





“Discovering citizen’s reaction toward e-government adoption: The role of uncertainty avoidance”

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DISCOVERING CITIZEN'S REACTION TOWARD E-GOVERNMENT ADOPTION: THE ROLE OF UNCERTAINTY AVOIDANCE

Abstract

One of the leading indicators of how well an e-government system is being implemented is how much citizen acceptance of e-government has increased. Thus, this study looks at social and psychological traits and uncertainty avoidance as moderating factors to identify the factors influencing Indonesian citizens' adoption of e-government. SEM-PLS was utilized for data analysis. An online survey with measurement questions tailored to 520 respondents was used to gather data for the proposed model's quantitative validation. A purposive sampling approach based on self-selection was used in this study. The analysis findings show that citizens' intents as end users of e-government systems are significantly and positively impacted by the influence of compatibility ($\beta = 0.265$; $p < 0.05$), relative advantage ($\beta = 0.482$; $p < 0.05$), and trust in e-government websites ($\beta = 0.243$; $p < 0.05$). On the other hand, complexity ($\beta = -0.293$; $p < 0.05$) significantly and negatively affects their intention to use the system. Additionally, the connection between relative advantage ($\beta = 0.213$; $p < 0.05$), complexity ($\beta = 0.294$; $p < 0.05$), compatibility ($\beta = 0.275$; $p < 0.05$), and propensity to use e-government was found to be moderated by uncertainty avoidance. Encouraging citizens to use e-government will aid the Indonesian government by increasing individuals' experience with the system and potentially lowering their perception of its hazards.

Keywords

e-government, technology acceptance model, diffusion of innovation, trust, Indonesia

JEL Classification

H83, M21, O38

INTRODUCTION

According to UU No. 25 of 2009 (Republik Indonesia, 2009), public service is defined as any activity that satisfies all service requirements for administrative services, goods, and services offered by public service providers in compliance with community legislation. Publicizing e-government services is one way the government performs public service. Governments utilize technology extensively to transform their operations and enhance citizen-government relations through e-governance.

According to the 2020 United Nations (UN, 2020) e-government study, Indonesia is placed 88th in terms of the implementation and development of e-government services, also known as an electronic-based government system. According to the United Nations (2020), nations with an EGDI (E-Government Development Index) of more than 0.75 are considered to have an extremely high EDGI. Menpan (2020) showed that individuals scoring between 0.50-0.75 are classified as high-EDGI, 0.25-0.50 as mid-EDGI, and those scoring less than 0.25 as low-EDGI.

Citizen acceptance is critical to e-government effectiveness (Ozkan & Kanat, 2011). This is because the system's enormous benefits will never be realized if citizens do not use the service. The importance of citizen adoption of e-government and the necessity for additional research on this popular topic in Indonesia are why this study focuses on the government-to-citizen context.

1. LITERATURE REVIEW

All country's governments, including Indonesia's, can benefit enormously from the use of e-government services. E-government can change government to provide better services and foster greater public trust (Susanto & Aljoza, 2015). According to Holmes (2001), e-government offers public services that yield financial benefits and increased convenience. Participation and representation of citizens in politics and governance are fundamental to a democracy. The essential elements of democracy are lost when the populace is not involved. The foundation of liberal democracy is the idea that the general people choose representatives. Citizens must communicate their views on policy matters and issues to their legislators (Clift, 2004).

Based on how the government and its stakeholders interact, e-government can be divided into four categories (Tan et al., 2007): government-to-government (G2G), government-to-employee (G2E), government-to-business (G2B), and government-to-citizen (G2C). The research emphasizes the significance of the government-to-citizen category because it is in this context that e-government systems are most useful, even though each category is essential in its own right (Jaeger, 2003). On the other hand, low rates of system and service adoption may indicate system failure (Savoldelli et al., 2014). Numerous studies acknowledge the significance of citizens as system users and as determinants of the success or failure of implementation (Rana & Dwivedi, 2015).

Government-to-citizen interaction and participation enable citizens to obtain services directly through information and communication systems (Omari, 2013). Even if everyone benefits from e-government, citizens appear to receive a larger proportion. Citizens gain from e-government through direct communication with the government, constant access to public services, and participation in creating new laws and regulations, along with having greater knowledge of rules and

regulations from the government and being able to communicate with it even though they are in various places (Jaeger, 2003).

