OFFICIALS' PERFORMANCE IN THE DIGITAL TRANSFORMATION OF GOVERNMENT: DO WE EXPECT TOO MUCH?

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This study analyzes the influence of E-government, Digital Competence, and Digital Transformation on officials' Performance at the Ministry of Communication and Information Technology of the Republic of Indonesia. The research method was quantitative empirical research using a survey, combined with interviews and observation. The measurement scale used ordinal data. Partial Least Square - Structural Equation Modeling (PLS-SEM) method was applied using SmartPLS 3 in analyzing the data. This study shows that E-government and Digital Competence affect Performance through Digital Transformation as a mediating variable. Digital Transformation partially mediates the influence of E-government on Performance. On the other hand, Digital Transformation has fully mediated the influence of Digital Competence on Performance. Digital competence is considered part of digital transformation. Government officials' performance tends to increase due to enforced policy (e-government and digital transformation of government), not because of their inner motivation (digital competence). This study fills the knowledge gap of government officials' performance to represent the organization's ability to deliver high-value and real-time services in a disruptive era.

*Keywords***:** E-government, Digital Competence, Digital Transformation, Performance

JEL Classifications: M0, O3

Digital transformation occurs in almost all countries in this era of technological disruption. Digital transformation is about improving software and hardware devices and human resources' digital capabilities in an organization.

The success of the government's digital transformation is influenced by digital technology and human resources empowerment. The question needs to be answered: Is the workforce of Government organizations indeed activated to innovate and drive digital transformation? The concept of digital transformation is not about robots that carry out organizational activities automatically, but rather the existence of culture, trust, and shared management control supported by digital human resource competencies.

Initially, the government's digital transformation was designed as an e-government project with a measurable start and end date, defined final status, and a fixed budget. Today, the government's digital transformation is considered an ongoing process with no final status. Digital transformation is a process that continually requires adjusting processes, services, and products for external needs, resulting in increased relations between public administration and stakeholders, citizen satisfaction, and changes in bureaucratic culture (Mergel et al., 2019).

Various studies related to digital transformation in Indonesian government organizations have been carried out. Research shows that implementing e-government policies influences Indonesian government officials (e.g., Kurniasih et al., 2013; Primasari, 2017). Meanwhile, previous research conducted by Oktari & Nasir (2011) concludes that information technology did not affect government agencies' performance. These studies only examine government organizations at the district level. Another variable, such as digital-divide, might have a role in this inconclusive outcome, given the study area's relatively rural location. Research is needed at the central government organization's level as an umbrella for digital transformation for the lower levels, such as provinces and regencies/cities.

The descriptive study conducted by Rumata & Nugraha (2020) shows that e-government implementation in the Ministry of Communication and Information Technology has stagnated or does not develop due to limited human resources. E-government is only limited to administrative functions, i.e., changing the system from analog to digital. The use of information systems has not been optimal nor integrated (Rumata & Nugraha, 2020). Although efforts to examine e-government implementation in the state scope, especially at the Ministry of Communication and Information Technology, Rumata & Nugraha's research (2020) was only a descriptive study using a survey method. Given these findings, the current study is interested and considers it essential to analyze the influencing factors further.

The current research analyzes the causal relationship of the E-government, Digital Competence, and Digital Transformation variables that might affect government officials' performance at the Ministry of Communication and Information Technology. The Ministry of Communication and Information Technology is expected to be the center of Information and Technology (IT) experts because it determines digital transformation policies in similar departments at the provincial and regency/city levels. Therefore, the current research intends to fill the knowledge gap of government officials' performance to represent the organization to deliver high-value and real-time services in Indonesia's disruptive era.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The Relationship between E-government and the Government's Digital Transformation

E-government is the application of information technology in producing and providing government services (Moon, 2002). Kumar & Best (2006) defines e-government as a system of using information and communication technology in the public sector to improve operations and

provide services. Changing the system from analog to digital by utilizing digital technology in the public service sector implemented through e-government can impact the government's digital transformation. The government's digital transformation is influenced by external drivers, such as using new technology by public administration stakeholders (Mergel et al., 2019).

