



# UTAUT Model Mediated by Government Information System to the Intention to Use of Indonesian Local Government

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## ABSTRACT

**Purpose** – This study investigates the role of the unified theory of acceptance and use of technology (UTAUT) model on the intention to use mediated by the Government Information System. In the context of this study, the implementation of government information systems through the application of local government information systems (SIPD) in Regional Governments in Indonesia. **Methodology** –The population in this study includes: Primary High Leadership Officials, Administrator Officers, Supervisory Officers, and SIPD Management ASNs in the Ministry of Home Affairs and local governments with a total sample of 358 respondents. This study uses a form of sampling in the form of purposive sampling and probability sampling, with the sampling technique used in the form of simple random. When viewed from the relationship between variables, this study is included in associative research. The data processing and analysis techniques used in this study were carried out through Descriptive Statistical Tests and Structural Equation Model (SEM). **Findings** – Based on the results of the study, it is known that Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition, either directly or indirectly through the Government Information System as the variable that mediates it, have had an influence on the Intention To use SIPD application.

**Keywords:** UTAUT, Government Information System, Intention to Use, Digital Government, Performance Expectancy

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## INTRODUCTION

### INTRODUCTION

The use of information technology in e-government as a tool in facilitating government information services to the public, then the information presented should always be up to date so that the public can follow every development that occurs in the scope of government, and provide opportunities for the public to participate by checking and balancing the various information presented in order to produce accurate data because it has been represented The interests of both parties are between the government and the people (Tran Pham, 2023). In relation to the implementation of the e-government information

system in Indonesia, the Ministry of Home Affairs presents a local government information system or in other words SIPD.

SIPD, of course, provides a new face in government administration by utilizing the use of information and communication technology (ICT) which is important in today's modern world as a means of information and communication activities, (Kwarteng, Ntsiful, Diego, & Novák, 2023). SIPD in the form of an application is an effective and efficient tool in improving the performance of government organizations, with the availability of information that includes; Regional development information, regional financial information, and other local government information. This is supported by the views of Lallmahomed, (2017) who observed digital transformation in the public sector is understood as the process of continuous use of technology by public organizations to improve services, making (Goloshchapova, et al., 2023) more efficient and accessible to citizens; change organizational processes, structures, and culture; and enhance value creation by enabling co-production and engaging citizens and stakeholders.

In the initial phase after launching the SIPD application in 2020, it was only inputted and used by as many as 50 regional governments (*Pemerintah Daerah*) throughout Indonesia with a total budget of  $\pm$  IDR 6 trillion accumulated from the entire regional apparatus work plan (RKPD). The following year in 2021, SIPD has been used by almost all local governments with a total of 539 consisting of provinces and districts / cities throughout Indonesia with the total budget in the RKPD inputted increasing sharply to IDR 186 trillion. Furthermore, currently in 2023 the SIPD is recorded to be used by as many as 526 local governments (95 percent) and is recorded while the total RKPD budget inputted is IDR 156 trillion.

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basis for decision making in development planning, mapping development budget needs, and other national issues, and can primarily provide quality information and data. So, it can improve the performance of digital-based government organizations. This is in line with the research of Almaiah & Nasereddin, (2020) which states that information quality dimensions such as availability, objectivity, utility, confidentiality, and integrity are significant in encouraging the acceptance of e-government services. And according to Ofosu-Ampong, et al., (2023) which states that the continuous use of e-government by citizens raises trust in government, internet service quality, and information quality shows a direct positive influence on post-use trust, when post-use trust does not encourage sustainable intentions to use e-government services. Another study by Jou et al., (2024) states that the acceptance and use of information systems is focused on understanding and influencing factors that lead to user behavior and intention to use information systems. When users get satisfaction from information system services, the experience will allow them to recommend to other users.

Correspondingly, Tanantong & Wongras, (2024) in his UTAUT theory consider the antecedent factors of behavioral intention to use are performance expectations, effort expectations, social influences, and facilitating conditions. Similarly, Ofosu-Ampong et al., (2023) found that trust in the context of e-government is influenced by performance expectations, business expectations, social influences, and facilitating conditions. Further explained the relationship between behavioral intentions with performance expectations, business expectations, social influences, and facilitating conditions.

First, the performance expectation factor is about whether the system will help complete work and the speed and success of daily life activities, determined by the intention to use the system (Adnan, Ghazali, & Othman, 2022). Furthermore, the second factor is that business expectations can be associated with the level of convenience associated with the use of technology (Jou et al., 2024). However, Dabić, et al., (2023) emphasized that although potential users believe the application provided is useful, they also believe that the system is very difficult to use, so the benefits obtained by users are worth the effort expended. The study by Sabani, et al., (2023) defines business expectations as the degree to which an organization or person believes that using open data will be free from excessive effort and that business expectations are related to the ease of finding open data and the skills possessed to extract and analyze the required data sets (Almagrashi, Mujalli, Khan, & Attia, 2023).

The third factor is social influence, defined by the degree to which a person perceives a new system or technology as important, and for others to believe it must use it (Alam, et al., (2023). Everyone may show different levels of commitment and satisfaction in using technology when the technology is praised and recommended by their social circle (Wu & Liu, 2023). In the context of open data, social influence can come from coworkers, superiors, management, friends, family, and people who are important to its users (Al-Adwan & Al-Debei, 2023). Finally, the fourth factor is the facilitating condition factor can be defined as the extent to which a person believes that the organization and existing technical infrastructure support the use of the system (Wu & Liu, 2023) in his research identifying that facilitating conditions influence behavioral intentions to use open data.

