets (TA), know-how and intellectual property (KI), digital capability (DC), strategic alignment (SA), strategic vision (SV), and culture of innovation (CI), are taken from Gurbaxani dan Dunkle (2019). According to Erhan et al. (2022), the digital leadership component includes transformational leadership, digital skills, digital ethics, digital empowerment, agility, and adaptation. Innovation, an organization's capacity for change, the use of consumer input, an open culture, data-driven decision-making, and a digital mindset are the next aspects of digital culture. The performance factors pertaining to financial, customer, internal, growth, and learning perspectives are derived from Gurbaxani and Dunkle (2019). As a result, the strategy plan ministry ATR/BPN 2020–2024 is modified for organizational performance.

All item values had a loading factor > 50, according to the test results, which suggests that the measurement model has some degree of convergent validity. How to design indicators that are expressed as latent variables is indicated by composite reliability, which has a range of 0.893 to 0.943. The findings exceeded the recommended threshold of 0.7 (Hair et al., 2010). The average variance extracted (AVE), which represents the total number of variants in the indicator reflecting latent constructs, then shows convergent validity because it passed the study's recommended threshold of 0.5 (Fornell & Larcker, 1981; Hair et al., 2010). The evidence of discriminant validity between measurements of different constructs was then examined (Hubley, 2014). Table 2 shows that the correlation that results can be used to verify discriminant validity by applying the Fornell-Larcker criterion, which examines the correlation between variables and the AVE root value. Discriminant validity was deemed satisfactory as each of the AVE's roots exceeded the correlation between the variables in the model (Hair et al., 2010).

Testing the conceptual model will help to guarantee that it will materialize into reality. SmartPLS 3.0, a PLS-SEM program, was used to verify the acquired data. The procedures used in the data computation process include the Partial Least Square (PLS) and Bootstrapping methods, which generate computed data that is then evaluated and approved for use in the conceptual model. Following SmartPLS testing, analysis will be done to evaluate the outer, inner, and hypothesis models.

Table 2. Measurement Model

Construct	Item	Factor	CR	AVE	CA	Source
Digital Competence	TC1	0,810	0.944	0.527	0.943	Digicomp (2023)
	TC2	0,773				
	TC3	0,746				
	TC4	0,697				
	TC5	0,769				
	TD1	0,740				
	TD2	0,797				
	TD3	0,804				
	TE1	0,796				
	TE2	0,696				
	TE3	0,726				
	TP1	0,614				
	TP2	0,731				
	TP3	0,602				
	TS1	0,736				
	TS2	0,609				
	TS3	0,636				
Digital Leadership	KT1	0,831	0.915	0.699	0.914	Tortorella et al. 2020
	KT2	0,860				
	KT3	0,815				
	KT4	0,829				
	KT5	0,849				
	KT6	0,829				
Digital Transformation	SC1	0.959	0.946	0.586	0.921	Gurbaxani dan Dunkle (2019)
	SC2	0.966				
	SC3	0,719				
	SC4	0,776				
	SI1	0,740				
	SI2	0,648				
	SI3	0,709				
	SI4	0,523				
	SI5	0,716				
	SP1	0,594				
	SP2	0,701				
	SP3	0,717				
	SP4	0,717				
	SP5	0,795				
	SS1	0,696				
	SV1	0,670				
	SV2	0,654				
Digital Culture	AL1	0,804	0.897	0.702	0.893	Gurbaxani dan Dunkle (2019)
	AL2	0,814				
	AL3	0,897				
	AL4	0,850				
	AL5	0,820				
	AL6	0,804				
Organizational Performance	KI1	0,804	0.941	0.766	0.938	strategic plan Ministry ATR/BPN 2020-2024
	KI2	0,898				
	KI3	0,878				
	KI4	0,923				
	KI5	0,905				
	KI6	0,836				

