



DOI: <https://doi.org/10.38035/gijea.v4i2>  
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## System Quality and Service Quality in Public Sector Accounting Information Systems: The Role of Perceived Usefulness in Enhancing User Satisfaction

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**Abstract:** This study is motivated by the suboptimal level of user satisfaction in public sector accounting information systems. It aims to examine the effect of system quality and service quality on user satisfaction with the mediating role of perceived usefulness. The research object consists of work units partnering with the State Treasury Service Office in Jambi, with 161 respondents. The study applies a quantitative approach using a survey method and structural equation modeling analysis. The results show that system quality and service quality have a positive and significant effect on perceived usefulness. Perceived usefulness has a positive and significant effect on user satisfaction. Service quality also has a direct effect on user satisfaction, while system quality has no direct effect. Perceived usefulness fully mediates the relationship between system quality and user satisfaction and partially mediates the relationship between service quality and user satisfaction. Overall, respondents perceive the variables at a high level. The findings refine the integration of the Information System Success Model and the Technology Acceptance Model by demonstrating that perceived usefulness serves as the primary mechanism through which system quality influences user satisfaction in mandatory system environments. This study concludes that enhancing perceived usefulness is essential to improving user satisfaction.

**Keyword:** System Quality, Service Quality, Perceived Usefulness, User Satisfaction, Public Sector.

### INTRODUCTION

The development of information systems has become an essential element in supporting organizational performance, particularly in improving efficiency, effectiveness, and decision-making quality. Information systems are defined as integrated components that collect, process, store, and distribute information to support organizational activities and decision-making processes (Laudon, 2020). In the public sector, the implementation of information

systems is increasingly important as governments are required to provide transparent, accountable, and efficient financial management.

One of the critical systems implemented in the public sector is the accounting information system, which functions to process financial data into useful information for decision making (Romney et al., 2012). In Indonesia, the government has implemented an integrated financial management system through the Sistem Aplikasi Keuangan Tingkat Instansi as part of digital transformation in public financial governance. This system is designed to improve the quality of financial reporting, budget monitoring, and decision-making processes in government institutions (Pambudi & Adam, 2018).

However, despite its strategic role, the implementation of public sector accounting information systems still faces several challenges, including system instability, limited functionality, and inadequate user support (Nasrudin & Widagdo, 2020). These issues may reduce the effectiveness of system utilization and ultimately influence user satisfaction.

From a theoretical perspective, the success of an information system can be explained using the Information System Success Model, which emphasizes system quality and service quality as key determinants of system success (DeLone & McLean, 2003). System quality refers to the technical performance of the system, while service quality reflects the quality of support services provided to users, such as responsiveness, assistance, and reliability. Meanwhile, the Technology Acceptance Model highlights perceived usefulness as a fundamental factor influencing user attitudes and system utilization (Davis, 1989). The integration of these two models provides a comprehensive framework to explain how system characteristics and service support influence user satisfaction.

Previous studies have shown inconsistent results regarding the relationship between system quality, service quality, perceived usefulness, and user satisfaction. Some studies found significant relationships (Rana et al., 2015); (Hariguna et al., 2017), while others reported insignificant effects (Alkrajji, 2021); (Wang & Teo, 2020). These inconsistencies indicate the need for further empirical investigation, particularly in the context of public sector accounting information systems.

This study offers a distinct contribution by providing a contextualized understanding of accounting information system success in a mandatory public sector environment. Unlike prior studies that predominantly assume direct relationships between system quality and user satisfaction, this study demonstrates that system quality does not directly influence user satisfaction but operates through perceived usefulness as a full mediating mechanism. In contrast, service quality exerts both direct and indirect effects on user satisfaction. This finding refines the integration of the Technology Acceptance Model and the Information System Success Model by highlighting the dominant role of perceived usefulness as a central linkage between system characteristics and user outcomes. Furthermore, this study emphasizes that service quality plays a more immediate role in shaping user satisfaction, particularly in environments where system usage is mandatory.

This study argues that in mandatory public sector information systems, technical system excellence alone is insufficient to generate user satisfaction. Instead, user satisfaction emerges when system quality is transformed into perceived usefulness that directly supports users' work performance. Therefore, perceived usefulness functions not merely as an additional explanatory variable, but as the central cognitive mechanism linking system characteristics to user satisfaction outcomes. This study positions perceived usefulness as the core theoretical bridge integrating the Information System Success Model and the Technology Acceptance Model in mandatory system environments.

Based on these conditions, this study focuses on work units that are partners of the State Treasury Service Office in Jambi to analyze the factors influencing user satisfaction in the use of accounting information systems. Therefore, the problem formulation in this study

is: (1) Does system quality affect perceived usefulness? (2) Does service quality affect perceived usefulness? (3) Does perceived usefulness affect user satisfaction? (4) Does system quality affect user satisfaction? (5) Does service quality affect user satisfaction? (6) Does perceived usefulness mediate the relationship between system quality and user satisfaction? and (7) Does perceived usefulness mediate the relationship between service quality and user satisfaction?