Open data is the principle of e-government. E-government has the potential to enhance economic development and public management reform (Trilestari, et al., 2024). While Sabani et al., (2023) have provided two groups of possible impacts. Direct impact is cost-effectiveness in public operations and better relationships with citizens, while indirect impact is greater transparency and accountability; in public decisions, reduction of corruption and improvement of services. The performance of e-government has to deal with the availability of several important factors such as political, social, economic and technological elements for e-government (Trilestari et al., 2024). While Gil-Cordero, et al., (2023) showed that the success of e-government implementation depends on government systems, technology, security, economic wealth, and public-private sector partnerships. Given that e-government is an important area in information technology innovation and information system innovation, the government has sought to incorporate e-government into existing information system applications and government (Gil-Cordero et al., 2023).

Information systems are the main component of e-government, which is able to provide online services through internet media. The use of information systems continues to be used as a dependent variable in a number of empirical studies (Mensah & Mwakapesa, 2023) and take new importance in

the measurement of the success of Internet-based systems, where the use of voluntary systems, the use of systems and alternative intentions to use are still considered important measures of success of information systems. Gil-Cordero et al., (2023) argued that use and intent to use are alternatives in their model, and that intent to use may be a more acceptable variable in the context of mandatory use. The impact of perceived usability on the intention to use a system will be higher for individuals who are innovative and have a high tolerance for uncertainty (Wu & Liu, 2023). Furthermore, the need for government services is an important variable to control because the extent to which a citizen needs certain government services will affect his or her intention to use them electronically.

Public service by the government is inseparable from its main element is employees of the state civil apparatus (ASN), as the driving force of the wheels of government in carrying out the function of community service and public interest. Therefore, civil servants should have competence in professional governance. Researchers point out that training of government employees is essential to improve the implementation of electronic services (Dhaoui, 2022). In addition to training information communication technology (ICT) skills, they are also required to change their work mentality to be more active (Almagrashi et al., 2023). At the same time, it needs to be stated that several Ministries and Institutions as well as Local Governments face limited capacity and experience in planning and budgeting (Papakostas, et al., 2023). Previously, Goloshchapova et al., (2023) had proposed and validated the UTAUT model with moderators such as age, gender, experience, and voluntariness of use.

A large number of studies have found that young people have a greater intention to adopt new technologies compared to older adults.. Older adults are often slower to adjust to technological changes because habits become stronger with age (Al-Adwan & Al-Debei, 2023). B. P. Singh, (2023) stated that older adults are less likely to adopt new technologies due to skepticism towards technology compared to younger adults. Similarly, older adults are more reluctant to try new technologies (Al Najdawi et al., 2023), and buy new technological devices (Chung, et al., 2010). In addition to the age factor as explained above, there are habit factors that imply that the use of technology is not only proficient because of experience, but also includes the use of technology automatically and spontaneously (Zou, et al., 2023). Previous opinion from Wibowo & Arviansyah, (2023) adoption occurs after direct experience with the technology and after an individual has decided to accept the technology.

In addition to studies from abroad, several studies related to UTAUT variables are also carried out by researchers from within the country with various subjects or research focuses. Using variations and combining UTAUT variables in relation to intention to use, several domestic researchers both published in the form of dissertations, theses, and theses also found results that in general performance expectancy, effort expectancy, social influence, and facilitating conditions have a positive influence on intention to use information technology (Adiputra, Utama, & Rossieta, 2018). In this domestic research, the UTAUT dimension is often combined with other dimensions or variables such as convenience, security, to subjective norms and religious beliefs or religiosity. Even so, there are also domestic studies that find that some variables or dimensions of UTAUT have a positive effect on the intention to use information technology while some have no influence.

The research gap in this study is based on previous research where there is a significant influence between the variables of performance expectations, effort expectations, social influences, and facilitating conditions which is a framework of the unified theory of acceptance and use of technology (UTAUT) on the intention to use government information system services. In the context of this study, the implementation of government information system through the SIPD application using digital government information quality dimension instruments. The age and experience factors are used as control variables that are used to control and facilitate testing.

The novelty of this study fills the research gap by involving the role of the government information system (SIPD) as a mediating factor between performance expectations, effort expectations, social influences, and conditions that facilitate intention to use which is limited only to age and experience as control variables. Thus, a more comprehensive picture of the results of how the influence of factors in UTAUT is mediated by the role of SIPD, and see the extent to which the implications of implementing SIPD in local government can affect the intention to use by civil servants in Indonesia and as recommendations for related parties in developing government information systems. On this basis, the author raises the title of the study as follows "Analysis of the Role of the UTAUT



Model on Intention to Use Mediated by the Government Information System in Local Government in Indonesia".

## LITERATURE REVIEW

### Government Information System

Alam et al., (2023) stated that e-government, generally characterized as the use of technology, information and communication by the government in conjunction with institutional transformation to improve organizational performance and improve coordination and cooperation relations between countries and domestic public sector organizations. This is in line with the opinion of Kwarteng et al., (2023) who said the use of technology, information and communication (ICT), as well as the internet in particular, to achieve better governance in the hope that it can produce better policies as well.

