



## Determinants of Information System Success in the Public Sector: The Moderating Role of Management Support, Tax Complexity, and Locus of Control

Diah Hari Suryaningrum\*, Pipit Dwi Saraswati

Universitas Pembangunan Nasional Veteran Jawa Timur, Jl. Raya Rungkut Madya No.1, Surabaya, Jawa Timur 60294, Indonesia

DOI: <https://doi.org/10.61656/ijospat.v4i1.445>.

### ABSTRACT

**Purpose:** This study aims to examine and analyze the influence of user participation in information system development on system success. Furthermore, it evaluates the role of three contingency factors—top management support, task complexity, and locus of control—as moderating variables influencing this relationship in the context of public services in Indonesia.

**Method:** The research employs a quantitative approach focusing on employees of the tax service office in Malang Regency. A sample of 50 respondents was selected using a simple random sampling technique via the Slovin method. Data were collected through questionnaires and analyzed using Moderated Regression Analysis (MRA) and subgroup analysis to determine the type of moderating variables.

**Findings:** The findings indicate that user participation has a significant positive relationship with information system success. All three contingency factors (management support, task complexity, and locus of control) were proven to act as quasi-moderators. Specifically, high management support and an internal locus of control strengthen the relationship between participation and system success. However, unlike previous studies, lower task complexity showed a greater influence on the relationship in this specific study.

**Implication:** Practically, public sector managers should consider situational factors and individual characteristics before involving users in system development. User participation is not the sole determinant of success; active top management support and an understanding of employees' self-control orientation are crucial for ensuring effective information system implementation to improve public service.

**Originality:** This study provides empirical evidence on the implementation of New Public Management in Indonesia, particularly within tax service offices. The novelty lies in the finding that task complexity in certain public sector organizations may exhibit different influence patterns on IT success compared to the private sector or organizations in other countries.

**Keywords:** User participation, top management support, task complexity, locus of control, systems success.

**Article info:** Received: 1 April 2026; Revised: 2 May 2026; Accepted: 5 May 2026

### Correspondence:

\*Diah Hari Suryaningrum and Email: [diah.suryaningrum.ak@upnjatim.ac.id](mailto:diah.suryaningrum.ak@upnjatim.ac.id)

### Recommended citation:

Suryaningrum, D. H. & Saraswati, P. D. (2026). Determinants of Information System Success in the Public Sector: The Moderating Role of Management Support, Tax Complexity, and Locus of Control, *Indonesian Journal of Sustainability, Policy, and Technology*, 4(1), pp 26-38.

## 1. INTRODUCTION

In the globalization era, a good public service is really needed by the citizens. For a long time, the delivery of services by the government has been static (Keast & Brown, 2002; Nugroho & Setiawan, 2025) with nobody ever let alone attempted to figure the service delivery practices to suit with entrepreneurial approach. It is irrespective with the number of changes that occur in the environment.

The trend of accountability and quality service assurance that has been relegated to the private sector has changed and affected the public sector. The public is no longer ready to withstand poor service delivery. The demanding for accountability and the increasing awareness of public makes the time for reinvention due. According to the new public management approach, addressing this essential



challenge must rely upon a comprehensive understanding of citizens' perceptions of public sector operations and the extent to which the public sector organization are aware of public needs (Rosenbloom et al., 2022; Sergianni et al., 2026).

In attempt to increase the service quality, the improvements are related with human resource management. As one part of the organization, human resource held the most important role. To have a good service delivery, it is relied on the quality of the human in site. The organization (in this case is government) must use every way to make their employee to work more efficient and effective.

According to Moenir (2002: 26), the performance of government employees are related with two factors, individual factor and situational factor. Individual factor includes gender, health, experience, and locus of control. Situational factor includes leadership, performance, social relationship, and organization commitment. The success and performance of individual at work are determined by their commitment with their task and work. Organization commitment empowered individual to relate with the organization, so they will have sense of belonging to the organization, and finally they will follow through the organization objectives. In other word, organization commitment can motivate individual performance.

Besides the commitment organization as situational factor, on the individual factor there is Locus of Control (LOC) that effects employee's performance. Within the accounting literature, LOC have been used to explain managerial performance and other decision context such as budget participation (Handoyo et al., 2022; Alsadoni et al., 2023), ethical decision (Syariati, 2022; Fawziah et al., 2023), non-ethical behavior (Wu et al., 2022), and management information requirements (Fisher, 1996).

Many studies insist that an information strategy cannot be effective without suitable considerations of the users by Fisher (1996), showed that a general perception of control, which he called Locus of Control (LOC) occupies a central, relatively stable place in determining a person's action. The personality variable lies on a continuum. At one extreme are those who believe that the events that occur in their lives are largely due to their own actions and efforts (internals) and the other extreme are those who believe that their destinies are controlled by luck or chance (externals). In the era of information technology, the implementation of IT in the system will help public sector to deliver their service more efficient and effective.

From those considerations above, this research tries to examine the discussion of new public management in managing public sector service. Three variables of Locus of control, organization commitment and implementation of information system are examined to indicate their effect on public sector service performance. This study attempted to conduct an evaluation based on public sector service performance offered by Tax Service office in Indonesia.