Prior research on e-government in various settings to identify the primary drivers of its uptake concentrated on the citizens as the primary recipients of any enhanced system architecture (Choi et al., 2016; Twizeyimana et al., 2018). However, it can be challenging to restructure systems to meet the requirements of residents, particularly in developing countries (Choi et al., 2016).

People's reluctance to embrace e-government stems from a variety of worries concerning security measures, privacy, and trust (Belanger & Carter, 2008). Rotter (1967) defined trust as the expectation that an individual or organization would be dependable. The idea of trust is examined in this study, with a focus on trust in e-government websites. The idea that citizens may rely on government websites as a single location for information sharing and transactions is known as trust in e-government websites.

Since websites are the primary medium by which people communicate or transact, these online retailers must be the primary factor influencing how customers view them (Lee & Koubek, 2010). The literature on electronic commerce and online buying supports this. The main factor influencing people's trust is their confidence in the Internet, which connects people's trust to its dependability and security as a way for them to communicate and transact securely and to the capacity of employees to confidently deliver necessary services. Choudrie et al. (2017) experimented to measure the impact of trust in government. Their study, though, was limited to senior Saudi nationals. Instead, this paper employed a sufficiently large sample size to be representative, focusing on various ages, genders, and geographic areas. A few of the drawbacks of earlier research on technology trust were that it was performed in a limited number of cities (Alateyah et al., 2013; Alomari et

al., 2012; Choudrie et al., 2017; Weerakkody et al., 2013) and it did not include participants of various ages and genders.

Relative advantage is the degree to which a person believes a new invention is better than the one it replaces (Rogers, 1983). The relative benefits considerably impact people's propensity to embrace electronic tax filing systems in India (Ojha et al., 2009). When visitors shop online, their opinions of the relative benefits affect their propensity to make an online purchase (Kim & Lee, 2006; Moital et al., 2009). The key distinction between the two constructs, according to Shin (2010), is that when participants make a usability evaluation, they do not compare the new technology with the old to arrive at a conclusion or decision. As a result, the relative advantage was incorporated into the research model, as Saudi residents' opinions on e-government services and systems diverged from traditional methods of communicating with the government.

Compatibility is the degree to which people believe that a newly adopted technology or system is more in line with their culture, society, and way of life than the one it replaces (Rogers, 1983). Accordingly, compatibility is crucial to adopting new technology (Rogers, 1983). Compatibility is a feature that predicts readiness to file taxes online (Hung et al., 2006). Social and cultural values are essential for a system's compatibility (Shareef et al., 2011). Therefore, compatibility was also a consistently significant factor in this study.

Complexity is the belief that a particular person finds using and understanding new technologies complicated (Rogers, 1983). Similar to the complexity construct in the diffusion of innovation theory is the perceived ease of use construct from the technology acceptance model. Even while research on e-government shows that both aspects are highly predictive, especially in less developed countries, other researchers distinguish between the two constructs (Alomari et al., 2012). It is expected that easily understood new technology will be embraced more broadly than technology that necessitates learning sophisticated new abilities (Rogers, 1995). Perceived ease of use in the technology acceptance model is compared to complexity in the diffusion of innovation theory, which is

analogous to the parallels between perceived usefulness and relative advantage previously highlighted (Venkatesh et al., 2003). The two constructs are similar (Wu & Wang, 2005). The intricacy of participants' comparisons between new constructs (e-government) and previously replaced ones (traditional ways) in order to obtain conclusions or make judgments, however, is a significant distinction between the conceptions (Shin, 2010). However, this was not the case when participants assessed their opinions regarding usability.

Cultural components are examined in the current study. Hofstede (1991) explained human cognition and emotion and the cumulative impact of life events on conduct using a method taken from computer programming. The study identified four distinct programming components. Individuality against collectivism, power distance, long-term orientation, and masculinity versus femininity are some characteristics that distinguish one culture from another (Hofstede, 1980, 2001). Individuals with strong individualism orientations and low power distance, masculinity, and uncertainty avoidance like to live in a world without laws. On the other side, people who score highly on collectivism, power distance, masculinity, and uncertainty avoidance are drawn to rigid institutions, norms, and guidelines. Rather than utilizing e-government platforms, traditionalists are more inclined to deal with their government traditionally and request information. It is now known that by looking at how culture affects people's reactions to new products and services, cultural impact can be used to identify circumstances with less chance of adoption (Anne Lee et al., 2007). Previous studies have demonstrated the impact of culture on individual innovation (Steenkamp et al., 1999).