The use of information technology carried out by the government is intended so that the government can communicate various things to various parties; public, investors, creditors, and parties related to relevant government information (Kwarteng et al., 2023). Conclusion from the existing definition, government information system is a mechanism used to acquire, submit, store, and retrieve organized information and knowledge. The benefits are to improve efficiency. e.g., quality of services at the same or lower cost, to improve cooperation and management within government, to improve policy decisions e.g., to give priority to information systems that assist in policymaking, and to improve cooperation with the private sector e.g., by reducing the cost of exchange/information services.

### Digital Government

Zainal, Hussin, et al., (2022) discussed digital government, namely digitalization or technology in government whose main purpose is to modernization, efficiency and facilitate internal access. The digitalization phase involves the development, operation and maintenance of the technological environment, including the availability of technological capabilities, services and infrastructure in the internal environment as well as among government organizations.

Meanwhile, in this stage will contain the representation of data, documents, and other information in digital format, as well as automate processes, services accessible to the public, and all offices in digital format and exchange through digital networks. When, the previous was done manually in physical or analogous form by government organizations. The digitization phase in practice does not involve redesigning, but simply digitizing and automating what already exists and making the results available to stakeholders and customers alike through digital networks. If a process or work practice is inefficient before digitization, it is likely that the results of both will remain the same.

### Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT was first introduced by Wu & Liu, (2023) when comparing the influence of various approaches in seeing the intention to use someone to use and utilize information technology. UTAUT is an integrated model, formulated with four main determinants of behavior; intentions and uses, which include: performance expectancy, effort expectancy, social influence, and facilitating conditions. In addition, there are also control factors such as gender, age, experience, and user volunteerism, which are also expected to predict the relationship between the main factor and behavioral intentions and technology use behavior. UTAUT is a tool to assess the likelihood of success in introducing and encouraging users to proactively accept, understand and use new technologies.

Through a review of the main adoption theories used in information systems, (Balaskas, et al., (2022) developed a model that integrates theories and variables from various models, including the technology acceptance model (TAM), the theory of planned behavior (TPB), and the Innovation diffusion theory (IDT). By investigating the different variables of interest in each theory and comparing different theoretical constructs, they hope to develop a model that takes into account the different technological factors and beliefs that drive adoption decisions. As UTAUT continues to grow, Yang & Wang, (2023) himself along with several other researchers develop and continue to refine various other

relevant approaches. More deeply, related to UTAUT in this study includes: definition, dimensions, roles and consequences of each variable.

### **Performance Expectancy**

Performance expectancy is defined by Venkatesh, et al., (2011) as the degree to which an individual believes that technology improves their overall job performance. B. P. Singh, (2023) said that performance expectancy is a scope of certainty in which an individual believes that the use of certain technologies can support them to maximize performance. Furthermore, according to Zainal et al., (2022) performance expectancy is the tendency of individuals to use conventional ways of working, if they consider that technology does not help them in doing work. It also said that performance expectancy is the strongest predictor of intention to use new technology services by users.

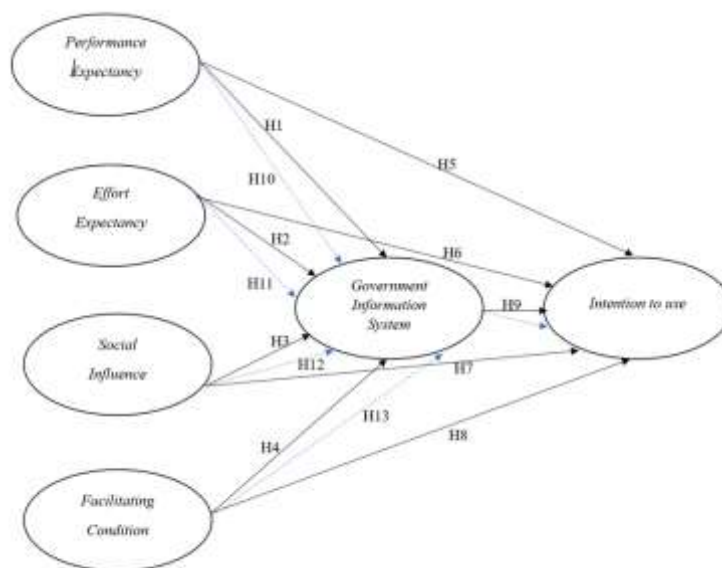
### **Intention to Use**

Tanantong & Wongras, (2024) stated that, intention to use reflects student behavior, which leads to adoption and intention to continue using e-learning platforms; taking into account actual use. When users acquire services from technologies such as e-government they will be empowered with extensive knowledge of those services. This will allow them to determine whether the service enjoyed is good or not. Based on their service experience (adoption), they may be inclined to recommend the same service to friends and other users. Studies have shown that behavioral intent to use is directly related to actual user behavior (Zainal et al., 2022).

Regarding behavioral intentions, (Abbad, 2021) discussed the Theory of Planned Behavior (TPB) developed by (Guetz & Bidmon, 2022) from the theory of reasoned action (Williams, et al., 2015) where the core element is the individual's intention to perform certain behaviors. The SDGs emphasize intention as a principle contributor to behavior, suggesting that stronger intentions should lead to the likelihood of stronger individual behavioral performance (Wu & Liu, 2023). While regarding the adoption of technology/systems, intention to use can be understood as the adoption of information systems in government services. The adoption of electronic government services itself is a condition where governance has used information technology development tools in providing services to its people. describe e-government as all government activities carried out digitally or more specifically the use of internet-based information technology (IT) to improve the delivery of government services, access to information and participation of citizens and organizations in government.