According to the interview with tax payers conducted by Akbar (2015), reveals that tax payers are reluctant to ask or go to tax service office because they have a bad perception of them. The evidence indicates that 54.8% of tax payers rarely come to the office. Most of the tax payers think that by coming to tax office, they seek for troubles and difficulties. They think that tax officer only want to enhance only their benefit and wealth.

This study provides an examination and seeks to answer the question: 1). Is there any relationship between three factors of Locus of control, organization commitment and implementation of information system with public sector service performance? 2). Which one of these factors have a dominant effect on public sector service performance? This research can provide empirical evidence about the factor that may effect public sector service performance, especially for tax service representatives in Indonesia.

While previous studies have extensively discussed the relationship between user participation and information system success, this research introduces a perspective by integrating New Public Management (NPM) principles within the specific bureaucratic environment of Indonesian Tax Service Offices. The novelty of this study lies in its focus on contextual contingency, particularly in re-examining the role of task complexity in a public sector setting. Unlike established findings from Western contexts, the initial evidence in this study suggests that lower task complexity may actually yield a stronger relationship between user participation and system success within Indonesian state-owned or government entities. Furthermore, this study offers a unique psychological integration by combining situational factors, such as top management support, with individual psychological traits like the internal locus of control to provide a more holistic model for predicting IT success in a reform-seeking public institution.

Beyond its novelty, this research provides significant theoretical and practical contributions. Theoretically, it expands the application of contingency theory by providing empirical evidence that situational and individual variables act as quasi-moderators in the relationship between user

participation and system success within the public sector. Practically, the findings offer a strategic roadmap for tax authorities to improve service performance; it emphasizes that investing in technology alone is insufficient without fostering an internal culture of managerial support and understanding employees' self-control orientations. Ultimately, these insights assist the Indonesian government in addressing negative taxpayer perceptions by implementing more effective, user-centric information systems that enhance overall public sector accountability.

## 2. LITERATURE REVIEW

### 2.1. Theoretical Framework

#### Contingency Theory

The foundational premise of this research is rooted in Contingency Theory ([Pacheco-Cubillos et al., 2024](#)), which suggests that there is no universal "best way" to manage an organization or design a system. Instead, the optimal organizational structure or technological implementation is dependent (contingent) upon various internal and external factors. In information systems, this theory implies that the success of user participation is not guaranteed in every situation; rather, it depends on how well the participation process aligns with situational variables such as management support, task characteristics, and individual traits. By adopting a contingency perspective, this study moves beyond simple linear relationships to explore how specific conditions in the Indonesian public sector environment act as moderating forces that either amplify or diminish the effectiveness of system development initiatives.

#### Task-Technology Fit (TTF) Theory

Task-Technology Fit (TTF) Theory ([Vafaei-Zadeh et al., 2025](#)) is utilized in this study to explain the critical alignment between the nature of the work performed and the technological tools provided to the employees. According to this theory, information systems lead to better performance only when their functions and features match the requirements of the tasks users must complete. In this research, TTF provides the theoretical basis for examining "Task Complexity" as a moderating variable. It suggests that the impact of user participation on system success will vary depending on whether the task is routine and standardized or complex and ambiguous. This theory helps clarify why participation might be more effective in certain bureaucratic workflows compared to others, depending on how well the system "fits" the operational reality of the tax office.

#### Expectancy Theory

To understand the motivational aspect of user involvement, this study incorporates Expectancy Theory ([Filipova, 2022](#)). This theory posits that individuals are motivated to engage in specific behaviors—such as participating in system development—when they believe that their efforts will lead to successful performance and that such performance will result in desired outcomes or rewards. In this framework, "Top Management Support" acts as a critical external stimulus that reinforces an employee's expectancy. When leaders provide visible support and resources, it increases the user's belief that their contribution is valuable and will lead to a successful system implementation. This theory provides a psychological lens to analyze how managerial environment influences the proactive behavior of employees during technological transitions.

#### Social Learning and Reinforcement Theory (Locus of Control)

The inclusion of "Locus of Control" as a psychological determinant is grounded in Social Learning Theory ([Malodia & Butail, 2023](#)) and Reinforcement Theory ([Malodia & Butail, 2023](#); [Pevnitskaya & Ryvkin, 2026](#)). These theories suggest that an individual's behavior is influenced by their perception of the link between their actions and subsequent reinforcements. Individuals with an "internal" locus of control believe that they can significantly influence outcomes through their own skills and efforts, making them more likely to participate effectively and persistently in problem-solving activities. Conversely, those with an "external" locus of control may perceive outcomes as being determined by fate or powerful others, potentially leading to passive participation. By applying these theories, the study examines how deep-seated personality traits dictate the degree to which user participation can be converted into tangible information system success.

## 2.2. The Influence of User Participation on Information System Success

The relationship between user participation and information system success is fundamentally rooted in Contingency Theory (Pacheco-Cubillos et al., 2024), which suggests that the effectiveness of an organizational process depends on the alignment between the design and its participants. User participation ensures that the system is built based on the actual needs and workflows of the end-users, rather than just technical specifications. When users are involved in the development phase, they provide critical tacit knowledge that minimizes information asymmetry between developers and staff (Suryaningrum, 2003; Suryaningrum et al., 2026).