When introducing new services and goods, uncertainty avoidance is the most relevant cultural feature (Maheswaran & Shavitt, 2000). Research carried out across multiple nations, including France, Germany, and the United States, has repeatedly shown that there is a negative relationship between the spread of cutting-edge technological goods and services and high scores in the uncertainty avoidance category (Anne Lee et al., 2007; Yenyurt & Townsend, 2003). Hofstede (2003) defines uncertainty avoidance as a person's degree of fear of unclear and unknown events whose results

are impossible to foresee or interpret in a given cultural context. Thus, compared to those with a high uncertainty avoidance orientation, those with a low uncertainty avoidance orientation are more tolerant of ambiguity, diversity, and uncertain situations (Hofstede et al., 2010).

Culture can affect individual innovation, the adoption rate, and the proliferation of innovative goods and services (Steenkamp et al., 1999). However, it is still being determined which of the cultural elements has the most significant bearing. Nonetheless, the most conceived aspect is uncertainty avoidance (Maheswaran & Shavitt, 2000). According to Becker (1982), “people continuously create and shape culture according to their own perspectives.” This statement applies to contextual studies of culture. Despite this, “culture can be seen as a repository of widely shared values and customs into which people are socialized so that they can function as good citizens or as full participants” (Bryman, 2008).

Culture or uncertainty avoidance significantly influences the adoption and usage of IS-related apps (Tam & Oliveira, 2019). Numerous scholarly investigations have examined the impact of culture, endeavoring to elucidate its effect on the utilization, acceptance, and execution of IT/IS (Leidner & Kayworth, 2006). The characteristics of the e-government system that work well in one culture might need to be revised in another. Cultural distinctions exist not only between nations but also among the populations of such nations, according to Baskerville (2003). It has been demonstrated that cultural elements like uncertainty avoidance restrict the uptake of IT/IS-related applications. A significant impact has been observed on people’s intention to utilize the application (Baptista & Oliveira, 2015; Lee et al., 2007). Uncertain avoidance was chosen as the major strategic approach to address concerns about the design of e-government, how people use these platforms, and how different citizen cultural characteristics affect the development of e-government services.

Using one or more of its dimensions, Hofstede’s well-known culture model has been effectively used in IT/IS-related applications (Leidner & Kayworth, 2006). Several factors have led to the adoption of uncertainty avoidance. First, a model

based on Hofstede’s cultural aspects was created. Secondly, several studies have verified its validity (Baptista & Oliveira, 2015). Thirdly, the successful assessment of e-government’s elements has occurred during its adoption stage (Zhao, 2011, 2013). Research suggests that most anxiety related to implementing systems like e-government derives from the desire to avoid uncertainty. Based on that, people can start to take on the characteristics of their cultural setting, combining deeply held beliefs with cultural ideals.

2. AIM AND HYPOTHESES

The goal of this study is to determine the elements that affect Indonesian citizens’ acceptance of e-government by looking at social and psychological characteristics and uncertainty avoidance as moderating variables. When taken into account collectively, the following hypotheses are offered:

- H1: *Trust in e-government websites influences the intention to use e-government services.*
- H2: *Relative advantage influences the intention to use e-government services.*
- H3: *Compatibility influences the intention to use e-government services.*
- H4: *Complexity influences the intention to use e-government services.*
- H5: *The association between relative advantage and propensity to use e-government is moderated by uncertainty avoidance.*
- H6: *The association between compatibility and propensity to use e-government is moderated by uncertainty avoidance.*
- H7: *The association between complexity and propensity to use e-government is moderated by uncertainty avoidance.*

3. METHODS

The study’s target audience is Indonesian nationals who have used any e-government website to apply for government services or conduct information

searches and are at least eighteen years old. The study employed purposive sampling to select the samples.

Multiple choice questions and a 5-point Likert scale, with 1 denoting strong disagreement and 5 denoting strong agreement, were included into the questionnaire's design. The questionnaire consists of 32 items in total. Nine questions about demographic information are included in the first section of the questionnaire. Twenty-three variables selected from the technology acceptance model and diffusion of innovation framework are included in the second section and are believed to be relevant to Indonesia's e-government adoption.

Individuals' expectations that they can rely on government websites to do business and share information are measured by their level of trust in e-government websites. Based on trial results and expert opinions, four indicators were chosen to be modified (Teo et al., 2008). Relative advantage gauges how much e-government website interaction is considered superior to more conventional approaches, such as paper-based work, that it replaces. Six indicators were taken from the works of Vassilakis et al. (2005) and Jarvenpaa et al. (2000).