### **The Conceptual Framework**

The conceptual framework of this research departs from the problems faced in the use of government information systems, namely Local Government Information System (SIPD) services based on theories built in figure below. In the context of the use of SIPD, since the promulgation of Permendagri No. 70 of 2019, almost all local governments have inputted and used the SIPD application in the preparation of their development planning documents. However, not a few problems are still encountered in the use of the application.



**Figure 1. Conceptual Framework**

Problems with the use of SIPD, including the discrepancy between the budget ceiling and the programs / activities set with inputs in SIPD, in terms of inadequate technology infrastructure (such as: slow upload process, to vulnerable security systems). If viewed more broadly, the use of SIPD seems to still find problems ranging from policies that require adjustment (considering user and usage conditions), the development of the latest features and technology so that it is easier and more effective to use by regional apparatuses, and has not been integrated between SIPD and other similar information systems, both built by the Ministry of Home Affairs, other ministries / institutions, or with systems that have been used by the government area.

Other problems also come from the ability of each individual to use the internet and applications, as well as geographical conditions in Indonesia. Various problems that have been described are factors that influence the intention to use SIPD users throughout Indonesia. The antecedent factors in UTAUT, including performance expectancy, effort expectation, social influence, and facilitating conditions are seen to have a lot of influence in the intention to use information systems / technology in various fields, although there is also found to be the opposite, namely, the absence of influence. This is in accordance with the results / findings of research - research that has been carried out by previous researchers both from within the country and abroad.

Similarly, this study was examined to see and analyze the extent to which independent variables, namely: performance expectancy, effort expectation, social influence, and facilitating condition within the framework of the UTAUT model affect mediation variables, namely the government information system, and on intention to use as dependent variables, as well as age and experience as control variables. That is, all independent variables will be seen to have an effect either directly or through mediation variables on the dependent variable. In addition, this study will also analyze the direct influence of the mediating variable on the dependent variable. The conceptual framework model of this study is illustrated by the pattern of relationships between variables and hypotheses built as shown below:

## METHOD

The study was conducted cross-sectionally because the data was collected all at once and only once at a time (Nations, 1995) was through the distribution of questionnaires to the respondents. in this case are primary high leadership officials, administrator officers, supervisory officials, and ASN implementing SIPD management at the Ministry of Home Affairs and Local Government in Indonesia. This study will use three groups of variables, namely independent variables, mediation variables, and dependent variables. The independent variables in this study consist of Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition. While the mediating variable of this study is only one, namely the Government Information System (Government Information System) and in this case, it is called the Local Government Information System (SIPD). While the dependent variable, which is the intention/willingness to use (intention to use).

The population in this study is primary high-ranking officials, administrator officials, supervisory officials, and civil servants implementing SIPD management in the Ministry of Home Affairs and local government. The participating regions are the Province. Aceh, South Sumatra Province, Bangka Belitung Province, West Java Province, East Java Province, West Kalimantan Province, Papua Province, Palembang City, Bandung City, South Tangerang City, Semarang City, Malang City, Makassar City, Bau – Bau City, Barru Regency, Maros Regency, Sinjai Regency, Aceh Besar Regency, Lembata Regency, Sorong Regency, Parigi Moutong Regency, and Dogiyai Regency. The total population is 358 people. The reasons for determining the above areas as populations and samples in this study are by considering the representation of all islands throughout Indonesia in order to be able to photograph adequately proportionally with the criteria, namely: (1) affordability of distance and energy, (2) effectiveness and efficiency of time, (3) facilitation and coordination, (4) representation of SIPD user areas in inputting and optimizing the use of SIPD in the regions.

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**Table 1. Confirmatory Factor Analysis Test Result**

Exogenous Variable	Endogenous Variable	$\lambda$	$\lambda^2$	e	CR	VE
<i>Performance Expectancy</i>	PE1	0.650	0.423	0.434	0.936	0.597
	PE2	0.701	0.491	0.402		
	PE3	0.732	0.536	0.303		
	PE4	0.873	0.762	0.548		
	PE5	0.670	0.449	0.433		
	PE6	0.770	0.593	0.227		
	PE7	0.818	0.669	0.147		
	PE8	0.836	0.699	0.119		
	PE9	0.749	0.561	0.998		
	PE10	0.773	0.598	0.286		
<i>Effort Expectancy</i>	EFE1	0.770	0.593	0.272	0.943	0.703
	EFE2	0.791	0.626	0.203		
	EFE3	0.845	0.714	0.159		
	EFE4	0.888	0.789	0.108		



Exogenous Variable	Endogenous Variable	$\lambda$	$\lambda^2$	e	CR	VE
<i>Sosial Influence</i>	EFE5	0.846	0.716	0.149	0.932	0.697
	EFE6	0.628	0.394	0.654		
	EFE7	0.767	0.588	0.322		
	SI1	0.776	0.60	0.226		
	SI2	0.752	0.57	0.317		
	SI3	0.856	0.73	0.113		
	SI4	0.827	0.68	0.211		
<i>Facilitating Condition</i>	SI5	0.692	0.48	0.499	0.914	0.641
	SI6	0.792	0.63	0.239		
	FC1	0.744	0.554	0.277		
	FC2	0.801	0.642	0.242		
	FC3	0.819	0.671	0.208		
	FC4	0.677	0.458	0.478		
	FC5	0.707	0.500	0.332		
	FC6	0.716	0.513	0.331		

Sources by the Author, 2024

In structural model testing, the results of structural model equations will be presented, model suitability tests and research hypothesis testing.