Recent evidence from Syahputra and Alamsyah (2023) demonstrates that in the context of Indonesian local government, active user involvement significantly enhances system quality and user satisfaction by reducing psychological resistance to new technology. Furthermore, Nugraha and Saputra (2025) emphasize that participatory design in public agencies acts as a catalyst for digital transformation, ensuring that the resulting system is not only functional but also widely accepted. Therefore, higher levels of user participation are expected to lead to greater success in information system implementation.

**H1:** User participation has a significant positive influence on information system success.

## 2.3. The Moderating Role of Top Management Support

The role of top management support as a moderating factor can be explained through Expectancy Theory (Filipova, 2022), where employees are motivated to participate when they perceive that their efforts are recognized and supported by organization leaders. Management support provides the necessary resources, authority, and psychological encouragement that facilitate the system development process. Without strong leadership commitment, user participation may become merely symbolic and fail to produce meaningful outcomes.

New research by Pradana et al. (2024) highlights that in the era of digital governance, top management support acts as the "glue" that strengthens the impact of human factors on technological performance. Similarly, Wibowo (2022) argues that leadership commitment in bureaucratic structures provides a safety net that encourages users to engage more deeply in system innovation. Thus, the presence of strong management support is expected to amplify the positive effect of user participation on the ultimate success of the system.

**H2:** Top management support moderates the relationship between user participation and information system success.

## 2.4. The Moderating Role of Task Complexity

The influence of user participation on information system success is often contingent upon the nature of the tasks being performed. According to Task-Technology Fit (TTF) Theory (Vafaei-Zadeh et al., 2025), the performance impact of an information system is maximized when the technology's capabilities match the demands of the task. In environments with low task complexity, such as standardized bureaucratic processes in tax offices, user participation allows for precise fine-tuning of the system to meet routine operational needs.

Recent research by Wibowo (2022) suggests that in highly regulated public sectors, excessive complexity can sometimes create cognitive overload, making participation less effective if the legal framework is too rigid. Furthermore, Syahputra and Alamsyah (2023) found that in Indonesian local governments, user involvement yields the most significant system improvements when tasks are clearly defined and structured. Therefore, while participation is generally beneficial, its impact is expected to be more pronounced when tasks are manageable and less ambiguous.

**H3:** Task complexity moderates the relationship between user participation and information system success.

## 2.5. The Moderating Role of Locus of Control

The psychological characteristics of the users involved in the development process play a crucial role in determining the success of an information system. Locus of Control (LOC), a concept rooted in Social Learning Theory (Malodia & Butail, 2023), distinguishes between individuals who believe they control their own destiny (internals) and those who believe outcomes are determined by external forces (externals). "Internals" tend to be more proactive, more involved in problem-solving, and more persistent in mastering new technologies. Nugraha and Saputra (2025) argue that in the context of digital transformation within public agencies, individuals with an internal locus of control demonstrate higher

digital literacy and a greater willingness to contribute meaningful feedback during system implementation.

This aligns with findings by Pradana et al. (2024), which indicate that the effectiveness of participatory management is significantly higher when employees possess high self-efficacy and a strong sense of personal control over their work outcomes. Consequently, user participation is expected to lead to greater system success when the users involved possess an internal locus of control.

**H4:** Locus of control moderates the relationship between user participation and information system success.

The research model in Figure 1 shows the relationship between variable as explained in the hypothesis development. The dependent variable is information systems success and the independent variable is user participation. There are three moderating variables, top management support, tax complexity, and locus of control.

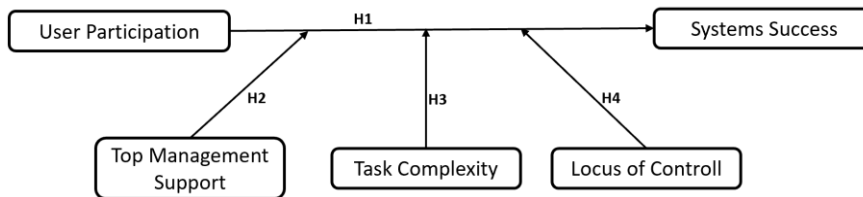


Figure 1. Research Model

### 3. RESEARCH METHOD

#### 3.1. Research Design

This study employs a quantitative research design with an explanatory approach to investigate the causal relationships between user participation and information system success, as well as the moderating effects of various contingency factors. The research is designed as a cross-sectional study, where data is collected at a single point in time to provide a snapshot of the phenomena within the Indonesian public sector environment. By utilizing a deductive reasoning process, the study tests hypotheses derived from existing theories, specifically Contingency Theory and Task-Technology Fit, to determine their empirical validity in the context of tax service offices. The structural framework of this research is centered on a Moderated Regression Analysis (MRA) design.

In this model, User Participation serves as the independent variable (X), while Information System Success is defined as the dependent variable (Y). To provide a deeper analysis of the situational dynamics, the design incorporates three moderating variables (Z): Top Management Support, Task Complexity, and Locus of Control. This design allows the researcher to not only identify direct effects but also to categorize the moderation type—whether it is a pure moderator, quasi-moderator, or a potential predictor—by comparing the interaction models with the simple regression models.