Table 3. Discriminant Validity Fornell-Larcker Criterion

Discriminant Validity Fornell-Larcker Criterion					
Construct	**1**	**2**	**3**	**4**	**5**
Digital Competence	0,726				
Digital Culture	0,413	0,838			
Digital Leadership	0,501	0,554	0,836		
Digital Transformation	0,555	0,756	0,701	0,697	
Organizational Performance	0,422	0,758	0,493	0,688	0,875

Note: N= 382; items displayed in boldface represents the square root of the AVE

Outer Model Evaluation

Table 1 presents the Cronbach's alpha test findings for the following values: DC = 0.943; DL = 0.914; DT = 0.921; DU = 0.893; OP = 0.938. Multivariate factual examination tests include factor loadings, discriminant validity checks, convergent validity, and structural equations model assessment via t-test (5,000 bootstrapping), explained variance (R2), predictive relevance (Q2), and effect size (f2) evaluation (Hair et al., 2017). IBM's Smart PLS v.3.2.8, a partial least squares model, and SPSS v.21 software were used to set up the evaluation.

If the composite reliability is greater than 0.6 and the average variance recovered is more significant than 0.4, the construct's convergent validity is still considered good (Fornell and Larcker, 1981; Lam, 2012; Hair et al., 2016). Table 1 illustrates that, with the exception of digital leadership to organizational performance, all five constructs have all-composite reliability values more than 0.80, suggesting that the assessments are valid. According to Table 3, the relationship between the components is 95% significant when the value of T falls between 1.96 and 1.97. Table 3 thus shows that all of the connections between the variables aside from the one between digital leadership and organizational performance are significant.

Inner Model Evaluation and Hypothesis Testing

Following the PLS analysis measurement model, the structural equations model was computed (Hair et al., 2016). Table 3 shows that measurements were made for the direct effect model. The effects of structural equation models, both direct and indirect, were examined using four criteria. To ascertain the degree of variance in every concept, impact size (F2), estimate significance (Q2), and path coefficient evaluations, the (R2) for endogenous latent variables are assessed (Hair et al., 2014). Analysis of 5,000 bootstrapped samples from the first 382 cases was done in a direct effect structural equations model to quantify the significance of the change and provide point measurements. (Hair et al., 2016).

Table 4. Results of the structural equations model

Relationship between variables of Research	**SD**	**T-Value**	**Direct Effect**	**p-values**	**F^2**
DC→DE	0,058	7,082	0,413	0,000	0,206
DC→DL	0,074	6,742	0,501	0,000	0,335
DC→DT	0,054	3,356	0,182	0,001	0,083
DC→OP	0,048	1,391	0,066	0,164	0,007
DC→DT	0,068	7,276	0,494	0,000	0,565
DC→OP	0,070	7,984	0,557	0,000	0,338
DL → DT	0,064	5,270	0,336	0,000	0,236
DL→OP	0,060	0,325	-0,020	0,745	0,000
DT→OP	0,076	3,202	0,244	0,001	0,044

The amount of variation in endogenous variables that external forces may explain is described by the R2 value (Hair et al., 2014). Nonetheless, R2 is heavily dependent on the research environment (Hair et al.,). The values of 0.708, 0.249, and 0.168 indicate moderate, high, and high education achievement, respectively. Digital culture, digital leadership, and digital transformation are predicted to change organizational performance by 60.3%, according to the R2 value of 0.603 for an endogenous variable in the direct effect model. To evaluate the estimated relevance of the research model, a cross-validated redundancy measure (Q2) was employed (Hair et al., 2017).

The direct effect model's sufficient estimations of significance received support. For the endogenous latent variable, the direct value of Q2 is shown in Table 4 and Figure 2 to be greater than zero (Q2 = 0.652). According to Hair et al. (2016), digital culture, digital transformation, digital culture, and digital competency all suggest that the model has a reasonable level of predictive relevance. Findings corroborate the following hypotheses: digital competency to leadership (b = 0.074, t = 6.742, p < 0.000); digital competency to digital transformation (b = 0.054, t = 3.356, p < 0.000); digital leadership to digital transformation (b = 0,336, t = 5.270, p < 0.000); digital competency to digital culture (b = 0.413, t = 7.082, p < 0.000); and digital transformation to organizational performance (b = 0.244, t = 3.202, p < 0.001), The relationship between digital culture and organizational performance was entirely favorable and significant (b = 0.557, t = 7.984, p < 0.000). The relationship between digital leadership and organizational performance (b = -0,200, t = 0,325, p < 0.745) and digital competency to organizational performance (b = 0.066, t = 1.391, p < 0.165) was neither significant or positive.