## DISCUSSION

Exogenous variables (independent variables or independent variables) in this study consist of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition variables. From the results, it can be analyzed that not all Performance Expectancy indicators have a loading factor ( $\lambda$ )  $\geq 0.5$ , this shows that some Performance Expectancy indicators are not yet valid. While all indicators of Effort Expectancy, Social Influence and Facilitating Condition have a loading factor ( $\lambda$ ) of  $\geq 0.5$ , this shows that all indicators of these variables are valid. Similarly, the reliability of the measurement model is shown from the value of CR  $> 0.7$  and VE  $> 0.5$  so that it is declared good. In structural model testing, the results of structural model equations will be presented, model suitability tests and the presentation of research hypotheses.

Based on the research paradigm, there are two sub-structure models that will be tested in this study. The results of the structural model equation in this study can be made based on the results of these calculations, so that the value of the path coefficient in each substructure is obtained as shown in the following equation:

$$\text{GIS} = 0,424 \cdot \text{PE} + 0,148 \cdot \text{EE} + 0,359 \cdot \text{SI} + 0,608 \cdot \text{FC}, R^2 = 0,655 \dots (1)$$

$$\text{IU} = 0,335 \cdot \text{PE} - 0,063 \cdot \text{EE} + 0,456 \cdot \text{SI} + 0,280 \cdot \text{FC} + 0,228 \cdot \text{GIS}, R^2 = 0,652 \dots (2)$$

Remarks:

GIS = *Government Information System*

EE = *Effort Expectancy*

FC = *Facilitating Condition*

PE = *Performance Expectancy*

SI = *Social Influence*

IU = *Intention to Use*

Based on equation (1) it can be seen that the direction of the relationship between Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition with the Government Information System is positive. This means that when Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition with the Government Information System increase, the Government Information System will increase by the efficiency of their respective paths. The total influence of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition on the Government Information System is 0.655 which means the Government Information System can be explained by Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition of 65.5%.

Then in equation (2) it can be seen that the direction of the relationship between Performance Expectancy, Social Influence and Facilitating Condition and Government Information System with Intention to Use is positive. This means that when Performance Expectancy, Social Influence, Facilitating Condition and Government Information System with Intention to Use increase, the Intention to Use will increase by the efficiency of their respective paths. While the direction of the relationship between Effort Expectancy and Intention to Use is negative. This means that when Effort Expectancy increases, the Intention to Use decreases by the path coefficient. The total influence of Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and Government Information System on Intention to Use is 0.652 which means Intention to Use can be explained by Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and Government Information System of 65.2%. After the structural equation is formed, then the model scratch level test is carried out with the goodness of fit index approach. This is done with the aim of finding out whether the model built on theoretical basis has a good match with empirical data collected through questionnaire instruments in the field.

### Overall Model Fit

Evaluation or analysis of structural models related to testing the relationship between exogenous latent variables and endogenous latent variables, as well as testing the relationship between endogenous latent variables in accordance with hypotheses that have been compiled in a study. The results of goodness of fit are listed in the following table:

**Table 3. Goodness-Of-Fit Model**

<i>Goodness-Of-Fit (GOF)</i>	<i>Analysis Result</i>	<i>Cut Off Value</i>	<i>Model Evaluation</i>
<b>Chi-square</b>	$\chi^2 = 2059.78$ <b>P = 0.000</b>	<b>Probability <math>\geq 0,05</math></b>	<b>Poor Fit</b>
<b>TLI</b>	<b>0.887</b>	<b>GFI &gt; 0.90</b>	<b>Marginal Fit</b>
<b>GFI</b>	<b>0.746</b>	<b>AGFI &gt; 0.90</b>	<b>Marginal Fit</b>
<b>AGFI</b>	<b>0.685</b>	<b>TLI &gt; 0.90</b>	<b>Poor Fit</b>
<b>CFI</b>	<b>0.905</b>	<b>CFI &gt; 0.90</b>	<b>Good Fit</b>
<b>RMSEA</b>	<b>0.063</b>	<b>RMSEA <math>\leq 0,08</math></b>	<b>Good Fit</b>

Based on the existing goodness of fit criteria, the goodness of fit is met, concluded by model evaluation which shows that the model in this study is fit.

### Hypothesis Analysis

Furthermore, testing the research hypothesis was carried out. Testing was carried out on 9 (nine) hypotheses proposed. Hypothesis testing is performed using a t-Value value with a significance level of 0.05. The t-value in the AMOS program is the Critical Ratio (C.R.) value in Regression Weights: (Group number 1 – Default model) of the fit model. If the Critical Ratio (C.R.) value  $\geq 1.96$  or the probability value (P)  $\leq 0.05$  then H0 is Not Supported (Supported research hypothesis). To find out whether the mediating variable has a significant effect between the independent variable (X) and the dependent variable (Y), it is carried out with the Sobel test. Sobel tests are used to see indirect effects that cannot be done with SEM AMOS. Testing using Calculation for the Sobel Test and if the statistical sobel test  $\geq 1.96$  with a significant 5%, then the variable can be said to be able to mediate the



independent variable (X) and the dependent variable (Y) (Ghozali, 2018). Testing was carried out on 4 (four) hypotheses proposed.