To ensure the reliability and validity of the research design, the study follows a rigorous operationalization of variables. Each construct is measured using validated instruments adapted from prior management and information systems literature, then translated into a five-point Likert scale. This design ensures that the abstract psychological and organizational concepts are transformed into measurable data, allowing for objective statistical testing and providing a robust foundation for the subsequent discussion of the findings.

#### 3.2. Sample dan Data Collection

The population for this research consists of employees at the Tax Service Office in Malang Regency, East Java. To ensure a representative and manageable subset of this population, the study employed a simple random sampling technique, with the sample size determined using the Slovin formula to achieve a high degree of statistical confidence. A total of 50 respondents were selected to participate, representing various functional departments within the office to capture a diverse range of perspectives regarding information system implementation. Data were primarily collected through a structured



**Table 1.** Cornbach Alpha Coefficient

	Before Deletion		After Deletion	
	Item	Coefficient	Item	Coefficient
User Participation	19	0.8646	18	0.8720
Top Management Support	5	0.4894	4	0.6338
Tax Complexity	7	0.3428	5	0.7066
Locus of Control	16	0.5774	10	0.7291
Information Systems Success	4	0.8281	4	0.8281

Source: Data processed

**Table 2.** Comparison of Reliability Value

Variable	Reliability	
	This Research	Past Researches
User Participation	0.87	0.85*
Top Management Support	0.53	0.82**
Tax Complexity	0.51	0.75*
Locus of Control	0.73	0.85***
Information Systems Success	0.83	0.74*

\*McKeen, et al (1994)

\*\*Choe (1996)

\*\*\*Spector (1988)

Source: Data processed

Table 1 shows the result of Cornbach Alpha test. There is a high value of reliability except for top management support and task complexity that only more than 0,5. If the alpha coefficient is above 0,7, the reliability of the multi-item scale is satisfactory. Table 2 shows the comparison of reliability value of this research with the past researches. The descriptive statistics that include the value of means and standard deviation for the research variables were calculated and summarized in Table 3.

**Table 3.** Descriptive Statistics

Variable	Mean	Std. deviation	Possible range	Actual range
User Participation	9.12	4.90	0-18	0-18
Top Management Support	12.61	2.24	4-20	8-18
Tax Complexity	13.76	2.77	5-25	5-19
Locus of Control	20.20	4.43	10-40	12-32
Information Systems Success	12.92	2.99	4-20	4-20

Source: Data processed

**Hypothesis Test**

Spearman correlation analysis was used to assess the relationship among critical variables. Table 4 presents the correlation matrix for the research variables. There were statistically significant positive relationships between user participation and system success with  $p = 0,005$ . Hence, if user participation in system development increases, performance of information system also increases.

**Table 4.** Correlation Matrix of Research Variables

Spearman's rho	UP	TM	TC	LOC	SS
User Participation (UP)		0.576	0.402	0.302	0.005
Top Management Support (TM)	0.576		0.182	0.229	0.389
Tax Complexity (TC)	0.402	0.182		0.125	0.653
Lotus of Control (LOC)	0.302	0.229	0.125		0.750
Information Systems Success (SS)	0.005	0.389	0.653	0.750	

Source: Data processed

The results of the moderated regression analysis are shown in Table 5. As hypothesized (H1) user participation does have a significant positive relationship with system success. The coefficient of determination ( $R^2$ ) was 0,159. The result is slightly stronger than another research (e.g. McKeen, et al, 1994; Choe, 1996) with  $R^2$  of 0,078; 0,083; and 0,108. But lower than McKeen, et al (1994) and Restuningdiah and Indriantoro (2000) with  $R^2$  of 0,166 and 0,679. The value of 0,159 means that the variation of system success could be explained by user participation only 16% and 84% by another factor.

The fact that user participation demonstrates a consistent and positive relationship over many

studies is significant; the magnitude of the relationship, as measured by the coefficient of variation, may be less significant (McKeen, et al, 1994). User participation is not likely the only explanatory variables or it is unaffected by other contingency variables such as proposed in this study.

**Table 5. Moderated Regression Analysis (MRA) Results**

	Regression Equation	F-value	R <sup>2</sup>	p-value
H1	SS = 10.696 + 0.244UP (0.005)	8.889	0.159	0.005
H2	SS = 8.430 + 0.250UP + 0.175TM (0.003)	4.920	0.176	0.012
	SS = 9.317 + 0.150UP + 0.105TM + 0.007UPTM (0.008)	3.228	0.177	0.031
H3	SS = 10.394 + 0.243UP + 0.023TC (0.019)	4.364	0.159	0.018
	SS = 9.179 + 0.374UP + 0.115TC – 0.009UPTC (0.047)	2.897	0.162	0.045
H4	SS = 11,960 + 0,255UP – 0,068LOC (0.015)	4.669	0.169	0.014
	SS = 9,675 + 0,488UP + 0,045LOC – 0,011UPLOC (0.015)	3.209	0.176	0.032

Source: Data processed

As hypothesized, top management support, task complexity, and locus of control are shown to be quasi moderator (Table 5). The beta coefficients are both for  $b_2$  and  $b_3$  significant at  $p = 0,05$ . It means that the contingency factor can influence the relationship between user participation and system success, both as an independent variable and as moderator variable. In the situation where top management support, task complexity, or locus of control is high, the system will be success and the relationship between user participation and system success is much stronger.