The qualitative research conducted by O'Neill (2009) in New Zealand illustrates the transformative impact of implementing e-government. The application of e-government creates a new approach for government in service delivery and governance. However, that research was exploratory by relying on the interview method to see the two variables' relationship. Further research is needed to see how much influence e-government has on the government's digital transformation. Mahmood (2019) shows that e-government positively affects the government's digital transformation in European countries. As a comparison between countries, this current study aims to quantitatively measure e-government's effect on digital transformation in the Ministry of Communication and Information Technology of the Republic of Indonesia. The first hypothesis of this research is:

H1: E-government positively affects Digital Transformation.

The Relationship Between Digital Competence and the Government's Digital Transformation

There are two approaches regarding digital competence: the first, based on an individual approach, and the second, based on an organizational approach. The first view states that digital competence is a specific ability that a person has, according to their field of work (Periáñez-Cañadillas et al., 2019), to effectively carry out tasks in a digital environment (Jones-Kavalier & Flannigan, 2006). These competencies include information and data literacy, communication and collaboration; digital content creation; safety; and problem-solving (Ferrari, 2013).

Meanwhile, the concept of digital competence from an organizational perspective is more political because it reflects future beliefs and needs (Ilomäki et al., 2016). The idea of digital competence also includes skills policies related to technological developments and the expectations of public knowledge (Ilomäki et al., 2016).

According to Martin & Grudziecki (2006), there are three stages of a person's digital literacy. The initial stage is digital competence. The second stage is the application of digital competence in daily life, and the last stage is what is known as digital transformation. The theory proposed by Martin & Grudziecki (2006) illustrates the existence of a relationship between individual digital competencies, which then becomes a culture in the organization. The digital culture becomes the organization's digital transformation.

According to Kwon & Park (2017), there are 4 (four) factors that influence digital transformation in an organization, namely human resources, technology, linkages between IT and business strategy, and digital leadership. Mergel et al. (2019) then summarize the factors that affect digital transformation into only two groups: human resources and technology. Sousa

& Rocha (2019) describe digital competence as a new trend in developing human resource capabilities. This trend is an adaptation of the development of digital technology. Therefore, digital transformation is about software and hardware and the capabilities of human resources. This study aims to test the concept of digital competence, which is assumed to affect the government's digital transformation. The second hypothesis of this research is:

H2: Digital Competence positively affects Digital Transformation

The Relationship Between E-government and Officials' Performance

Technology is a supporting factor affecting performance (Valentine et al., 2020). E-government creates a new form of relationship, one of which is the Government to Employees/Officials (G2E) as an interactive relationship between government officials to improve their performance and welfare. Indrajit (2005) describes e-government as an effort to enhance government officials' performance and interest in various agencies as public servants.

Primasari (2017) found the positive influence of implementing the regional financial information system (fintech) on performance. This result is in line with a study by Kurniasih et al. (2013) that shows a significant influence of e-government policies implementation on officials' performance. The better the implementation of e-government policies, the better the understanding of the government's officials. Given these findings, the relationship between e-government and government officials' performance is presumably causal. The third hypothesis of this research is:

H3:E-government positively affects Performance

The Relationship Between Digital Competence and Officials' Performance

People's competencies are different and shaped by their expertise, both intellectually and physically. Personal competence in doing work is a significant factor affecting performance (Valentine et al., 2020). According to Spencer & Spencer (1993), superior performance and business profits are influenced by competence. Yu & Ko (2017) show that communication competence has a positive effect on performance.

In education, Yazon et al. (2019) show that academics' digital competence is significantly related to their research productivity. From (2017) develops the concept of Pedagogical Digital Competence (PDC), defined as "the ability to consistently apply the attitudes, knowledge, and skills required to plan and conduct, and to evaluate and revise on an ongoing basis, ICT-supported teaching, based on theory, current research and proven experience with a view to supporting students' learning in the best possible way." In this case, From (2017) views digital competence as a work culture in an organization, rather than just digital skills possessed by individuals.

Only a few studies specifically explore the relationship between digital competence and official performance in government. Is this because digital competence is considered part of

digital transformation? Digital competence is viewed as a work culture. Thus, it is necessary to study two alternative levels of relationship between digital competence; either digital competence directly affects the performance or indirectly affects performance through digital transformation. The fourth hypothesis of this research is:

H4: Digital Competence positively affects Performance

The Relationship between the Government's Digital Transformation and Officials' Performance

An organization needs to consider digital transformation as a comprehensive organizational approach. Digital transformation should be accompanied by a cultural shift that trusts and empowers workers to utilize technology to create value.