Exogenous variables (independent variables or independent variables) in this study consist of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition variables. The results of testing the measurement model (confirmatory factor analysis) of each dimension on exogenous variables are presented in the following table:

**Tabel 2**  
**Loading Factors Results Endogenous Variable**

Exogenous Variable	Endogenous Variable	$\lambda$	$\lambda^2$	e	CR	VE
<i>Performance Expectancy</i>	PE1	0.488	0.238	0.434	0.91	0.52
	PE2	0.572	0.327	0.402		
	PE3	0.625	0.391	0.303		
	PE4	0.399	0.159	0.548		
	PE5	0.543	0.295	0.433		
	PE6	0.668	0.446	0.227		
	PE7	0.867	0.752	0.147		
	PE8	0.887	0.787	0.119		
	PE9	0.447	0.200	0.998		
	PE10	0.741	0.549	0.286		
	EE2	0.758	0.575	0.203		
	EE3	0.851	0.724	0.159		
	EE4	0.89	0.792	0.108		
	EE5	0.829	0.687	0.149		
	EE6	0.583	0.340	0.654		
	EE7	0.698	0.487	0.322		
<i>Facilitating Condition</i>	SI1	0.742	0.551	0.226	0.93	0.69
	SI2	0.749	0.561	0.317		
	SI3	0.896	0.803	0.113		
	Endogenous Variables	$\lambda$	$\lambda^2$	e		
	SI4	0.831	0.691	0.211		
	SI5	0.612	0.375	0.499		
	SI6	0.717	0.514	0.239		
	FC1	0.697	0.486	0.277		
	FC2	0.795	0.632	0.242		
	FC3	0.823	0.677	0.208		
<i>Facilitating Condition</i>	FC4	0.717	0.514	0.478	0.91	0.64
	FC5	0.675	0.456	0.332		
	FC6	0.705	0.497	0.331		

Sources: Data processed by the Author via AMOS, 2024

Based on the table above, it can be seen that not all Performance Expectancy indicators have a loading factor ( $\lambda$ )  $\geq 0.5$ , this shows that some Performance Expectancy indicators are not yet valid. While all

indicators of Effort Expectancy, Social Influence and Facilitating Condition have a loading factor ( $\lambda$ ) of  $\geq 0.5$ , this shows that all indicators of these variables are valid. Similarly, the reliability of the measurement model is shown from the value of CR  $> 0.7$  and VE  $> 0.5$  so that it is declared good. In structural model testing, the results of structural model equations will be presented, model suitability tests and the presentation of research hypotheses. The following are the results of structural modeling using IBM AMOS program version 23.0.

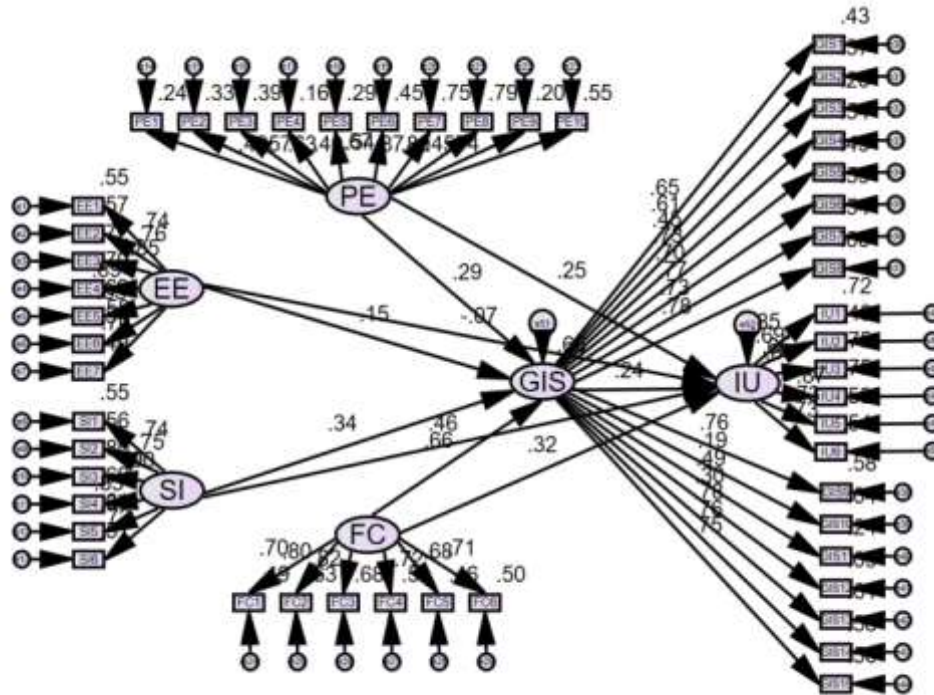


Figure 1. Structural Model Test Result

Sources: Data processed by the Author via AMOS, 2024

Based on the research paradigm, there are two sub-structure models that will be tested in this study. The results of the structural model equation in this study can be made based on the results of these calculations, so that the value of the path coefficient in each substructure is obtained as shown in the following equation:

$$\text{GIS} = 0,424 * \text{PE} + 0,148 * \text{EE} + 0,359 * \text{SI} + 0,608 * \text{FC}, R^2 = 0,655 \dots \dots \dots (1)$$

$$\text{IU} = 0,335 * \text{PE} - 0,063 * \text{EE} + 0,456 * \text{SI} + 0,280 * \text{FC} + 0,228 * \text{GIS}, R^2 = 0,652 \dots (2)$$

Remarks:

GIS = *Government Information System*  
 EE = *Effort Expectancy*  
 FC = *Facilitating Condition*

PE = *Performance Expectancy*  
 SI = *Social Influence*  
 IU = *Intention to Use*

Based on equation (1) it can be seen that the direction of the relationship between Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition with the Government Information System is positive. This means that when Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition with the Government Information System increase, the Government Information System will increase by the efficiency of their respective paths. The total influence of Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition on the Government Information System is 0.655 which means the Government Information System can

be explained by Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition of 65.5%.