Table 5. Coefficient of determination in the PLS Method

Construct	R^2	R^2 adjusted	Q^2
Digital competency	0,171	0,168	0.613
Digital Leadership	0,251	0,249	0.677
Digital Transformation	0,711	0,708	0.357
Organizational Performance	0,608	0,603	0.652

The effect size (F2) measures the direct impact of the independent (exogenous) variable on the dependent (endogenous) variable. This helps assess the degree of significance of the exogenous variable's influence on the endogenous variable. According to Hair et al. (2017), (f2) estimations with 0,335, 0,338, and 0,565, respectively, correspond to modest, medium, and considerable effects. The impact size of digital competency on organizational performance is 0.613 for digital leadership, 0.677 for digital transformation, and 0.357 for digital competency on organizational performance, according to Table 3. Consequently, the influence of foreign constructs on endogenous constructs is reduced and heightened, respectively.

The primary purpose of this study was to examine the relationship between digital competency, digital leadership, digital transformation, digital culture towards organizational performance in the context of the ministry of Agraria and Spatial Planning in Indonesia. The results revealed through structural equation modeling that the digital competence can improve digital leadership, transformation and culture. A low digital competence can create opportunities for misuse of the digital land management system and result in the loss of guaranteed civil rights over land for the community (Sunrizal , 2022), . This situation has an impact on the increase in disputes, conflicts and cases as well as the organizational performance of the Ministry of Agraria and Spatial Planning. On the other hand, the Decree of the Minister of Agraria and Spatial Planning Number 333/2019 concerning Position Competency Standards within the Ministry of ATR/BPN does not yet regulate the digital competencies that must be mastered by employees. According to the Inspectorate General of the Ministry of ATR/BPN at the 2023 National Working Meeting, the increase in land service performance is also accompanied by misuse of accounts due to a lack of understanding of the importance of digital identity. The limited number of auditors who understand electronic-based service business processes, as well as weak supervision of application security systems have provided opportunities for electronic data manipulation, bypass systems and overlapping land parcels as well as manipulation of electronic data and land parcel areas using the tools available in land service applications. Therefore the role of digital competence is urgently needed in the ministry.

Digital culture is closely related to organizational values as its main heart. It is like oxygen that can be breathed even though it cannot be seen, and we cannot live without it. At this point, the question is why digital culture is important? the answer is because of culture which causes technology to be adopted. A digital culture that is a strong commitment for employees not only has a good impact on the organization, but also for all people who work as stakeholders (Ramaditya, et al., 2022). This study admits that digital successful digital leaders can pay attention to the importance of digital culture and take major steps to maintain it so that the organization remains superior and competitive in marketing (Clarke 2018). Currently, ministry Agraria and Spatial Planning are trying to digitize and adopt digital services by increasing the flexibility and convenience of mobile and active services. Business collaboration is increasingly global, including the presence of workers who can become from anywhere. This can happen as long as they remain connected to a secure internet(Singh and Atwal 2019). On the other hand, new ways of working bring their own challenges, such as guaranteeing employee safety, creating a digital work ethic, and difficulties in monitoring employee performance directly (Shaughnessy 2018). Integrating digital technology into the workplace not only affects employee productivity and creativity, but also creates a different work culture than before. For this reason public organization must be

proactive in adapting work systems to a digital work environment with an organizational culture that is adaptive to technology but still pays attention to fundamental values or norms and beliefs (Bresciani et al., 2021).