This study aims to analyze the effect of system quality and service quality on user satisfaction with the mediating role of perceived usefulness in public sector accounting information systems. The findings are expected to provide both theoretical contributions to the development of integrated information system models and practical implications for improving system implementation in government institutions.

## **METHOD**

This study employs a quantitative research approach to examine the relationships between system quality, service quality, perceived usefulness, and user satisfaction in public sector accounting information systems. A survey method was used to collect primary data from respondents who actively utilize the system in their work processes.

The research was conducted on work units that are partners of the State Treasury Service Office (KPPN) in Jambi, Indonesia. The population consisted of 230 work units, and a sample of 161 work units was selected using purposive sampling. The selection criteria included work units that actively use the accounting information system and are directly involved in financial management activities.

### **Respondent Profile**

Most respondents were financial management staff and accounting system operators who were directly involved in government financial reporting activities. The majority of respondents had more than three years of experience using the accounting information system and possessed adequate familiarity with system operations in daily work processes.

Data were collected through a structured questionnaire using a seven-point Likert scale ranging from “strongly disagree” to “strongly agree.” The seven-point Likert scale was selected because it provides greater response variability and improves measurement sensitivity compared to lower-scale alternatives, thereby enhancing the precision of respondents’ perceptions.

The measurement items were adapted from established and validated studies to ensure content validity. System quality was measured using indicators such as reliability, flexibility, ease of use, response time, and security, adapted from (DeLone & McLean, 2003) and subsequent studies (Alkrajji, 2021); (Al-Rahmi et al., 2022). Service quality was measured using indicators such as responsiveness, reliability of support, assurance, and user assistance. Perceived usefulness was measured based on (Davis, 1989), focusing on the extent to which the system enhances job performance. User satisfaction was measured using indicators reflecting overall satisfaction and system evaluation.

To minimize potential bias, several procedural remedies were applied during data collection, including ensuring respondent anonymity and reducing ambiguity in question wording. In addition, statistical testing was conducted to assess common method bias using Harman’s single-factor test. The results indicate that the first factor accounts for less than 50% of the total variance, suggesting that common method bias is not a significant concern in this study.

Data analysis was performed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS version 4.1.0.9. The use of PLS-SEM is justified because this study aims to examine predictive relationships and mediation effects involving multiple

constructs and complex relationships. In addition, PLS-SEM is suitable for studies with moderate sample sizes and does not require strict assumptions of multivariate normality (Hair Jr et al., 2021); (Henseler et al., 2016).

The analysis consists of two main stages: evaluation of the measurement model and evaluation of the structural model. The measurement model was assessed by examining indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. The structural model was evaluated using path coefficients, coefficients of determination ( $R^2$ ), predictive relevance ( $Q^2$ ), and effect size ( $f^2$ ). Hypothesis testing was conducted using the bootstrapping method.

## RESULT AND DISCUSSION

### Measurement Model Evaluation

The measurement model assessment indicates that all indicators meet the required validity and reliability criteria. Factor loadings exceed the recommended threshold of 0.70, confirming indicator reliability. Convergent validity is established as all constructs achieve Average Variance Extracted values above 0.50. Furthermore, internal consistency reliability is confirmed through Cronbach’s alpha and composite reliability values exceeding 0.70.

However, several constructs exhibit reliability values exceeding 0.90. While this indicates strong internal consistency, it may also suggest potential redundancy among indicators. Despite the high reliability values, discriminant validity assessed using the Fornell-Larcker criterion confirms that each construct remains empirically distinct. Therefore, the measurement model is considered acceptable.

### Structural Model Evaluation

The structural model demonstrates substantial explanatory power. The coefficient of determination ( $R^2$ ) indicates that system quality and service quality explain 63.6% of the variance in perceived usefulness, while system quality, service quality, and perceived usefulness explain 74.4% of the variance in user satisfaction. These results suggest that the proposed model has strong predictive capability.

Additionally, the predictive relevance value ( $Q^2 = 0.647$ ) indicates that the model has high predictive relevance. To provide a more comprehensive interpretation, effect sizes ( $f^2$ ) were also considered. The results indicate that perceived usefulness has a strong effect on user satisfaction, while service quality has a moderate effect on perceived usefulness, and system quality has a relatively smaller effect. These findings indicate that statistical significance alone is insufficient to explain the practical importance of relationships among constructs, as the magnitude of effects also varies substantially across variables.