Then in equation (2) it can be seen that the direction of the relationship between Performance Expectancy, Social Influence and Facilitating Condition and Government Information System with Intention to Use is positive. This means that when Performance Expectancy, Social Influence, Facilitating Condition and Government Information System with Intention to Use increase, the Intention to Use will increase by the efficiency of their respective paths. While the direction of the relationship between Effort Expectancy and Intention to Use is negative. This means that when Effort Expectancy increases, the Intention to Use decreases by the path coefficient. The total influence of Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and Government Information System on Intention to Use is 0.652 which means Intention to Use can be explained by Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Condition and Government Information System of 65.2%. After the structural equation is formed, then the model scratch level test is carried out with the goodness of fit index approach. This is done with the aim of finding out whether the model built on theoretical basis has a good match with empirical data collected through questionnaire instruments in the field.

### Overall Model Fit

Evaluation or analysis of structural models related to testing the relationship between exogenous latent variables and endogenous latent variables, as well as testing the relationship between endogenous latent variables in accordance with hypotheses that have been compiled in a study. The results of goodness of fit are listed in the following table:

**Tabel 3. Goodness-Of-Fit Model**

<i>Goodness-Of-Fit (GOF)</i>	<i>Analysis Result</i>	<i>Cut Off Value</i>	<i>Model Evaluation</i>
<b>Chi-square</b>	$\chi^2 = 2059.78$ <b>P = 0.000</b>	<b>Probability <math>\geq 0,05</math></b>	<b>Poor Fit</b>
<b>TLI</b>	<b>0.887</b>	<b>GFI &gt; 0.90</b>	<b>Marginal Fit</b>
<b>GFI</b>	<b>0.746</b>	<b>AGFI &gt; 0.90</b>	<b>Marginal Fit</b>
<b>AGFI</b>	<b>0.685</b>	<b>TLI &gt; 0.90</b>	<b>Poor Fit</b>
<b>CFI</b>	<b>0.905</b>	<b>CFI &gt; 0.90</b>	<b>Good Fit</b>
<b>RMSEA</b>	<b>0.063</b>	<b>RMSEA <math>\leq 0,08</math></b>	<b>Good Fit</b>

Based on the existing goodness of fit criteria, the goodness of fit is met, concluded by model evaluation which shows that the model in this study is fit.

### Hypothesis Analysis

Furthermore, testing the research hypothesis was carried out. Testing was carried out on 9 (nine) hypotheses proposed. Hypothesis testing is performed using a t-Value value with a significance level of 0.05. The t-value in the AMOS program is the Critical Ratio (C.R.) value in Regression Weights: (Group number 1 – Default model) of the fit model. If the Critical Ratio (C.R.) value  $\geq 1.96$  or the probability value (P)  $\leq 0.05$  then H0 is Not Supported (Supported research hypothesis). To find out whether the mediating variable has a significant effect between the independent variable (X) and the dependent variable (Y), it is carried out with the Sobel test. Sobel tests are used to see indirect effects that cannot be done with SEM AMOS. Testing using Calculation for the Sobel Test and if the statistical sobel test  $\geq 1.96$  with a significant 5%, then the variable can be said to be able to mediate the independent variable (X) and the dependent variable (Y) (Ghozali, 2018). Testing was carried out on 4 (four) hypotheses proposed.

**Tabel 4. Hypothesis Analysis Direct and Indirect Influences**

Hypothesis Testing		Estimate	C.R. (>1,96)	P-value (<0,05)	Results
<b>Hipotesis Direct Influences</b>					
<b>H1</b>	<i>Performance Expectancy</i> has positive and significant influences to the <i>Government Information System</i>	0.424	4.785	0.000	Supported
<b>H2</b>	<i>Effort Expectancy</i> has positive and significant influences to the <i>Government Information System</i>	0.148	3.191	0.001	Supported
<b>H3</b>	<i>Social Influence</i> has positive and significant influences to the <i>Government Information System</i>	0.359	5.996	0.000	Supported
<b>H4</b>	<i>Facilitating Condition</i> has positive and significant influences to the <i>Government Information System</i>	0.608	8.224	0.000	Supported
<b>H5</b>	<i>Performance Expectancy</i> has the positive and significant influence to the <i>Intention to Use</i>	0.335	4.032	0.000	Supported
<b>H6</b>	<i>Effort Expectancy</i> has no positive and significant influence to the <i>Intention to Use</i>	-0.063	-1.467	0.142	Not Supported
<b>H7</b>	<i>Social Influence</i> has positive and significant influence to the <i>Intention to Use</i>	0.456	7.055	0.000	Supported
<b>H8</b>	<i>Facilitating Condition</i> has positive and significant influence to the <i>Intention to Use</i>	0.280	3.898	0.000	Supported
<b>H9</b>	<i>Government Information System</i> has positive and significant influence to the <i>Intention to Use</i>	0.228	2.658	0.008	Supported
<b>Hypothesis of Indirect Influences</b>					
<b>H10</b>	<i>Performance Expectancy</i> has positive and significant influences to the <i>Intention to Use</i> mediated by <i>Government Information System</i>	0.097	4.459	-	Supported
<b>H11</b>	<i>Effort Expectancy</i> has positive and significant impact to <i>Intention to Use</i> mediated by <i>Government Information System</i> .	0.034	3.164	-	Supported
<b>H12</b>	<i>Social Influence</i> has positive and significant influences to the <i>Intention to Use</i> mediated by <i>Government Information System</i>	0.082	5.583	-	Supported
<b>H13</b>	<i>Facilitating Condition</i> has positive and significant influence to the <i>Intention to Use</i> mediated <i>Government Information System</i>	0.228	7.056	-	Supported