The MRA technique tests the interaction effect of each contingency factor independently. The increment in  $R^2$  is used to determine the relative contributions of the three contingency factors in explaining the variance in system success, as shown in Table 6. The data in Table 6 show that the three contingency factors have significant effects on system success and the relationship between user participation and system success.

**Table 6. MRA Results: User Participation on System Success**

Contingency Factors	Increment in R <sup>2</sup>
User Participation (UP)	0.15904505
+ Top Management Support (TM)	0.01718071
+ Task complexity (TC)	0.00043614
+ Locus of Control (LOC)	0.00969377
+ UP*TM	0.01803129
+ UP*TC	0.00280413
+ UP*LOC	0.01716883

Source: Data processed

Using the subgroup analysis (Table 7), the three contingency factors were dichotomized at the median, and user participation was regressed on system success under conditions of low and high-top management support, task complexity, and locus of control. For each of these equations, the slope coefficients of the high and low subgroups were compared to determine the differential effects of the contingency factors on the relationship of user participation and system success.

Table 7 presents the results of the subgroup analysis. The data shows that the subgroup analysis on top management support resulted that where there was a high-top management' support on the information system development, the greater the relationship between user participation and system success. Hence, the second hypothesis is accepted.

**Table 7. Slope Coefficient for Split Samples: User Participation**

Contingency Factors	Slope	
	High	Low
Top Management Support (TM)	0.260	0.171
Task Complexity (TC)	0.138	0.214
Locus of Control (LOC)	0.180	0.453

Source: Data processed

Based on Table 7, results of subgroup analysis on task complexity shows that the low of task complexity, the greater the relationship between user participation and system success. The result is

different with [McKeen, et al \(1994\)](#) research result. It proved that the higher the task complexity, the greater the relationship with regression coefficient 0,137 for the high subgroup and 0,100 for the low subgroup. It may likely that the task complexity on BUMN in Indonesia is not complex at all. Hence, the third hypothesis is partly rejected. The subgroup analysis on locus of control shows that the internal locus of control has more influence on the relationship between user participation and system success than external locus of control. Hence, the fourth hypothesis is accepted.

## 4.2. Discussion

### User Participation and Information System Success

The relationship between user participation and information system success is fundamentally grounded in Contingency Theory ([Pacheco-Cubillos et al., 2024](#)), which posits that there is no single best way to manage an organization; rather, the optimal course of action is contingent upon internal and external situations. In this context, involving users during the system development life cycle creates a "fit" between the technical design and the operational reality of the tax office. By participating, users contribute their specific tacit knowledge, which reduces uncertainty and ensures that the system's features align with the actual requirements of public service delivery.

This finding is consistent with the results of [Syahputra and Alamsyah \(2023\)](#), who found that user involvement significantly bridges the gap between system developers and end-users in Indonesian local governments. It also aligns with the classic study by [McKeen et al. \(1994\)](#), which established that participation is a robust predictor of user satisfaction. Furthermore, [Doll & Torkzadeh \(1991\)](#) demonstrated that end-user engagement leads to higher system acceptance and reduced psychological resistance to new technology.

Managerially, these results suggest that tax office administrators must move away from top-down IT implementations. Instead, they should adopt a "co-creation" strategy where staff members are given formal roles in the development process. By fostering a sense of psychological ownership, management can ensure that the system is not only technically sound but also practically useful, ultimately leading to higher efficiency in tax-payer services.

### The Moderating Role of Top Management Support

The moderating effect of top management support is best explained through Expectancy Theory ([Filipova, 2022](#)), which suggests that employees are motivated to act in a certain way based on the expectation that their effort will lead to a specific rewarded outcome. When top leaders actively support IT initiatives, it sends a powerful signal to the staff that their participation is valued and essential to the organization's mission.

This support acts as a stimulus that transforms participation from a mere task into a motivated contribution toward organizational success.

This result is supported by [Pradana et al. \(2024\)](#), who highlighted that in the era of digital government, leadership commitment is the primary catalyst for successful system adoption. Similarly, [Choe \(1996\)](#) found that management support is a critical contingency factor that determines whether user participation actually leads to improved system performance. Research by [Donnelly et al. \(2003\)](#) also emphasizes that the organizational environment created by leaders significantly influences how employees commit to new work processes.

For management, this implies that the success of a new information system depends on visible leadership. Leaders must do more than just authorize budgets; they must actively advocate for the system, provide the necessary resources, and participate in key decision-making meetings. This active involvement builds trust and ensures that the technical transition is supported by a strong organizational foundation, reducing the likelihood of project failure.

### The Moderating Role of Task Complexity

The impact of task complexity on the relationship between participation and system success is interpreted through Task-Technology Fit (TTF) Theory ([Vafaei-Zadeh et al., 2025](#)). In this study, the finding that the relationship is stronger when complexity is low suggests that for standardized bureaucratic processes, user input is highly effective at optimizing workflows. In a highly regulated environment like the Indonesian tax office, users may find it easier to provide meaningful feedback on routine tasks than on highly complex, legally rigid procedures ([Tambunan & Rosdiana, 2020](#)).