### Hypothesis Testing

**Table 1. Hypothesis Testing Results**

Effect	Original sample (O)	T statistics ( $ O/STDEV $ )	P values	Interpretation
SQ -> PU	0.452	4.397	0.000	Accepted
SQ -> US	0.094	0.811	0.418	Rejected
SVQ -> PU	0.393	4.068	0.000	Accepted
SVQ -> US	0.250	2.714	0.007	Accepted
PU -> US	0.580	5.070	0.000	Accepted

Table 2. Mediation Effect Based on Path Coefficient

Variabel Effect	Original sample (O)	T statistics ((O/STDEV))	P values	Interpretation	Mediation Effect
SQ -> PU -> US	0.262	3.779	0.000	Accepted	Full mediation
SVQ -> PU -> US	0.228	3.215	0.001	Accepted	Complementary Partial mediation

The results of hypothesis testing show that system quality has a positive and significant effect on perceived usefulness, while it does not have a significant direct effect on user satisfaction. Service quality significantly affects both perceived usefulness and user satisfaction. Furthermore, perceived usefulness has a strong and significant effect on user satisfaction. Mediation analysis reveals that perceived usefulness fully mediates the relationship between system quality and user satisfaction and partially mediates the relationship between service quality and user satisfaction.

**Discussion**

This study provides a more nuanced understanding of the relationships between system quality, service quality, perceived usefulness, and user satisfaction in public sector accounting information systems.

First, the findings indicate that both system quality and service quality significantly influence perceived usefulness. This suggests that reliable system performance and high-quality service support enhance users’ perception of system benefits. However, the effect of system quality is slightly stronger than service quality, indicating that technical system performance remains a fundamental driver of perceived usefulness.

Second, perceived usefulness is found to be the strongest predictor of user satisfaction. This result highlights that users evaluate the system primarily based on the extent to which it improves their job performance. Rather than focusing solely on technical characteristics, users are more concerned with the practical benefits derived from system usage.

Interestingly, system quality does not have a significant direct effect on user satisfaction. This finding suggests that technical excellence alone is insufficient to generate positive user evaluations in mandatory public sector system environments. Users may perceive system quality as a basic operational requirement rather than a direct source of satisfaction. Consequently, improvements in reliability, flexibility, or functionality do not automatically enhance satisfaction unless users experience tangible work-related benefits from the system. This finding challenges the conventional assumption within the Information System Success Model that higher system quality directly leads to greater user satisfaction across all contexts.

In contrast, service quality has a direct and significant effect on user satisfaction. This indicates that service-related aspects, such as responsiveness, technical support, and user assistance, directly influence user experience and satisfaction.

The mediation analysis further strengthens these findings. Perceived usefulness fully mediates the relationship between system quality and user satisfaction and partially mediates the relationship between service quality and user satisfaction. This confirms that perceived usefulness acts as a critical mechanism that translates both system performance and service quality into user satisfaction outcomes.

**Theoretical Contribution**

This study contributes theoretically by refining the relationship between system quality and user satisfaction within mandatory information system environments. Unlike traditional assumptions in the Information System Success Model, this study demonstrates that system quality does not directly generate satisfaction. Instead, its influence operates through

perceived usefulness as a cognitive evaluation mechanism. This finding strengthens the integration between the Information System Success Model and the Technology Acceptance Model by positioning perceived usefulness as the primary explanatory pathway linking technical system attributes to user satisfaction. Furthermore, the study confirms that service quality retains both direct and indirect effects, highlighting its complementary experiential role in shaping satisfaction in public sector systems.

From a practical perspective, the findings suggest that improving user satisfaction in public sector accounting information systems requires more than enhancing system performance. Organizations should focus on strengthening service quality, including responsiveness, user support, and reliability, while also ensuring that users clearly perceive the benefits of the system. Efforts such as improving helpdesk services, providing user training, and enhancing system usability are essential to increase perceived usefulness and ultimately improve user satisfaction. Overall, this study extends prior research by providing a deeper understanding of how system quality and service quality influence user satisfaction through perceived usefulness, particularly in mandatory system environments.

## CONCLUSION

This study examines the influence of system quality and service quality on user satisfaction with the mediating role of perceived usefulness in public sector accounting information systems. The findings reveal that both system quality and service quality have a positive and significant effect on perceived usefulness. Furthermore, perceived usefulness has a strong and significant effect on user satisfaction, indicating that users primarily evaluate the system based on its contribution to their job performance.

The results also show that service quality has a direct and significant effect on user satisfaction, while system quality does not have a significant direct effect. This indicates that in a mandatory system environment, system quality is perceived as a basic requirement rather than a determinant of satisfaction, whereas service quality plays a more immediate role in shaping user experience.

Mediation analysis demonstrates that perceived usefulness fully mediates the relationship between system quality and user satisfaction and partially mediates the relationship between service quality and user satisfaction. This finding highlights the central role of perceived usefulness as a mechanism through which both technical and service aspects influence user satisfaction.

From a theoretical perspective, this study extends the integration of the Information System Success Model and the Technology Acceptance Model by emphasizing the role of service quality in public sector systems and confirming the dominant role of perceived usefulness in mandatory usage contexts.

This study is limited to public sector work units within one regional treasury service office, which may restrict the generalizability of the findings to other institutional settings. Future studies are encouraged to involve broader organizational contexts and incorporate additional variables such as trust, organizational support, or user competence.

The study therefore proposes that in mandatory public sector systems, user satisfaction is determined less by technical system excellence itself and more by the extent to which the system is perceived as useful for accomplishing work tasks.

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