Digital transformation has disrupted various human activities, causing the emergence of new human resource problems that impact official performance to increase organizational effectiveness and efficiency (Mergel et al., 2019). The emphasis of digital transformation is a change in corporate and relational culture to obtain different outcomes (Mergel et al., 2019). In line with Mahmood (2019) research, it shows that the government's digital transformation positively affects performance. The variables assumed to influence digital transformation, i.e., e-government and digital competence, have been discussed in the previous sections. The fifth hypothesis of this research is:

H5: Digital Transformation Positively affects Performance

The Relationship Among E-government, Digital Competence, Government's Digital Transformation, and Officials' Performance

Causal analysis research by considering various variables affecting digital human resource (HR) performance was carried out by Mahmood (2019) in European countries. E-government, technology, expectations, transparency, and accountability that affect citizen confidence and trust in government were mediated by three intervening variables: digital transformation, performance, and citizen satisfaction (Mahmood, 2019). One of the crucial findings show that e-government positively affects the government's digital transformation, and digital transformation positively affects perceptions of government performance.

In Indonesia, empirical research has never been conducted to analyze the causal relationship between several variables assumed to affect official performance, especially those related to digital transformation. The literature so far only describes the relationships between e-government and digital transformation, e-government and performance, digital competence and digital transformation, and digital transformation and performance. When there have been no such simultaneous studies considering the mediating variable or received limited attention in prior literature, then it is necessary to explore the possibility of such a variable (Bala et al., 2019; Raheja & Dhiman, 2019).

Digital transformation is considered as a necessary factor that mediates the influences of E-government and Digital Competence to Performance. The sixth hypothesis of this research is:

H6:E-government and Digital Competence positively affect Performance with Digital Transformation as a mediating variable

The Empirical Model

The empirical model of this study is illustrated in Figure 1.
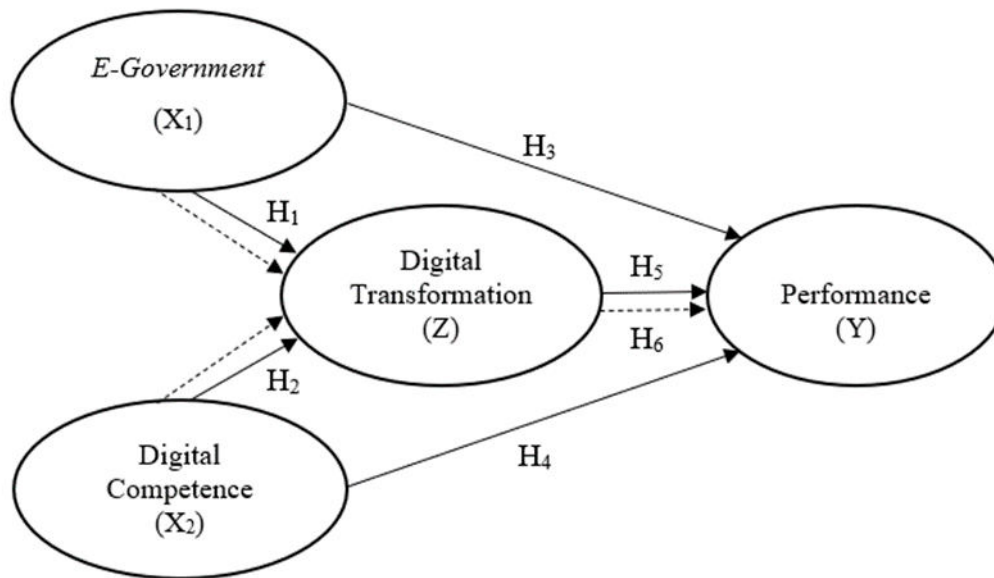
Figure 1.   **Empirical model**

RESEARCH METHODOLOGY

In this study, respondents were all government officials in the Human Resources Research and Development Agency of the Ministry of Communication and Information Technology, Republic of Indonesia, totaling 110 persons from all work units and led by four agency heads. Thus, the total respondents were 114 people (Table 1).