Sumber: Hasil Uji Hipotesis, 2023

Based on the table of Hypothesis Testing Results above, information was obtained: of the 13 research hypotheses studied, 12 hypotheses had Almost all hypotheses in this study are declared accepted/supported, meaning that H1 is accepted and H0 is rejected. Only one research hypothesis was stated not supported / not accepted from the results of the analyst, namely the hypothesis for the effect of the independent variable effort expectancy on intention to use. Here, H1 is rejected, while H0 is accepted. Even so, when the effect of the independent effort expectancy variable on intention to use is tested by involving the government information system mediation variable, the hypothesis turns out to

be accepted or H1 is accepted and H0 is rejected. significant value (supported hypotheses) and 1 hypothesis had insignificant values (unsupported hypotheses).

Almost all hypotheses in this study are declared accepted/supported, meaning that H1 is accepted and H0 is rejected. Only one research hypothesis was stated not supported / not accepted from the results of the analyst, namely the hypothesis for the effect of the independent variable effort expectancy on intention to use. Here, H1 is rejected, while H0 is accepted. Even so, when the effect of the independent effort expectancy variable on intention to use is tested by involving the government information system mediation variable, the hypothesis turns out to be accepted or H1 is accepted and H0 is rejected. The influence of each independent variable on the dependent variable either directly or through the intermediary of the mediating variable as identified in the research problem can be concluded as follows: Performance expectancy has a significant effect on the government information system. This means that the results of this study conclude that one of the explanations for the use of government information systems at the local government level is because of the performance promised by the information system itself. The expectation of improved performance is the cause of the acceptance of the use of information systems by local governments.

## CONCLUSION

The expected managerial implications of the results of this study are mainly related to the management, development, and utilization of local government information systems (SIPD). This study fills the research gap by involving the role of the Local Government Information System (SIPD) as a mediating factor between performance expectations, effort expectations, social influences, and conditions that facilitate the intention to use the application of e-government services against intention to use. Thus, from this research, it is hoped that the central and local governments can improve management, develop features, increase the use of a more sustainable system, and increase the intention to use for the use of SIPD in the preparation of regional planning and budgeting.

This study has limitations on several things, including variable limitations. The variables used in this study have constraints on independent variables that only use performance expectancy, effort expectancy, social influence, and facilitating conditions. While the mediation variable only uses a government information system in the form of a local government information system (SIPD). While the dependent variable only uses intention to use. That way, the results of this study do not pretend to generalize to government management and government information more broadly.

Limitations of the use of mediation variables. By only using mediation variables in SIPD, this study has limited analysis on government information systems presented and facilitated by SIPD. By using other mediating variables, it could be that the results of the study also have different conclusions. Limitations of data collection and informant representation. The data collection carried out and the aggregated data may not be representative enough and not proportionate enough. The limitation of data proportionality may also be a limitation of this study, because it has not been fully proportional to obtain informants at each level of position. That way, this section becomes another limitation that can affect the results of research analysis. The data collected in this study were limited to testing UTAUT theory with SIPD-specific local development, while informants involved and respondents may still not be representative enough, based on factual conditions of distribution of positions in local government.

Referring to the limitations of the research, the objectives and results of the research that have been explained, the recommendations that can be proposed include the development of research in similar fields can enrich the analysis of UTAUT theory by, for example, adding other variables both as independent variables, mediation, and dependent variables. Specifically to enrich related local discourses such as SIPD mediation variables, other studies may be able to replicate or develop them in other information systems or government applications. It will be even richer to develop this research as well, for example by examining the same object in the non-government sector by looking for differences or differentiators from existing research.

Improvement and development of research can also be done by expanding or even researching more specifically the themes and subjects of research as well as the scope of local governments that

become informants. It is necessary to ensure coverage of the theme and maintain proportionality of the representation of the informant with his factual data, so that the analysis drawn will depict a portrait that is as close as possible or equal to reality. Especially for SPD management, it can be seen that it is quite extensive and many areas use SIPD, but need further development. Several developments are expected to target the need to develop and perfect various features so as to make it easier for regions to compile regional planning and budgeting, and ensure development targets are on target with effective and efficient use of human resources and budgets.

The results showed that in general, all independent variables affect mediating variables and dependent variables either directly or indirectly, except for one relationship between variables, namely the influence of effort expectancy on intention to use. This means, significantly or only a small part, SIPD has influenced the willingness of local governments to use information systems. It only needs to be seen with further research whether there are other factors that further influence the use of information systems, or further what can encourage and influence the use of information systems for integrated development planning. This is important because it turns out that this study found that the size of the effort spent to use information systems did not affect the use of SIPD in the regions. From there, there may still be the use of SIPD which is only limited to the formality of implementing instructions or policies, not yet on efforts to compile substantive planning and adhere to the principles of good governance. Thus, it may be important to continue to conduct and develop research in this field with multi-perspective scope and objectives and then utilized by decision makers from government elements at the central, provincial, and district / city levels.

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