Compatibility measures how closely a person's viewpoint on e-government adoption conforms to his/her cultural values and way of life. Five indicators were taken from Vassilakis et al. (2005) and Jarvenpaa et al. (2000). Complexity is a metric that quantifies how hard it is for an individual to comprehend and utilize e-government services. Five indicators were taken from the works of Vassilakis et al. (2005) and Jarvenpaa et al. (2000). The intention to use e-government gauges the individual's subjective likelihood of using it. Four recommendations made by Aswar et al. (2023) were adopted and modified. Uncertainty avoidance is taken into consideration how uneasy a person feels under strange or unclear circumstances. The two indicators adopted are from Hofstede (1980, 1991) and Yoo et al. (2011).

Path modeling, factor analysis, variance analysis, and regression analysis are all skillfully combined in SEM. Table 1 describes respondent demographics.

Table 1. Respondent demographics

Characteristics	Information	Frequency	Percentage
Gender	Male	250	48.08%
	Female	270	51.92%
Education level	Junior High School	0	0.0%
	Senior High School	116	22.31%
	Bachelor's Degree	357	68.65%
	Master's Degree	27	5.19%
	Doctoral Degree	20	3.85%
Occupation	Student	172	33.08%
	Government employee	46	8.85%
	Private employee	281	54.04%
	Unemployed	21	4.04%
How long have you used the Internet?	Less than 1 year	12	2.31%
	2-3 years	22	4.23%
	4-5 years	39	7.5%
	More than 5 years	447	85.96%
How often do you use the Internet?	Every day	509	97.88%
	Several times a week	11	2.12%
	Several times a month	0	0.0%
	Once a month	0	0.0%
	Less than a month	0	0.0%

4. RESULTS

The necessary samples were gathered and screened; the results are shown in Table 1. The subsequent stage employed the SmartPLS 3.0 tool to analyze the data using the structural equation model (SEM). The descriptive findings are shown in Table 2.

Table 2. Descriptive statistics

Variable	Total Question Items	Mean	Standard Deviation (SD)
TE	3	3.54	0.286
RA	6	3.67	0.274
CB	4	3.83	0.453
CX	3	3.68	0.287
IU	4	3.95	0.351
UA	3	3.86	0.374

Note: TE means usage behavior; RA means relative advantage; CB means compatibility; CX means complexity; IU means intentions to use e-government; UA means uncertainty avoidance.

Table 2 displays the descriptive data. The mean values for usage behavior are 3.54, with the SD of 0.286. Moreover, the mean value of relative advantages is 3.67, and the SD is 0.274. The mean value in compatibility is 3.83, and the SD is 0.453.

Additionally, the mean value for complexity is 3.68, with the SD of 0.287. In the meantime, with the SD of 0.351, the mean intention to use e-government is 3.95. Lastly, uncertainty avoidance has a 3.86 mean and a 0.374 SD.

The convergent validity and reliability tests were performed to ascertain Cronbach's alpha, average variance extracted (AVE), and composite reliability (Table 3).

Table 3. Convergent validity and reliability test

Variable	AVE	Composite Reliability	Cronbach's Alpha
TE	0.724	0.932	0.827
RA	0.727	0.945	0.879
CB	0.738	0.986	0.895
CX	0.792	0.973	0.873
IU	0.785	0.941	0.917
UA	0.796	0.927	0.928

Note: TE means usage behavior; RA means relative advantage; CB means compatibility; CX means complexity; IU means intentions to use e-government; UA means uncertainty avoidance. The average variance extracted (AVE), composite reliability, and Cronbach's alpha tests are shown in Table 3, along with the results of convergent validity and reliability tests. According to Hair et al. (2016), who described the composite reliability and Cronbach's alpha test results, the fundamental minimal threshold is 0.7. The results of this investigation show that the parameters for Cronbach's alpha and composite dependability have been met. Aside from that, the minimal limit value for the convergent validity test's average variance extracted (AVE) is 0.5 (Hair et al., 2016). The AVE values have satisfied the requirements since the test findings show that each of the resultant variables' AVE values is greater than 0.6 and 0.7, respectively. All variables satisfied the requirements according to the reliability and convergent validity tests conducted, indicating the validity of the study's data.

The path diagram is generated using SmartPLS version 3.0, and the outcomes of the path algorithm and bootstrapping are shown in Table 4.