Table 1. *Research Respondents*

No.	Work Unit	Number of government officials
1.	Head of Agency	4 persons
2.	Center for Research and Development of Resources, Equipment, and Implementation of Post and Information Technology (Puslitbang SDPPPI)	28 persons
3.	Center for Research and Development of Informatics Application & Public Communication and Information (Puslitbang Aptika & IKP)	25 persons

4.	Professional Development and Certification Center (Pusbag Proserti)	26 persons
5.	Education and Training Center (Pusdiklat)	31 persons
	TOTAL	114 persons

Source: The Human Resources Research and Development Agency of the Ministry of Communication and Information Technology of the Republic of Indonesia, 2018

Data collection methods used in this study were surveys, interviews, and observations. The measurement scale in this study used ordinal data. The data analysis method used in this study was Partial Least Square (PLS). Analysis of the PLS method by SmartPLS 3.0 was conducted in three stages, i.e., outer model analysis, inner model analysis, and hypotheses testing. The evaluation carried out on this outer model includes validity testing consisting of convergent validity and discriminant validity.

Research Variables and Questionnaires

Respondents completed online questionnaires comprised of E-government, Digital Competence, and Digital Transformation. The superiors (agency heads) completed the Performance online questionnaire to assess their employees' performance.

The exogen variables in this study were E-government (X1) and Digital Competence (X2). E-government (X1) is a system of using information and communication technology in the public sector to improve operational efficiency and provide quality services to create trust, reliability, and public support. The dimensions of the E-government measurement were the quality of website services. The indicators used to measure E-government in this study refers to the eGovQual method (Papadomichelaki & Mentzas, 2012), namely efficiency, trust, reliability, and citizen support.

Because this study measured individual performance, the concept of Digital competence refers to personal digital skills. In this case, the operational definition of Digital competence (X2) is a specific ability to follow his / her field of work (Periáñez-Cañadillas et al., 2019). These competencies include information and data literacy, communication and collaboration; digital content creation; safety; and problem-solving (Ferrari, 2013).

The mediating variable in this study was Digital transformation (Z). Digital transformation is an adaptation of an ongoing change process due to being disrupted by digital technology to improve government performance. Referring to Mergel et al. (2019), this study used six digital transformation indicators: digitization of processes, digitization of physical documents, digitization of work relationships, digitization of services, use of new technology, and development of new competencies.

The endogenous variable in this study was the Performance of government officials (Y). Government officials' performance referred to work performance, qualitatively and quantitatively, as part of their duties and responsibilities to accomplish the target program. The

indicators used to measure government officials' performance in this study were the quality of work, work commitment, work initiatives, and cooperation.

RESULTS AND DISCUSSIONS

Descriptive Analysis

The respondents' characteristics based on gender with the male percentage were 32.56%, while the female percentage was 67.54%. The most considerable portion of respondents aged 25 - 34 years was 50%, followed by 35 - 44 years old at 28.07%. The respondents' age data show most of the officials at the Research and Development Agency for Human Resources of the Ministry of Communication and Information Technology were in the productive age.

The most percentage of the respondent's education level was the Bachelor degree at 56.14%, followed by the Master's degree of 31.58%. Bachelor's degree education level is the minimum education standard determined by the State Civil Service Agency (BKN) in recruiting State Civil Service (government officials). Considerately officials with an undergraduate education can obtain and analyze information relating to their duties, thus improving their performance.

The respondents' percentage of working tenure was at most 5 - 9 years at 52.63%, followed by the working term's portion less than five years at 22.81%. Therefore, most respondents had a working tenure of fewer than ten years. The highest percentage of respondents' positions were functional/technical officials at 79.82%, followed by structural officials' rate at 20.28%.

The Validity of Test Results

The measurement model's convergent validity can be assessed by the loading factor and Average Variance Extracted (AVE) values. All loading factor of indicators were valid ranged from 0.703 - 0.788. Table 2 shows the AVE values of the variables.

Table 2. *Average Variance Extracted (AVE)*

Variables	Average Variance Extracted (AVE)	The square root of AVE
E-government	0.530	0.728
Digital Competence	0.512	0.715
Digital Transformation	0.564	0,751
Performance	0.574	0.757

Based on Table 2, all variables have an AVE above 0.5. Thus, the variables have good convergent validity, i.e., each variable can explain an average of more than half its indicators' variance. Additionally, this study assessed the discriminant validity using the Fornell Larcker criteria (Table 3) and the cross-loading values.