This observation aligns with [Wibowo \(2022\)](#), who argued that in bureaucratic structures, high task complexity can sometimes overwhelm the benefits of user participation if the technology is not perfectly aligned. It differs from the earlier findings of [McKeen, et al \(1994\)](#), who suggested that higher

complexity requires more participation. However, it is consistent with the work of [Muafi and Kusumawati \(2020\)](#), which indicated that the unique characteristics of Indonesian organizations can alter traditional contingency relationships.

The managerial implication is that for routine and standardized public services, user participation should be the primary tool for system improvement. However, when dealing with highly complex or specialized tax regulations, management should provide more structured participation frameworks and expert guidance. This ensures that users do not feel "lost" in the complexity and that their participation remains focused on areas where they can add the most value.

### **The Moderating Role of Locus of Control**

The role of Locus of Control (LOC) as a moderator is rooted in Social Learning Theory ([Malodia & Butail, 2023](#)) and Reinforcement Theory ([Malodia & Butail, 2023](#); [Pevnitskaya & Ryvkin, 2026](#)). Individuals with an "internal" LOC believe that they have the power to influence their own destiny and the outcomes of their work. Consequently, they are more proactive, perceptive, and ready to learn about their surroundings than those with an "external" LOC. This internal drive makes their participation in system development much more impactful.

Recent behavioral research by [Nugraha and Saputra \(2025\)](#) confirms that internal LOC is a significant predictor of pro-environmental and pro-technological behaviors in public agencies. This also supports the classic work of [Spector \(1988\)](#), who developed the Work Locus of Control Scale used in this study and found that internals are more effective in information-rich environments. Furthermore, [Fisher \(1996\)](#) demonstrated that internal LOC individuals have a better grasp of information requirements in managerial settings.

Managerially, the tax office should consider the psychological profiles of its employees when forming IT project teams. Identifying and empowering "internals" to lead user-participation groups can maximize the quality of feedback and accelerate system success. For employees with an external LOC, management should provide more explicit encouragement and external rewards to ensure they feel their participation actually matters to the final outcome.

## **5. CONCLUSION**

The results of this research could be used by the manager as a factor in considering the development of information system. In fact, user participation proved to be affected on system success, although in this research, it has a low significant.

The analysis shows that information system development can be successful in the presence of only minimal user participation. The prescription of user participation must be re-examined. In the sample of 49 systems in this research, many had system success despite little or no user participation. Conversely, many had no system success (low user satisfaction) despite high user participation. Apparently, while user participation is in general an important factor, it is certainly not the main determinant of system success. Because of the unique nature of systems development, many situational factors can affect user participation. It is simply not universally true that more user participation is better in all cases. This research has started by examining three potential explanatory variables – which are proved to interact the relationship of user participation and system success significantly. Future research may find additional factors and also examine the interaction among these factors more detailed.

Concerning the research object on BUMN in Indonesia, future research may test the organization culture considerably. This may be necessary because in BUMN that is relatively affect by the government regulation the organization culture may influence organization care of planning and developing information system. For the future research, the measurement of system success not only can be measured by user satisfaction, it is also can be measured by system usage or information system decision usefulness. Future studies should consider expanding the sample size and scope to include multiple government agencies to enhance the external validity of the results. It is also recommended to employ a longitudinal approach to observe the long-term sustainability of information system success following the initial implementation. Additionally, future researchers could explore other moderating or mediating variables, such as "Digital Literacy" or "Organizational Readiness for Change," to provide a deeper understanding of the complex dynamics involved in public sector digital transformation.

### 3.1. Limitations

Despite its contributions, this study has several limitations. First, the sample size was limited to 50 respondents within a specific regional tax office, which may limit the generalizability of the findings to larger or different types of public organizations. Second, the data collection relied solely on self-reported questionnaires, which are susceptible to social desirability bias. Lastly, this research focused on a specific set of moderating variables, potentially overlooking other influential factors such as organizational culture, technological infrastructure, or external regulatory changes.

Several limitations that may disturb the research results are:

1. The low rate of responses (15%), from 400 questionnaires only 49 of them can be used in this analysis. It is difficult to generalize the result with the low rate of response, because it is difficult to know whether the response could represent the population. Also the sampling method with purposive sampling has a weakness in representing population. These factors can affect the generalization capability and conclusions.
2. Non response bias test is not done in this research because the researcher cannot distinguish the first respond from the last respond. The result of the test may be affected the result of data analysis.
3. The alpha coefficients of the three contingency factors are lower than the past researches, but marginally the factors are reliable.

This study provides empirical evidence on the critical role of user participation and various contingency factors in determining the success of information systems within the public sector, specifically in the Indonesian Tax Service. The results conclude that involving users in the system development process significantly enhances system success by aligning technical capabilities with operational requirements. Furthermore, the effectiveness of this participation is significantly strengthened when supported by proactive top management and when aimed at individuals possessing an internal locus of control. Interestingly, in the bureaucratic environment of public services, user participation is found to be most effective for tasks with lower complexity, where standardized procedures allow for more impactful user-driven optimizations.