An organization's digital transition is facilitated by digital competence, which creates a new culture known as "digital culture." To highlight how crucial it is in determining the kind and caliber of Indonesia's Ministry of Agriculture and Spatial Planning, one must consider the roles of digital competence, digital culture, digital transformation, and digital culture. Additional research is necessary due to certain limitations identified in this study. There was a common bias and generalization amongst variables in this study because it used a cross-sectional methodology and a single data source. Consequently, in order to collect data from several sources, future research should employ a longitudinal approach. Furthermore, to enhance generalizability, a longer-term strategy including a bigger sample size ought to be looked into. (Hinings et al. 2018). This research found that the success of digital transformation really depends on the readiness of human resource competencies and digital transformation includes three stages. The first is digital competence, the second is the application of digital competence in implementing activities and the last is the creativity or innovation produced, as a form of the highest maturity in implementing digital transformation.

However, digital culture in hypothesis 5 and 8 which digital leadership were not positively related to organizational performance and digital competency were not positively related to organizational performance. This view that digital leadership and digital competency was not directly related to organizational performance. This due to current conditions in Ministry of Agraria and Spatial Planning there aren't any yet happened to conduct digital competency and digital leadership in ministry environments.

Conclusions

A new organizational culture known as "digital culture" is created by digital competence, and it is this culture that leads to the organization's digital transformation. To emphasize the significance of digital competence, digital culture, digital transformation, and digital culture in shaping the nature and caliber of Indonesia's Ministry of Agraria and Spatial Planning, one must consider these factors. This work has significant drawbacks that need to be investigated further. This study's cross-sectional design and reliance on a single data source resulted in a shared bias and variable generalization. Thus, in order to collect data from several sources, future research should employ a longitudinal strategy. To further enhance generalizability, a longer-term strategy with a bigger sample size ought to be taken into account.

References

Abualoush, S., Masa'deh, R., Bataineh, K., &Alrowwad, A. (2018). The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organization performance. Interdisciplinary Journal of Information, Knowledge, and Management, 13, 279-309.https://doi.org/10.28945/4088

Armenia, S., Casalino, N., Gnan, L., & Flamini, G. (2021). A systems approach to the digital transformation of public administration. Prospettive in organizzazione, 14. https://doi.org/10.0000/3mp7y-537

Bresciani, S., Huarng, K., Malhotra, A., & Ferraris, A. (2021, May 1). Digital transformation as a springboard for product, process and business model innovation. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2021.02.003

Broomfield, H., & Reutter, L. M. (2021). Towards a Data-Driven Public Administration: An Empirical Analysis of Nascent Phase Implementation. https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2980669

Chandra, T., & P. (2016). The Influence of Leadership Styles, Work Environment and Job Satisfaction of Employee Performance--Studies in the School of SMPN 10 Surabaya. https://eric.ed.gov/?id=EJ1086697

Deschamps, N., Bovis, B., Jonk, G., Gaberman, I., and Aurik, J. C. (2020). The future of change, a new formula for a new era. Chicago, IL: Kearney.

Erhan T; Uzunbacak HH; Aydin E. (2022). From conventional to digital leadership: exploring digitalization of leadership and innovative work behavior. Manag. Res. Rev. 2022. 45: 1524–1543. DOI:10.1108/mrr-05-2021-0338

Gurbaxani, Vijay, Dunkle D. (2019). Gearing up for successful digital transformation. [Internet]. Tersedia pada: https://aisel.aisnet.org/misqe/vol18/iss3/6

Fiaz, M., Su, Q., Ikram, A. and Saqib, A. (2017) Leadership Styles and Employees' Motivation: Perspective from an Emerging Economy. The Journal of Developing Areas, 51, 143-156. https://doi.org/10.1353/jda.2017.0093

Gerster, D., Dremel, C., & Kelker, P. (2018). "Agile Meets Non-Agile": Implications of Adopting Agile Practices at Enterprises. Proceedings of the 24th Americas Conference on Information Systems(AMCIS), New Orleans, LA, USA