Table 3. *The Estimation of Discriminant Validity using Fornell Larcker Criteria*

	E-government	Digital Competence	Digital Transformation	Performance
E-government	0.728			
Digital Competence	0.711	0.715		
Digital Transformation	0.669	0.638	0.751	
Performance	0.653	0.595	**0.754**	0.757

As shown in Table 3, the AVE square root value of the Digital Transformation on Performance is 0.754, which has a greater value than the AVE square root value of the Digital Transformation variable itself, 0.751. By removing the smallest loading factors of the Digital Transformation indicator (Z4) and the Performance indicator (Y2), all variables in the study met the criteria for discriminant validity (Table 4).

Table 4. *The Re-estimation of Discriminant Validity using Fornell Larcker Criteria*

	E-government	Digital Competence	Digital Transformation	Performance
E-government	0.728			
Digital Competence	0.711	0.715		
Digital Transformation	0.672	0.641	0.759	
Performance	0.663	0.597	0.747	0.767

Table 5 shows that each variable indicator has a greater cross-loading value than other variables' cross-loading value. These findings indicate that all variables have good discriminant validity.

Table 5. *The Cross Loading Value*

Indicators	E-government	Digital Competence	Performance	Digital Transformation
X1.1	**0,718**	0,497	0,440	0,475
X1.3	**0,713**	0,513	0,541	0,489
X1.4	**0,742**	0,513	0,514	0,530
X1.5	**0,714**	0,511	0,505	0,548
X1.6	**0,714**	0,475	0,541	0,515
X1.7	**0,718**	0,549	0,470	0,471
X1.8	**0,765**	0,527	0,459	0,474
X1.9	**0,740**	0,446	0,459	0,442
X1.10	**0,708**	0,476	0,489	0,453
X1.11	**0,763**	0,621	0,504	0,564

X1.13	**0,725**	0,479	0,439	0,524
X1.14	**0,710**	0,564	0,382	0,411
X1.15	**0,730**	0,554	0,488	0,428
X2.1	0,488	**0,722**	0,449	0,440
X2.2	0,478	**0,708**	0,392	0,406
X2.3	0,499	**0,707**	0,365	0,511
X2.4	0,518	**0,754**	0,414	0,464
X2.5	0,542	**0,713**	0,459	0,457
X2.6	0,499	**0,712**	0,430	0,506
X2.7	0,541	**0,717**	0,372	0,419
X2.8	0,564	**0,711**	0,436	0,458
X2.9	0,536	**0,706**	0,421	0,384
X2.10	0,594	**0,703**	0,446	0,491
X2.11	0,510	**0,707**	0,406	0,419
X2.12	0,413	**0,713**	0,491	0,529
X2.13	0,509	**0,722**	0,479	0,475
X2.14	0,433	**0,717**	0,401	0,418
Y1	0,387	0,344	**0,723**	0,547
Y3	0,590	0,539	**0,794**	0,627
Y4	0,485	0,459	**0,736**	0,527
Y5	0,542	0,570	**0,801**	0,605
Y6	0,520	0,470	**0,802**	0,569
Y7	0,439	0,341	**0,718**	0,550
Y8	0,569	0,452	**0,791**	0,581
Z1	0,508	0,481	0,612	**0,752**
Z2	0,543	0,448	0,515	**0,750**
Z3	0,567	0,549	0,617	**0,780**
Z5	0,452	0,395	0,503	**0,747**
Z6	0,447	0,404	0,581	**0,789**
Z7	0,519	0,478	0,575	**0,747**
Z8	0,519	0,617	0,549	**0,744**

Reliability Test

Table 6 shows the reliability test results of all variables.

Table 6. *Results of Reliability Test*

Variable	Cronbach's Alpha	Composite Reliability
E-government	0.926	0.936
Digital Competence	0.927	0.936
Performance	0.883	0.909
Digital Transformation	0.877	0.905

The value of composite reliability for E-government is 0.936; Digital Competence is 0.936; Performance is 0.909; and Digital Transformation is 0.905. All variables obtained composite

reliability values more than 0.7 and above Crobach's alpha value. Thus all variables are reliable (Table 6).

Evaluation of Inner Model (Structural Model)

The evaluation of the inner model analyzes whether the model was robust or otherwise. Various indicators to assess the inner model were coefficient of determination (R-square), predictive relevance (Q^2), and Goodness of Fit Index (GoF).