### Abbreviations

BUMN : Badan Usaha Milik Negara  
TTF : Task-Technology Fit  
LOC : Locus of Control

### Authors' contribution

All authors equally contributed in the research process with DHS supervised PDS in conducting the research. The authors collaborated on final editing and ensured the article adhered to the journal's writing guidelines.

### Conflict of Interest

The authors declare no competing interests.

### Funding

This research received no external funding.

### Availability of data and materials

All data and materials used are derived from questionnaires and confidential for research purpose. The requirement of the data may contact the corresponding author.

## REFERENCES

- Akbar, Imam N. (2015). Pengaruh Persepsi Wajib Pajak Orang Pribadi terhadap Pelaksanaan Self-Assessment System (Studi Kasus pada Wajib Pajak Orang Pribadi di Kantor Pelayanan Pajak Pratama Batu). *Jurnal Mahasiswa Perpajakan*, vol. 7, no. 1, 2015. <https://www.neliti.com/publications/193569/pengaruh-persepsi-wajib-pajak-orang-pribadi-terhadap-pelaksanaan-self-assessment#cite>

- Alsadoni, N. N., Metwally, A. B. M., Abdelazim, S. I., Aly, S. A. S. (2023). Locus of Control as Budget Slack Moderator: The Role of Ethical Leadership and Budget Participation. *Information Sciences Letters: An International Journal*, 12(6), 2235-2247. <http://dx.doi.org/10.18576/isl/120604>.
- Choe, J. M. (1996). The relationships among performance of accounting information systems, influence factors, and evolution level of information systems. *Journal of Management Information Systems*, 12(4), 215-239. <https://doi.org/10.1080/07421222.1996.11518107>.
- Doll, W. J., & Torkzadeh, G. (1991). The measurement of end-user computing satisfaction: Theoretical and methodological issues. *MIS Quarterly*, 15(1), 5-10.
- Donnelly, D. P., Jeffrey, J. Q., & O'Bryan, D. (2003). Auditor acceptance of dysfunctional behavior: An explanatory model using auditors' personal characteristics. *Behavioral Research in Accounting*, 15(1), 87-108. <https://doi.org/10.2308/bria.2003.15.1.87>
- Fawziah, Intan Nurbaiti, et al. (2023). The Role of Locus of Control in Moderating the Effect of Auditor Independence and Professional Skepticism on Audit Quality. *The Indonesian Accounting Review*, vol. 13, no. 2, Aug. 2023, pp. 233-47, <https://doi.org/10.14414/tiar.v13i2.3791>.
- Filipova, A.A. (2022). Expectancy Theory in Organizations. In: Farazmand, A. (eds) *Global Encyclopedia of Public Administration, Public Policy, and Governance*. Springer, Cham. [https://doi.org/10.1007/978-3-030-66252-3\\_3002](https://doi.org/10.1007/978-3-030-66252-3_3002).
- Fisher, C. (1996). The impact of perceived control, financial feedback, and budget advocacy on personal goals and performance. *Accounting, Organizations and Society*, 21(7-8), 751-769. [https://doi.org/10.1016/0361-3682\(96\)00010-0](https://doi.org/10.1016/0361-3682(96)00010-0).
- Handoyo, S., Fauziya, A. N., Hardinto, W., Riantika, R. L., & Safitri, W. R. I. (2022). Can Organizational Commitment, Locus of Control, and Ethical Considerations Moderate the Relationship Between Budget Participation and Budgetary Slack? *International Journal of Economics, Business and Management Research*, 6(6), 107-124. <http://dx.doi.org/10.51505/ijebmr.2022.6609>.
- Keast, R., & Brown, K. (2002). The Government Service Delivery Project: A Case Study of the Push and Pull of Central Government Coordination. *Public Management Review*, 4(4), 439-459. <https://doi.org/10.1080/14616670210163015>.
- Malodia, L. & Butail, P. K. (2023). Fostering Sustainability in Education: Role of Internal LOC on Classroom Incivility and Learning Engagement, *Empirical Economics Letters*, 22 (Special Issue 1): (December 2023), 35-45. <https://doi.org/10.5281/zenodo.10656102>.
- McKeen, J. D., Guimaraes, T., & Wetherbe, J. C. (1994). The relationship between user participation and user satisfaction: Integrating condition variables. *MIS Quarterly*, 18(4), 427-451. <https://doi.org/10.2307/249523>.
- Muafi & Kusumawati, R. A. (2020). Strategic consensus on organizational performance: A contingency approach of organizational culture and isomorphic pressure, *Journal of Industrial Engineering and Management (JIEM)*, Vol 13, No 2, 352-370. <https://doi.org/10.3926/jiem.2480>.
- Moenir, HAS. (2002), *Manajemen Pelayanan Umum di Indonesia*, Bumi Aksara, Jakarta
- Nugraha, A., & Saputra, R. (2025). Psychological drivers of digital transformation in public agencies: The role of Locus of Control. *Journal of Behavioral Public Administration*, 8(1), 45-62. <https://doi.org/10.1017/bpa.2025.12>.
- Nugroho, R., & Setiawan, A. (2025). Governance: Static, Dynamic, and Chaotic. *Jurnal Academia Praja*, 8(2), 242-259. <https://doi.org/10.36859/jap.v8i2.454>.
- Pacheco-Cubillos, D. B., Boria-Reverter, J., & Gil-Lafuente, J. (2024). Transitioning to Agile Organizational Structures: A Contingency Theory Approach in the Financial Sector. *Systems*, 12(4), 142. <https://doi.org/10.3390/systems12040142>
- Pevnitskaya, S. & Ryvkin, D. (2026), Locus of control in reward and punishment decisions. *Review of Behavioral Economics*, Vol. 13 No. 2 pp. 318-337, <https://doi.org/10.1108/RBE-01-2025-0249>
- Pradana, M., et al. (2024). Leadership and user participation in the era of Digital Government: A moderating analysis. *International Journal of Public Sector Management*, 37(2), 112-130. <https://doi.org/10.1108/IJPSM-2024-0045>.
- Rosenbloom, D. H., Kravchuk, R. S., & Clerkin, R. M. (2022). *Public Administration: Understanding Management, Politics, and Law*, 9th Edition, Taylor & Francis. <https://api.taylorfrancis.com/content/books/mono/download?identifierName=doi&identifierValue=10.4324/9781003198116&type=googlepdf>.
- Santoso, S. (2020), *SPSS Statistik Parametrik*, Penerbit PT. Elex Media Komputindo, Jakarta.
- Sergianni, C., Brozović, D., & Andersson, T. (2026). Public service logic: a systematic literature review. *Public Management Review*, 1-38. <https://doi.org/10.1080/14719037.2026.2631749>.

