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The Effects of System Quality, Information Quality, and Service Quality on the Net Benefits of the Satu Data Ketenagakerjaan Portal: The Mediating Role of User Satisfaction

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Abstract: Digital transformation in public administration requires reliable, informative, and responsive public data services that deliver tangible benefits to users. However, no empirical study has specifically examined the application of the DeLone and McLean Information Systems Success Model to Portal Satu Data Ketenagakerjaan as an integrated government public data service in the labor sector. This study examines the effects of System Quality, Information Quality, and Service Quality on User Satisfaction and Net Benefits of Portal Satu Data Ketenagakerjaan and tests the mediating role of User Satisfaction. A quantitative explanatory approach was used, with data collected through an online questionnaire from 100 portal users selected by purposive sampling during May-June 2026. The data were analyzed using Partial Least Squares Structural Equation Modeling with SmartPLS version 4.1.1.8. The results show that System Quality, Information Quality, and Service Quality positively and significantly affect User Satisfaction and Net Benefits. User Satisfaction also positively and significantly affects Net Benefits and mediates the effects of all three quality dimensions through complementary partial mediation. The novelty lies in applying the DeLone and McLean Information Systems Success Model to Portal Satu Data Ketenagakerjaan as an integrated government public data service supporting Satu Data Indonesia in the labor sector, while examining User Satisfaction as a mediating mechanism in generating Net Benefits.

Keyword: Net Benefits, DeLone and McLean Model, Portal Satu Data Ketenagakerjaan.

INTRODUCTION

The development of information technology has brought significant changes to public administration, particularly in the management and provision of public data. These changes have increased the need for information systems capable of supporting accountable, integrated, standardized, and accessible data governance. In Indonesia, this need has been reinforced by Presidential Regulation of the Republic of Indonesia Number 39 of 2019 concerning Satu Data Indonesia, which emphasizes the consistent implementation of data standards, metadata, data interoperability, reference codes, and master data across government institutions. This policy is

intended to produce government data that are accurate, up to date, integrated, accountable, and readily shareable to support data-driven policymaking.

As part of the implementation of Satu Data Indonesia in the labor sector, the Ministry of Manpower established Satu Data Ketenagakerjaan through Regulation of the Minister of Manpower of the Republic of Indonesia Number 15 of 2020 concerning Satu Data Ketenagakerjaan. In support of this policy, Portal Satu Data Ketenagakerjaan was developed as an integrated platform for the management, storage, and dissemination of labor data. The portal is managed by the Center for Manpower Data and Information Technology and is intended to improve the effectiveness, transparency, and accessibility of labor data services for government institutions and the public. Through this portal, the processes of data collection, validation, management, and dissemination are expected to be carried out more systematically and consistently, thereby supporting digital transformation in public data governance.

The success of a public information system is determined not only by the availability of technology but also by the extent to which the system provides ease of use, high-quality information, and services that meet users' needs. The DeLone and McLean Information Systems Success Model provides a comprehensive framework for evaluating these aspects. The Information Systems Success Model was initially introduced by DeLone and McLean (1992) and subsequently updated by DeLone and McLean (2003), incorporating Service Quality and Net Benefits into the model. In the updated model, System Quality, Information Quality, and Service Quality are identified as important determinants of information system success because they can influence User Satisfaction and the Net Benefits derived from system use (DeLone & McLean, 2003). System Quality relates to the technical characteristics of a system, including ease of use, reliability, availability, adaptability, and response time. Information Quality reflects the completeness, relevance, ease of understanding, security, and suitability of information for users' needs, whereas Service Quality relates to reliability, responsiveness, assurance, and support provided to users (DeLone & McLean, 2003).

These three dimensions are particularly relevant to Portal Satu Data Ketenagakerjaan because users depend not only on the technical performance of the system but also on the quality of the data and services provided. In its implementation, several aspects still require improvement. In terms of System Quality, improvements are needed in the user interface, ease of navigation, data-search processes, and system security. The 2025 data-request records also indicate that not all users utilized the portal as the primary channel for data services, as some requests were still submitted through other channels, such as official correspondence and WhatsApp. This condition indicates that the utilization of Portal Satu Data Ketenagakerjaan as the primary data-service channel has not yet been fully optimized and may still be influenced by accessibility, ease of use, service procedures, and the portal's ability to meet users' needs.

User feedback also indicates the need for improvements in Information Quality and Service Quality. Some users considered the available data not yet fully adequate in terms of completeness, relevance, and timeliness. In addition, users expected improvements in notification features, ease of data downloading, and clarity of information regarding the progress of data requests. In terms of service, the processing time for data requests was, under certain circumstances, perceived as relatively lengthy and was not always accompanied by clear information regarding estimated completion times. These conditions indicate that improving System Quality, Information Quality, and Service Quality is important not only for enhancing the user experience but also for ensuring that the portal generates tangible benefits for its users.