The coefficient of determination (R-square) measures how much other variables influence the endogenous variable. Table 7 shows the coefficient of determination (R-square) of the inner model is categorized as moderate to substantial because the coefficient of determination (R-square) is in the range of 0.5. The Digital Transformation variable (Z) has an R-square value of 0.506, meaning that the E-government (X1) and Digital competence (X2) variables could explain the Digital transformation by 0.506 or 50.6%. The Performance (Y) variable has an R-square value of 0.608, meaning that the variability of the E-government (X1), Digital Competence (X2), and Digital Transformation (Z) variables could explain the Performance (Y) by 0.608 or 60.8 %.

Table 7. *Value of the Coefficient Determination (R-square)*

Variable	R- square	Interpretation
Digital Transformation	0.506	Moderate
Performance	0.608	Moderate

In addition to R-square, this study used predictive relevance (Q^2) to evaluate the inner model (structural model). This study obtained a Q^2 of 0.806, which indicates a highly predictive model (Latan & Ghozali, 2012).

The Goodness of Fit (GoF) index determines the inner model's overall predictive power (structural model). The GoF index is bounded between 0 and 1 (Akter et al., 2011). Wetzels et al. (2009) propose using 0.50 as the cut-off value for communality (Fornell & Larcker, 1981). This current study obtained a GoF value of 0.551, indicating a good model. Based on the R-square, $Q^{2,}$ and GoF values described above, this study's inner model (structural model) is robust so that that research hypotheses testing can be carried out.

Hypotheses Testing

Table 8 shows the path coefficient values of all variables are within the 0 to 1 range. Therefore, E-government and Digital Competence have positive effects on Digital Transformation. Likewise, E-government, Digital Competence, and Digital Transformation have positive effects on Performance.

Table 8. *Path Coefficients*

Variable	Digital Transformation	Performance
E-government	0.439	0.250
Digital Competence	0.329	0.082
Digital Transformation		0.526

The bootstrapping procedure tested the mediation effect of Digital Transformation in the inner model (structural model). Table 9 shows all predictive effects (direct and indirect effects) of exogenous variables on endogenous variables.

Table 9. *Results of Total Effect (Direct and Indirect)*

Variables	Path Coeff.	SD	t-test	p-value
E-government (X1) → Digital Transformation (Z)	0.439	0.102	4.302	0.000
Digital Competence (X2) → Digital Transformation (Z)	0.329	0.107	3.086	0.002
E-government (X1) → Performance (Y)	0.481	0.101	4.782	0.000
Digital Competence (X2) → Performance (Y)	0.255	0.103	2.478	0.013
Digital Transformation → Performance (Y)	0.526	0.105	4.987	0.000

Table 9 shows that all variables have a t-statistic value> 1.96 and a p-value <0.05. In the addition of the mediating variable (Digital Transformation), both exogenous variables (E-government and Digital Competence) have positive and significant effects on the endogenous variable (Performance).

Table 10 illustrates the values of the direct and indirect effects of the exogenous variables E-government and Digital Competence through Digital Transformation on Performance. Row 3 shows the path coefficient value of E-government to Performance (the direct effect) of 0.250 is greater than the path coefficient value of the indirect effect (through Digital Performance) of 0.231 (row 6). The decrease in the path coefficient value is due to the Digital Transformation addition as a mediating variable.

Table 10. *Results of Direct and Indirect Effects of Exogenous Variables*

No	Variables	Path Coeff.	SD	t-test	p-value
	Direct Effect				
1	E-government (X1) → Digital Transformation (Z)	0.439	0.102	4.302	0.000

2	Digital Competence (X2) → Digital Transformation (Z)	0.329	0.107	3.086	0.002
3	E-government (X1) → Performance (Y)	0.250	0.088	2.849	0.004
4	Digital Competence (X2) → Performance (Y)	0.082	0.089	0.930	0.353
5	Digital Transformation → Performance (Y)	0.526	0.105	4.987	0.000
	Indirect Effect				
6	E-government (X1) → Digital Transformation (Z) → Performance (Y)	0.231	0.073	3.182	0.001
7	Digital Competence (X2) → Digital Transformation (Z) → Performance (Y)	0.173	0.068	2.541	0.011

E-government's direct effect on Performance with a t-test of 2.849> 1.96 and p-value 0.004 <0.05 indicates a significant positive effect (Table 10 row 3).   Back to Table 9, E-government's total effect on Performance has a t-test of 4.782>1.96; the p-value of 0.000 <0.05 also indicates a significant positive effect. The result means no significant change in either the direct effect or the total effect after adding the mediating Digital Transformation variable. This mediation model is called partial mediation, where Digital Transformation only mediates some of the effects of E-government on Performance. Thus, E-government can directly influence Performance with or without involving Digital Transformation as a mediating variable.