Table 4 indicates that the TE → IU results have a significant value of $0.000 < 0.05$, a positive relationship with a t-count value of 2.532, and a path coefficient value of 0.243. These findings support the acceptance of H1 since they show that intentions to use e-government are positively impacted by usage behavior. For the RA → IU results, the t-value of 7.975 and the path coefficient value of 0.482 show a positive correlation with a significant value of $0.000 < 0.05$. According to these results, H2 is accepted since relative advantage positively influences intentions to use e-government.

Subsequent findings indicate that the path coefficient value of CB → IU is 0.265, resulting in a positive correlation with a t-count of 4.852 and a significant value of $0.000 < 0.05$. According to these findings, compatibility positively influences intentions to use e-government, so H3 is approved. The link between complexity and intentions to use e-government is negatively correlated with a t-count of 7.866, a path coefficient value of -0.293 , and a significant value of $0.000 < 0.05$. These results imply that complexity has a detrimental effect on the intentions to use e-government, so H4 is approved.

The route coefficient value of UA → RA → IU for uncertainty avoidance as moderation is 0.213, indicating a positive association, a t-count value of 12.947, and a significant value of $0.002 < 0.05$. Based on these findings, H5 is approved. The path coefficient value for UA → CB → IU is 0.294, indicating a positive link with a t-value of 11.764 and a significant value of $0.016 < 0.05$. Based on these findings, H6 is approved. With a path coefficient value of 0.275, the association between uncertain-

Table 4. Bootstrapping testing with PLS path algorithm

Relationship	Path Coefficient (Original Sample)	T-Statistics	P-Values
TE → IU	0.243	2.532	0.000
RA → IU	0.482	7.975	0.000
CB → IU	0.265	4.852	0.000
CX → IU	-0.293	7.866	0.000
UA → RA → IU	0.213	12.947	0.002
UA → CB → IU	0.294	11.764	0.016
UA → CX → IU	0.275	8.294	0.000

Note: TE means usage behavior; RA means relative advantage; CB means compatibility; CX means complexity; IU means intentions to use e-government; UA means uncertainty avoidance.

ty avoidance, complexity, and intentions to use e-government is positive. The t-value is 8.294, and the significant value is $0.000 < 0.05$. According to these findings, so H7 is approved.

5. DISCUSSION

Trust in e-gov websites positively impacts citizens' intention to adopt e-government in the Indonesian government ($\beta = .243$, $p < .05$). These data support the findings of Lee and Koubek (2010), who concluded that websites are crucial as a conduit for information between the public and the government. When Indonesian citizens believe that official websites are a dependable and trustworthy medium for safe and secure interaction, transactions, and information requests, their desire to use e-government tends to rise. This study is in line with Venkatesh et al. (2003), who found that the media interacted with e-government websites, influencing citizens' desire to use e-government. These results are consistent with Mahmood et al. (2020) and Alzahrani et al. (2017). Public disclosure of personal data might affect citizens' confidence in government processes and lead to system adoption (Belanger & Carter, 2008).

Enhancing Indonesians' perception of government organizations and their ability to meet demands is essential to boosting public trust in e-government websites (Wang & Lu, 2010). Furthermore, the costs of engaging in opportunistic activity must outweigh any gains any party makes from engaging in such action. Because individuals may try to cognitively assess new methods of interacting with the government, decision-makers must also be mindful of initial impressions (Srivastava & Teo, 2009). Srivastava and Teo (2009) claim that regularly soliciting suggestions for improvements from system users – like those utilizing e-government – will increase user satisfaction and system confidence. Also in favor of this viewpoint is Alzahrani et al. (2017). The contribution of e-government users is crucial to the creation of e-government policies.

The study's findings show that relative advantage has a significant and positive impact on intentions to use e-government services in Indonesia ($\beta = .482$, $p < .005$). When citizens believe that e-government services are more effective than traditional services for carrying out transactions, communicating with

the government and locating information may increase their desire to utilize e-government services. Belanger and Carter's (2008) findings align with this because the latter study was conducted in a developed nation where people were accustomed to e-gov services, frequently browsed the Internet, and were comfortable with online purchasing. It is possible that participants will not view e-government as novel. Carter et al. (2016) found inconsistent results in their comparison study between the United Kingdom and the United States, which further supports the purpose of understanding e-gov adoption in varied situations. Because the Indonesian system is based on religious, cultural, and tribal institutions, underestimating their impact could result in inaccurate generalizations from other studies applied to the Indonesian government.