Hartl, E., & Hess, T. (2017). The Role of Cultural Values for Digital Transformation: Insights from a Delphi Study. In Twenty-Third Americas Conference on Information Systems (pp. 1-10). https://core.ac.uk/download/pdf/301371796.pdf

Hofmann, S., & Ogonek, N. (2018). Different But Still The Same? How Public And Private Sector Organisations Deal with New Digital Competences. https://academicpublishing.org/index.php/ejeg/article/view/657

Hinings, B., Gegenhuber, T., & Greenwood, R. (2018, March 1). Digital innovation and transformation: An institutional perspective. Information and Organization. https://doi.org/10.1016/j.infoandorg.2018.02.004

Hair, JF, Hult, GTM, Ringle, CM, dan Sarstedt, M. (2017). Sebuah primer tentang pemodelan persamaan struktural kuadrat terkecil parsial (PLS-SEM) , 2nd Edn. Thousand Oaks, CA: Sage Publications Inc.

Loureiro SMC, Japutra A, Molinillo S, Bilro R.G., (2021) Stand by me: analyzing the tourist–intelligent voice assistant relationship quality. Int J Contemp Hosp 33:3840–3859. https://doi.org/10.1108/IJCHM-09-2020-1032

Nasiri, M., Ukko, J., Saunila, M., & Rantala, T. (2020). Managing the digital supply chain: The role of smart technologies. Technovation, 96-97, 102121. https://doi.org/10.1016/j.technovation.2020.102121

Nadkarni S, Prügl R. 2020. Digital transformation: a review, synthesis and opportunities for future research. Management Review Quarterly, 71. https://doi.org/10.1007/s11301-020-00185-7

Vuorikari, R., Punie, Y., Carretero Gomez S., Van den Brande, G. (2016). DigComp 2.0: The Digital Competence Framework for Citizens. Update Phase 1: The Conceptual Reference Model. Luxembourg Publication Office of the European Union. EUR 27948 EN. doi:10.2791/11517

Khan MA, Ismail FB, Hussain A, Alghazali B. 2020. The interplay of leadership styles, innovative work behavior, organizational culture, and organizational citizenship behavior. SAGE Open. 10(1). https://doi.org/10.1177/2158244019898264

Edelmann, N., Mergel, I., & Lampoltshammer, T. J. (2023, February 6). Competences That Foster Digital Transformation of Public Administrations: An Austrian Case Study. Administrative Sciences. https://doi.org/10.3390/admsci13020044

Kindermann, B., Beutel, S., De Lomana, G. G., Strese, S., Bendig, D., & Brettel, M. (2021).

Digital orientation: Conceptualization and operationalization of a new strategic orientation. European Management Journal. https://doi.org/10.1016/j.emj.2020.10.009

Lubis, N. W. (2022). Resource Based View (RBV) in Improving Company Strategic Capacity. Research Horizon, 2(6), 587–596. https://doi.org/10.54518/rh.2.6.2022.587-596

Loureiro SMC, Japutra A, Molinillo S, Bilro R.G., (2021). Stand by me: analyzing the tourist–intelligent voice assistant relationship quality. Int J Contemp Hosp 33:3840–3859. https://doi.org/10.1108/IJCHM-09-2020-1032

Mergel, I., Edelmann, N., & Haug, N. (2019, October 1). Defining digital transformation: Results from expert interviews. Government Information Quarterly. https://doi.org/10.1016/j.giq.2019.06.002

Mansour H, Aminudin E, Mansour T, Adiana Binti Abidin NI, Lou E. 2022. Resource-Based view in construction project management research: a meta-analysis. IOP Conference Series: Earth and Environmental Science. 1067(1): 012057. https://doi.org/10.1088/1755-1315/1067/1/012057

Nwankpa, J. K., & Roumani, Y. (2016). IT capability and digital transformation: A firm performance perspective. 2016 International Conference on Information Systems, ICIS 2016.