Table 10 shows the direct effect of Digital Competence on Performance, which path coefficient value of 0.082 (row 4) is smaller than the indirect effect of Digital Competence on Performance through Digital Transformation with a path coefficient value of 0.173 (row 7). These findings were due to the addition of Digital Transformation as the intervening/mediating variable. Digital Competence's direct influence on Performance with a t-test of 0.930 <1.96; the p-value 0.353> 0.05 indicates a positive but insignificant effect. Whereas in Table 9, after the addition of Digital Transformation as a mediating variable, the Digital Competence to Performance has t-test 2.478> 1.96; p-value 0.013 <0.05 indicates a significant positive effect. This suggests a change in Digital Competence on Performance from insignificant to significant due to a mediating variable, the Digital Transformation. This mediation model is full mediation, where Digital Transformation mediates all the effects of Digital Competence on Performance. Hence, Digital Competence cannot significantly influence Performance without going through Digital Transformation as a mediating variable.   Table 11 summarizes the research hypotheses results

Table 11. *Research Hypotheses Testing Results*

Hypotheses	Results
H1 E-government affects Digital Transformation	Accepted
H2 Digital Competence affects Digital Transformation	Accepted
H3 E-government affects Performance	Accepted
H4 Digital Competence affects Performance	Rejected

| H5 | Digital Transformation affects Performance | Accepted |
| H6 | E-government and Digital Competence affect Performance through Digital Transformation | Accepted |

DISCUSSION

The Effect of E-government on Digital Transformation

The result of testing the first hypothesis (H1) in this study indicates that E-government (X1) has a positive and significant effect on Digital Transformation (Z). The interpretation is that the better the implementation of E-government at the Research and Development Agency for Human Resources of the Ministry of Communication and Information Technology, the organization's digital transformation process will increase.

E-government implements information technology policies to produce and provide government services that change analog systems to digital, thus influence the government's digital transformation (Moon, 2002). The quality of website services is the basis for measuring the implementation of e-government in the Ministry of Communication and Information Technology, having its indicators of efficiency, trust, reliability, and citizen support.

The acceptance of the first hypothesis (H1) supports O'Neill's (2009) research findings, which describes the transformative impact of implementing e-government. The application of e-government creates a new approach for the government in providing services and governance. In other words, e-government influences the government's digital transformation.

The Effect of Digital Competence on Digital Transformation

The results of testing the second hypothesis (H2) in this study indicate that there is a positive effect of Digital Competence (X2) on Digital Transformation (Z). Therefore, the better the digital competence of officials, the better the organization's digital transformation process will be.

Digital competence is a specific ability possessed by a person according to their field of work (Perianez et al., 2019) in using digital tools and facilities appropriately (Martin & Grudziecki, 2006) that impact digital transformation. Competencies on acquiring information and data literacy are the most critical aspects of improving officials' digital competence. These aspects are essential for the officials because most of their activities use digital media such as browsing, news, and content evaluation to manage digital data.

The Effect of E-government on Performance

E-government (X1) has a positive and significant effect on Performance (Y). E-government is a form of utilization of information and communication technology that affects performance (Valentine et al., 2020). Kumar & Best (2006) define e-government as a system of using

information and communication technology in the public sector to improve operations and provide services. In this study, government officials' performance indicators were work quality, work commitment, work initiatives, and cooperation. Work quality is an essential aspect of performance appraisal to improve government officials' performance.

The acceptance of the third hypothesis (H3) supports research conducted by Pertiwi & Nurhikmah (2018), Primasari (2012), and Kurniasih et al. (2013). The prior research found a significant influence of implementing E-government policies on Indonesian officials' performance, where the better the implementation of E-government policies, the better the performance would be.

The Effect of Digital Competence on Performance

The results of testing the fourth hypothesis (H4) in this study indicate that Digital Competence (X2) has a positive but insignificant effect on Performance (Y). The officials' digital competence has not been developed as a professional mindset and action in properly doing a job and improving performance. The most dominating Digital Competency indicators in this study were information and data literacy. These indicators show that digital competence is limited to carrying out activities in finding information and digital data literacy. Apart from these tasks, there are still many other tasks evaluated by superiors for government officials, so it could be that their digital competence, which relates to individual skills, is only a small part of the performance appraised by superiors. As a result, there is no difference in whether the official possesses high or low digital competence since their superiors evaluated their general performance.