User Satisfaction is an important mechanism for explaining how information system quality can generate benefits for users. In this study, User Satisfaction represents users' evaluations after interacting with and receiving services from Portal Satu Data Ketenagakerjaan. It is measured through accuracy, timeliness, format, and ease of use, adapted from the End-User Computing Satisfaction concept developed by Doll and Torkzadeh (1988), as well as usefulness and the tendency to revisit the portal. Meanwhile, Net Benefits represent

the benefits obtained from using the portal, including reduced effort and costs in searching for data, time savings, increased productivity, and improved decision-making quality. These aspects are consistent with the DeLone and McLean Information Systems Success Model (2003) and the concept of information technology impacts on individual work developed by Torkzadeh and Doll (1999).

The DeLone and McLean Model has been widely applied in previous studies to evaluate information system success. Rizal et al. (2025) found that System Quality and Information Quality influenced User Satisfaction in a library information service system, whereas Service Quality did not demonstrate a significant effect. Gurendrawati et al. (2022) found that System Quality and Service Quality had positive effects on User Satisfaction in an academic service system. The same model has also been applied to academic information systems (Alwi et al., 2023), public organizations and government applications (Faris et al., 2024), and digital banking services (Riva'i et al., 2023). These findings demonstrate that the DeLone and McLean Model is relevant across various types of information systems; however, the effects of System Quality, Information Quality, and Service Quality may vary depending on the system context and user characteristics.

Based on the review of previous studies, research applying the DeLone and McLean Information Systems Success Model specifically to integrated government labor data services remains limited. Previous studies have predominantly focused on library services, academic systems, public service applications, digital banking systems, and other government information systems. In contrast, Portal Satu Data Ketenagakerjaan has distinct characteristics because it is used not only to obtain information but also to support planning, monitoring, evaluation, analysis, reporting, and data-driven decision-making. Furthermore, studies explaining the mediating role of User Satisfaction in the relationships between System Quality, Information Quality, Service Quality, and Net Benefits in government public data services remain limited. These conditions constitute the research gap addressed in this study.

The state of the art and novelty of this study lie in its research object and implementation context, namely the evaluation of Portal Satu Data Ketenagakerjaan as a digital government public data service in the labor sector that supports the implementation of Satu Data Indonesia. Unlike previous studies that have primarily applied the DeLone and McLean Model to organizational information systems or transactional systems, this study applies the model to an integrated labor data platform. In addition to examining the direct effects of System Quality, Information Quality, and Service Quality on Net Benefits, this study also analyzes the indirect effects through User Satisfaction as a mediating variable. Therefore, this study is expected to provide empirical contributions to the development of information system success research in the public sector, particularly in the context of digital labor data services.

Based on the research problems, this study aims to analyze the relationships among System Quality, Information Quality, Service Quality, User Satisfaction, and Net Benefits in Portal Satu Data Ketenagakerjaan. More specifically, this study examines the effects of System Quality, Information Quality, and Service Quality on User Satisfaction; the effects of System Quality, Information Quality, and Service Quality on Net Benefits; and the effect of User Satisfaction on Net Benefits. In addition, this study analyzes the mediating role of User Satisfaction in the effects of System Quality on Net Benefits, Information Quality on Net Benefits, and Service Quality on Net Benefits. Through these objectives, the study is expected to provide a more comprehensive understanding of how technical quality, information quality, and service quality contribute to the benefits perceived by users of Portal Satu Data Ketenagakerjaan.

METHOD

This study employed a quantitative explanatory approach to examine the relationships among System Quality, Information Quality, Service Quality, User Satisfaction, and Net

Benefits of Portal Satu Data Ketenagakerjaan. The unit of analysis was users of the portal, and the study was conducted from May to June 2026. The research framework was based on the DeLone and McLean Information Systems Success Model, with System Quality, Information Quality, and Service Quality as independent variables, User Satisfaction as a mediating variable, and Net Benefits as the dependent variable. Intention to Use and Actual Use were excluded because portal use by some users is associated with job responsibilities, institutional requirements, and data-access needs rather than solely with individual intention. The research model is presented in Figure 1.