RamadityaM., MaarifM. S., AffandiM. J., & SukmawatiA. (2022). Private Higher Education Development Strategy in Indonesia in Facing an Era of Change. Jurnal Aplikasi Bisnis Dan Manajemen (JABM), 8(3), 793. https://doi.org/10.17358/jabm.8.3.793

RamadityaM., EffendiS., & SyahraniN. A. (2023). Does Toxic Leadership, Employee Welfare, Job Insecurity, and Work Incivility Have an Impact On Employee Innovative Performance at Private Universities in LLDIKTI III Area?. Jurnal Aplikasi Bisnis Dan Manajemen (JABM), 9(3), 830. https://doi.org/10.17358/jabm.9.3.830

Ramaditya, M., Maarif, M. S., Affandi, J., & Sukmawati, A. (2022). Reinventing talent management: How to maximize performance in higher education. Frontiers in Education, 7. https://doi.org/10.3389/feduc.2022.929697

Ramaditya M, Effendi S and Burda A (2023) Survival and human resource strategies of private higher education in facing an era of change: Insight from Indonesia. Front. Educ. 8:1141123. doi: 10.3389/feduc.2023.1141123

Jedynak M, Czakon W, Kuźniarska A, Mania K. (2021). Digital transformation of organizations: what do we know and where to go next? Journal of Organizational Change Management. 24. https://doi.org/10.1108/JOCM-10-2020-0336

Saleh A, Awny MM. (2020). Digital transformation strategy framework. Paper presented at the 29th International Conference of the International Association for Management of Technology: Towards the Digital World and Industry X.0, IAMOT 2020.

Soane, E., Butler, C., & Stanton, E. (2015, March 9). Followers' personality, transformational leadership and performance. Sport, Business and Management. https://doi.org/10.1108/sbm-09-2011-0074

Singh Y. (2019). Digital culture-a hurdle or a catalyst in employee engagement. International Journal of Management Studies 6: 54–60. https://doi.org/10.18843/ijms/v6i1(8)/08

Rumata, V.M.& Nugraha, D.A. (2020). Rendahnya tingkat perilaku digital ASN kementerian kominfo: Survei literasi digital pada instansi pemerintah. Jurnal Studi Komunikasi, 4(2). doi: 10.25139/jsk.v4i2.2230

Rinata, M., S., Putra, A., & Goh, T. S. (2022, July 18). The Influence Of Organizational Culture And Communication On Work Conflicts Of Employees At Pt.Nagamas Agro Mulia Medan. iocscience.org. https://doi.org/10.35335/mantik.v6i2.2643

Rudito P, Sinaga M. (2017). Digital Mastery Membangun Kepemimpinan Digital Untuk Memenangkan Era Disrupsi. Jakarta. (ID): Gramedia Pustaka Utama

Rupeika-Apoga, R., Буле, & Petrovska, K. (2022, January 20). Digital Transformation of Small and Medium Enterprises: Aspects of Public Support. Journal of Risk and Financial Management. https://doi.org/10.3390/jrfm15020045

Warner K, Wäger M. (2018). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. Long Range Planning, 52. https://doi.org/10.1016/j.lrp.2018.12.001

Tortorella, G., Narayanamurthy, G., Godinho Filho, M., Portioli Staudacher, A. and Mac Cawley, A.F. (2021), "Pandemic's effect on the relationship between lean implementation and service performance", Journal of Service Theory and Practice, Vol. 31 No. 2, pp. 203-224. https://doi.org/10.1108/JSTP-07-2020-0182

Wang, T., Li, C., Yuan, Y., Liu, J., & Adeleke, I. B. (2019, July 1). An evolutionary game approach for manufacturing service allocation management in cloud manufacturing. Computers & Industrial Engineering. https://doi.org/10.1016/j.cie.2019.05.005

Westerman G, Mc-Afee A. (2012). The Digital Advantage: How Digital Leaders Outperform Their Peers In Every Industry. Capgemini Consulting.

Zeike S, Bradbury K, Lindert L, Ptaff H. (2019). Digital leadership skills and associations with psychological well-being. Int J Environ Res Public Health. 16(14): 2628. DOI:10.3390/ijerph16142628