The rejection of hypothesis (H4) supports the theory put forward by Martin & Grudziecki (2006), which states that the first stage of digital literacy is individual digital competence. When digital competence is utilized daily, it becomes a digital culture that will transform an organization into a digitized one (digital transformation). The theory proposed by Martin & Grudziecki (2006) illustrates the existence of a strong relationship between individual digital competence and digital transformation. It is logical and acceptable when the government's digital transformation fully mediates the relationship between officials' digital competence and performance. Therefore, digital competence is considered part of digital transformation.

The Effect of Digital Transformation on Performance

The results of testing the fifth hypothesis (H5) in this study indicate a directional influence of Digital Transformation on Performance, where Digital Transformation (Z) has a positive and significant effect on Performance (Y). The interpretation is that with the more substantial digital transformation, the government officials' performance will increase.

Digital transformation describes business management changes to digital by more technology usage (Legner et al., 2017). The digitization of work relationships is the most crucial aspect affecting the digital transformation process at the Research and Development Agency of the

Ministry of Communication and Information Technology. The digitization of work is due to the changes in work interactions between officials, which became more indirect interactions through digital media intermediaries—thereby disrupting officials' work activities to transform digitally and improve government officials' performance. The acceptance of the fifth hypothesis (H5) supports previous research conducted by Mahmood (2019), which shows that the government's digital transformation positively affects performance.

The Effect of E-government and Digital Competence on Performance through Digital Transformation

The mediation effect test results have proven that the Digital Transformation variable (Z) acts as a mediator that mediates exogenous variables' effect on an endogenous variable. In terms of the influence of E-government (X1) on government officials' Performance (Y), the Digital Transformation variable's role is a partial mediation. When there was a Digital transformation variable in the research model, the results showed a significant positive effect of E-government (X1) on Performance (Y). E-government (X1) can directly influence the Performance (Y) without going through or involving Digital Transformation (Z) as a mediating variable.

Meanwhile, on the influence of Digital Competence (X2) on Performance (Y), the role of Digital Transformation is a total mediation. Digital Competence (X2) has a positive but insignificant effect on Performance (Y). After adding the Digital Transformation variable, the results obtained turn out to be a positive and significant indirect effect of Digital Competence (X2) on Performance (Y). Hence, the Digital Competence (X2) variable did not significantly influence Performance (Y) without going through Digital Transformation (Z) as a mediating variable. Therefore, it is necessary to add a Digital Transformation variable (Z) which mediates all the effects of Digital Competence (X2) on Performance (Y).

The acceptance of the sixth hypothesis (H6) supports the results of previous research conducted by Mahmood (2019), which shows that e-government positively affects performance through digital transformation as an intervening variable.

CONCLUSION

This study's findings indicate that E-government and Digital Competence affect Performance through Digital Transformation as a mediating variable. The influence of E-government on Performance is only partially mediated by Digital Transformation. E-government can directly affect performance and indirectly affect performance through digital transformation. On the other hand, Digital Competence on Performance was fully mediated by the Digital Transformation. Digital competence is considered part of digital transformation. Thus, government officials' performance tends to increase due to enforced policy (e-government and the government's digital transformation), not because of their inner motivation (digital competence).

LIMITATION AND STUDY FORWARD

This study has several limitations. The scope of this research is only limited to government officials in the Research and Development Agency for Human Resources of the Ministry of Communication and Information Technology of the Republic of Indonesia. Future research should involve several samples from various ministries so that Indonesian government officials' readiness in the era of technological disruption is clearly illustrated.

The performance questionnaire measured a rather general performance aspect, not specifically Information Technology (IT performance. Therefore, it might bias the relation between digital competence and performance. Another limitation is that this study only explores the views of the ministry's officials. Future research should measure other stakeholders' perceptions, including B2B and citizens, on implementing e-government, the ministry's digital competence, and ultimately assessing the relevant ministries' performance. Future research should also include psychological variables that measure official motivation and the need for achievement. Thus, factors that affect official performance in the digital era can be better understood. Furthermore, the theoretical definition of digital competence needs to be emphasized. When used as an operational definition of research and derived through its indicators, it can measure competence organizationally, not just individual digital skills, especially when digital competence is viewed as a work culture.

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