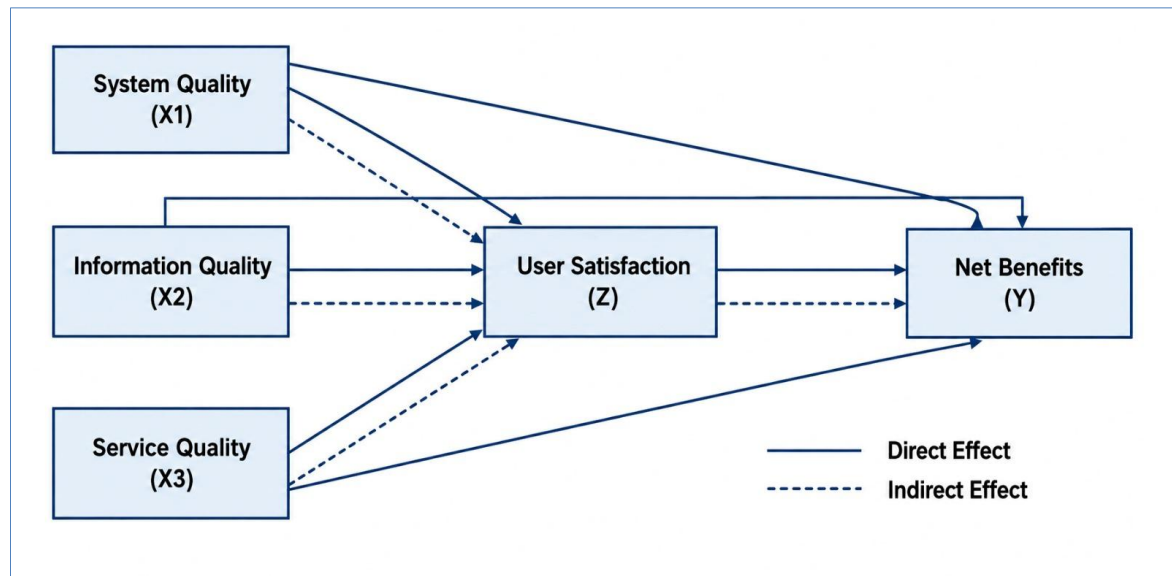


Figure 1. Research Model

Data Collection and Sample

The population comprised internal and external users who had previously used Portal Satu Data Ketenagakerjaan, particularly to access, search for, download, or request labor data. Respondents were selected using non-probability sampling with a purposive sampling approach based on criteria relevant to the research objectives (Sugiyono, 2013). Eligible respondents were users with sufficient experience in using the portal and who were willing to complete the online questionnaire.

A total of 100 respondents were included in the analysis. Sample adequacy was assessed using the 10-times rule for Partial Least Squares Structural Equation Modeling, which recommends a minimum sample size of ten times the largest number of indicators in a construct or structural paths directed at an endogenous construct (Hair et al., 2022). The largest construct in this study was User Satisfaction, consisting of six indicators; therefore, the minimum sample size was 60 respondents. The sample of 100 respondents thus exceeded the minimum requirement.

Operationalization of Variables

The research instrument used a five-point Likert scale ranging from strongly disagree to strongly agree and consisted of 23 indicators: five indicators of System Quality, five of Information Quality, three of Service Quality, six of User Satisfaction, and four of Net Benefits. System Quality, Information Quality, and Service Quality were measured based on the DeLone and McLean Information Systems Success Model (2003). User Satisfaction was measured by adapting the *End-User Computing Satisfaction* instrument developed by Doll and Torkzadeh (1988). Net Benefits were measured based on reduced data-search effort, time savings,

increased productivity, and improved decision-making quality (DeLone & McLean, 2003; Torkzadeh & Doll, 1999).

Data Analysis Techniques

The data were analyzed using descriptive and inferential analyses. Descriptive analysis was used to summarize respondent characteristics and response patterns through frequencies, percentages, and mean values. Inferential analysis was conducted using Structural Equation Modeling–Partial Least Squares with SmartPLS version 4.1.1.8. Prior to evaluating the measurement and structural models, potential common method bias was assessed using Harman’s One-Factor Test, with a first-factor variance below 50% indicating that the data were not dominated by a single common factor (Fuller et al., 2016).

The measurement model was evaluated using outer loading, Average Variance Extracted (AVE), Heterotrait-Monotrait Ratio (HTMT), Cronbach’s Alpha, and Composite Reliability. The structural model was assessed using the Variance Inflation Factor (VIF), R-square, and f-square. Hypothesis testing was performed using bootstrapping based on path coefficients, t-statistics, and p-values. Relationships were considered statistically significant at the 5% level when the t-statistic exceeded 1.96 and the p-value was below 0.05. Indirect effects through User Satisfaction were assessed using the specific indirect effect, while the type of mediation was determined based on the significance and direction of the direct and indirect effects.