The findings show that compatibility has a major impact on intentions to use e-government ($\beta = .265$, $p < .005$). These results are consistent with other research conducted in e-commerce, such as e-government tax e-filing services (Shareef et al., 2011; Hung et al., 2006; Kim & Lee, 2006; Ojha et al., 2009). A citizen's perception of e-government is likely to be more favorable when it aligns with the lifestyle and place of employment. Both initial and ongoing adoption are positively impacted by compatibility (Sun & Jeyaraj, 2013). This implies that the government must replicate citizens' past experiences with traditional government services in order for citizens to use e-government services efficiently. Electronic forms, for instance, have to be compatible with traditional government forms. Furthermore, users' views of compatibility would be enhanced by standardizing e-government websites.

Intentions to use e-government are negatively impacted by complexity ($\beta = .293$, $p < .005$). The public's presentation of e-government services requires careful consideration. Information should be presented to make it easy to understand, apply, and generalize prior knowledge in new situations (Webb, 1997). For instance, e-government services and information should be simple to locate and use techniques people are accustomed to, like online purchasing. The findings of this investigation are consistent with Venkatesh et al. (2003), Weerakkody et al. (2013), Alateyah et al. (2013), and Choudrie et al. (2017). But occasionally,

a task's intricacy does not automatically translate into difficulty (Webb, 1997). If the system is kept simple, it can accomplish simple tasks.

Furthermore, the intention to use Indonesian e-government services is impacted by their desire to avoid uncertainty about how relative advantage, compatibility, and complexity are related. According to the results, relative advantage, compatibility, and complexity have less of an impact on citizens' intentions to use e-government in citizen groups with high levels of uncertainty avoidance than with low levels of uncertainty avoidance. Older and more conservative persons are more inclined to favor traditional methods of obtaining information and conducting business with the government. They often perceive unstructured situations as novelties that provide security risks and tend to see things as unstructured and regarded as dangerous (Hofstede, 2011). Their view is that utilizing new IT/IS-related applications, including e-government, carries dangers, which makes it

less acceptable to them. Because they lack confidence and anticipate making mistakes in their interactions, they frequently believe that using new technology is challenging.

The results of this investigation are consistent with earlier studies conducted by Zhao (2011, 2013), Warkentin et al. (2002), and Tam and Oliveira (2019). Warkentin et al. (2002) highlighted the critical role that power distance and uncertainty avoidance play. These will likely be the main elements affecting how people accept e-government. The study's findings demonstrate that cultural variations exist not only across nations but also among people who reside in particular nations (Baskerville, 2003). Comprehending these distinctions is crucial while advocating for the adoption of e-government. Every nation, including Indonesia, has a distinct environment, culture, and set of beliefs that should be considered while evaluating and implementing e-government technologies.

CONCLUSION

The purpose of this study is to identify the motivations behind Indonesians' adoption of e-government. The study's conclusions show how encouraging users to provide feedback might improve e-government services and include them in the growth and development of e-government and its websites. Regarding people's intention to use e-government services, relative advantage is beneficial. This implies that citizens' intention to use e-government services may rise if they think they are superior to traditional services for completing transactions, interacting with the government, and finding information. The intention to use e-government services is positively influenced by compatibility. This implies that citizens evaluate the pre- and post-adoption compatibility of e-government technologies. Furthermore, the results validate that people's intention to use e-government services is adversely affected by complexity. On the other hand, when citizens perceive that utilizing e-government services is no more complicated than traditional government services, they are more likely to embrace them.

Furthermore, this study's findings indicate that e-government adoption is less likely among citizens who genuinely would rather avoid uncertainty. When available and compatible with the e-government system, they are more inclined to select traditional methods of transacting business and communicating with the government. Since conventional techniques involve less uncertainty, these individuals are projected to find them to be more profitable, highly compatible, and less complex; conversely, low levels of uncertainty increase the likelihood that citizens will adopt e-government.

These findings might be useful in helping decision-makers handle difficulties about the components that have been investigated in order to better understand the phenomena and raise citizen adoption rates. Moreover, decision-makers stand to gain by arranging these components' combined influence to maximize adoption. Using this setup, they can better understand the significance of combining components that complement one another and the relative relevance of each factor. This work suggests several directions for future research. Future research may use data collected from other developing countries to have a deeper understanding of the factors influencing the adoption of e-government.

AUTHOR CONTRIBUTIONS

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