- Spector, P. E. (1988). Development of the work locus of control scale. *Journal of Occupational Psychology*, 61(4), 335-340. <https://doi.org/10.1111/j.2044-8325.1988.tb00470.x>
- Suryaningrum, D. H. (2003). The Relationship Between User Participation and System Success: Study of Three Contingency Factors on BUMN in Indonesia, *Simposium Nasional Akuntansi 2003, Surabaya, Jawa Timur, Indonesia*. [https://www.researchgate.net/profile/Diah-Suryaningrum/publication/370125356\\_The\\_Relationship\\_between\\_User\\_Participation\\_and\\_System\\_Success\\_Study\\_of\\_Three\\_Contingency\\_Factors\\_on BUMN\\_in\\_Indonesia/links/6440726539aa471a524cae93/The-Relationship-between-User-Participation-and-System-Success-Study-of-Three-Contingency-Factors-on-BUMN-in-Indonesia.pdf](https://www.researchgate.net/profile/Diah-Suryaningrum/publication/370125356_The_Relationship_between_User_Participation_and_System_Success_Study_of_Three_Contingency_Factors_on BUMN_in_Indonesia/links/6440726539aa471a524cae93/The-Relationship-between-User-Participation-and-System-Success-Study-of-Three-Contingency-Factors-on-BUMN-in-Indonesia.pdf)
- Suryaningrum, D. H., Alam, S. F., Rofiq, M. H., Sa'diyah, & Husnayain, M. F. (2026). Efektivitas Pembelajaran Berbasis Learning Management System (LMS) terhadap Partisipasi Mahasiswa. *Jurnal Ragam Pengabdian*, 3(1 (Spesial Issue), 4076-4082. <https://doi.org/10.62710/99jwce82>
- Syahputra, H., & Alamsyah, B. (2023). Determinants of Accounting Information System Success: Evidence from Indonesian Local Government. *Journal of Accounting and Strategic Finance*, 6(1), 88-105. <https://doi.org/10.33005/jasf.v6i1.312>
- Syariati, A. (2022). SMEs' Performance in Indonesia: The Nexus of Notable Ethics-Strategic Behavior Constructions. *Psychology Research and Behavior Management*, 15, 3039–3052. <https://doi.org/10.2147/PRBM.S382273>.
- Tambunan, M.R.U.D. & Rosdiana, H. (2020). Indonesia Tax Authority Measure on Facing the Challenge in Taxing Digital Economy. *Int Technol Manag Rev* 9, 1–10. <https://doi.org/10.2991/itm.k.200203.001>.
- Ule Prince Alamina, Edeh Friday Ogbu, Aberes Wapaimi, & Woyengiimomoemi Jacob (2022). Validity and Reliability: The Functionality of Knowledge Seeking Behavior and Theory Building, *International Journal of Accounting and Management Science*, Vol. 1 No. 2 (2022): October. <https://doi.org/10.56830/FCTP1084>
- Vafaei-Zadeh A, Nikbin D, Wong SL, & Hanifah H (2025), Investigating factors influencing AI customer service adoption: an integrated model of stimulus–organism–response (SOR) and task-technology fit (TTF) theory. *Asia Pacific Journal of Marketing and Logistics*, Vol. 37 No. 6 pp. 1465–1502, doi: <https://doi.org/10.1108/APJML-05-2024-0570>.
- Wibowo, S. (2022). Task complexity and Information System implementation in bureaucratic structures. *Public Policy and Administration Review*, 10(3), 201-218. <https://doi.org/10.15640/ppar.v10n3a4>
- Wu M, Zhu Y, He Q, Zhang L and Lu J (2022) The influence of differential leadership on employees' deviant innovation behavior: An outsider subordinate perspective. *Front. Psychol.* 13:996331. <https://doi.org/10.3389/fpsyg.2022.996331>.