RESULTS AND DISCUSSION

Respondent Characteristics

A total of 150 questionnaires were distributed to users of Portal Satu Data Ketenagakerjaan during May-June 2026. Of these, 102 questionnaires were returned, and 100 were used for the analysis. The respondents were predominantly male (59%), aged 35-44 years (41%), and held a bachelor’s degree (70%). Most respondents had used Portal Satu Data Ketenagakerjaan for more than two years (88%). In terms of occupation, the respondents were predominantly central government civil servants (52%) and regional government civil servants (32%). These characteristics indicate that most respondents had relatively extensive experience using the portal and were closely associated with the utilization of labor data.

Descriptively, respondents’ perceptions of all research variables ranged from high to very high. For System Quality, the mean indicator scores ranged from 3.60 to 4.24, with the highest score found for the portal’s ability to operate across various devices or web browsers. Information Quality had mean scores ranging from 3.58 to 4.05, while Service Quality ranged from 4.03 to 4.26. User Satisfaction recorded mean scores ranging from 3.60 to 4.24, with the highest score observed for the usefulness of the portal. Meanwhile, Net Benefits ranged from 3.82 to 4.24, with the highest score found for improved decision-making quality. These findings indicate that users generally had positive perceptions of the quality and benefits of Portal Satu Data Ketenagakerjaan.

Measurement Model Evaluation

Before evaluating the research model, the potential for *common method bias* was examined using Harman’s One-Factor Test. The first factor explained 41.5% of the total variance, which was below the 50% threshold. This result indicates that the data were not dominated by a single general factor and that there was no dominant indication of *common method bias*.

The measurement model evaluation showed that all 23 indicators had *outer loading* values ranging from 0.785 to 0.906, all exceeding the recommended threshold of 0.70. The *Average Variance Extracted* values for all constructs were also above 0.50, namely 0.701 for System Quality, 0.757 for Information Quality, 0.759 for Service Quality, 0.720 for User

Satisfaction, and 0.766 for Net Benefits. Therefore, all constructs met the requirements for convergent validity.

Discriminant validity was also established. All *Heterotrait-Monotrait Ratio* values were below 0.90, with the highest value being 0.725 for the relationship between User Satisfaction and Net Benefits. The *Fornell-Larcker Criterion* and *cross-loading* results also demonstrated adequate empirical distinction among the constructs. Furthermore, *Cronbach's Alpha* values ranged from 0.841 to 0.922, while *Composite Reliability* values ranged from 0.904 to 0.940. Since all values exceeded 0.70, the research instrument was considered valid and reliable.

Structural Model Evaluation

The structural model evaluation showed that the *Variance Inflation Factor* values ranged from 1.040 to 2.642, which were below the threshold of 5.00. Therefore, no multicollinearity problems were identified among the predictor variables.

The *R-square* value for User Satisfaction was 0.622, indicating that System Quality, Information Quality, and Service Quality explained 62.2% of the variance in User Satisfaction. Meanwhile, the *R-square* value for Net Benefits was 0.507, indicating that System Quality, Information Quality, Service Quality, and User Satisfaction explained 50.7% of the variance in Net Benefits. Both values indicate a moderate level of explanatory power.

The *f-square* results showed that Information Quality made the largest contribution to User Satisfaction, with a value of 0.607, followed by Service Quality at 0.383 and System Quality at 0.196. Accordingly, Information Quality and Service Quality had large effects on User Satisfaction, whereas System Quality had a moderate effect. In contrast, the individual effects of System Quality, Information Quality, Service Quality, and User Satisfaction on Net Benefits were categorized as small, with *f-square* values ranging from 0.058 to 0.083. The differences in effect sizes provide further insight into the structural relationships within the model. Information Quality ($f^2 = 0.607$) and Service Quality ($f^2 = 0.383$) made substantially stronger contributions to User Satisfaction than System Quality ($f^2 = 0.196$), indicating that users' satisfaction with Portal Satu Data Ketenagakerjaan is particularly influenced by the quality of the information provided and the quality of services received. In contrast, the relatively small individual effect sizes on Net Benefits suggest that no single predictor independently dominates the formation of user benefits. Nevertheless, the *R-square* value of 0.507 indicates that System Quality, Information Quality, Service Quality, and User Satisfaction collectively explain 50.7% of the variance in Net Benefits. This pattern suggests that the benefits derived from the portal emerge from the combined contribution of technical system performance, information quality, service quality, and users' satisfaction rather than from a single dominant factor.

The PLS-SEM model results, including the outer loading values, path coefficients, and *R-square* values of the endogenous constructs, are presented in Figure 2.

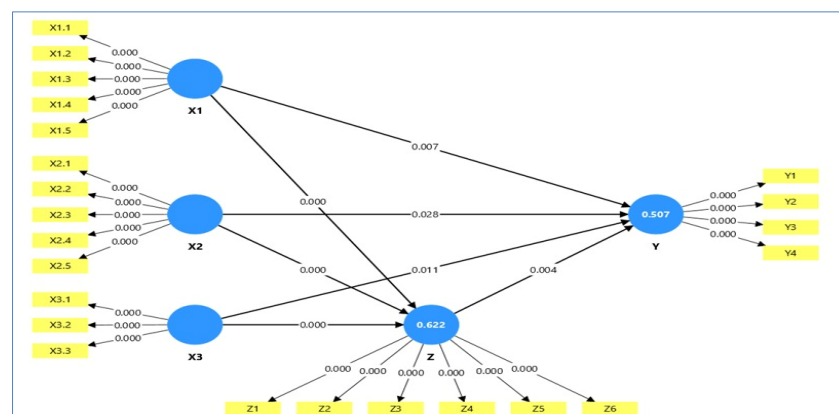


Figure 2. PLS-SEM Model Estimation Results

As illustrated in Figure 2, all indicators demonstrate adequate outer loading values, while the structural paths indicate positive relationships among the constructs in the proposed model.

Direct Effects among Variables

The *bootstrapping* results showed that all direct relationships in the research model were positive and statistically significant, as presented in the following table.

Table 1. Path Coefficients - Mean, STDEV, T Values, P Values

Relationship	Path Coefficient	Sample Mean (M)	STDEV	T Statistics	P Values	Result
X1 -> Y	0,196	0,202	0,073	2,677	0,007	Significant
X1 -> Z	0,278	0,282	0,061	4,533	0,000	Significant
X2 -> Y	0,221	0,224	0,101	2,199	0,028	Significant
X2 -> Z	0,494	0,492	0,066	7,489	0,000	Significant
X3 -> Y	0,222	0,223	0,087	2,553	0,011	Significant
X3 -> Z	0,390	0,389	0,062	6,241	0,000	Significant
Z -> Y	0,328	0,323	0,115	2,852	0,004	Significant

Source: SmartPLS Data Analysis Results, (2026)

System Quality had a positive and significant effect on User Satisfaction ($\beta = 0.278$; $p < 0.001$). This finding indicates that the availability, reliability, response speed, ease of use, and adaptability of Portal Satu Data Ketenagakerjaan contribute to user satisfaction. This result supports the DeLone and McLean Information Systems Success Model (2003), which identifies System Quality as one of the determinants of User Satisfaction. The finding is also consistent with Gurendrawati et al. (2022), who reported a positive effect of System Quality on User Satisfaction. However, it differs from Wilana (2025), who found that System Quality did not significantly affect User Satisfaction in the Amdalnet system. This difference suggests that the effect of System Quality may depend on the characteristics of the system and its usage context.

Information Quality had a positive and significant effect on User Satisfaction ($\beta = 0.494$; $p < 0.001$) and represented the strongest direct effect on User Satisfaction. The *f-square* value of 0.607 further indicates that Information Quality had a large effect. This finding suggests that completeness, relevance, ease of understanding, suitability, and information security are important aspects in shaping users' experiences with Portal Satu Data Ketenagakerjaan. The result supports DeLone and McLean (2003) and is consistent with Rizal et al. (2025), Faris et al. (2024), and Wilana (2025), who emphasized the importance of Information Quality in determining User Satisfaction. In the context of government data services, this finding is particularly relevant because the primary value of the portal lies in its ability to provide data that can be used for analysis, reporting, planning, and decision-making.

Service Quality also had a positive and significant effect on User Satisfaction ($\beta = 0.390$; $p < 0.001$), with an *f-square* value of 0.383, indicating a large effect. This result suggests that service assurance, responsiveness, and attention to users' needs are important factors in determining satisfaction. The finding is consistent with Gurendrawati et al. (2022) and Wilana (2025). However, it differs from Rizal et al. (2025), who did not find a significant effect of Service Quality on User Satisfaction. In Portal Satu Data Ketenagakerjaan, users interact not only with the system but also with service administrators during data searches and data-request processes. Therefore, Service Quality remains an important component of the portal's overall success.

System Quality also had a positive and significant effect on Net Benefits ($\beta = 0.196$; $p = 0.007$). This finding indicates that better technical performance of the portal leads to greater

benefits for users, including easier data searches, time savings, increased productivity, and support for decision-making. Although the effect was statistically significant, the *f-square* value of 0.063 indicates that its direct contribution was relatively small. This suggests that technical system quality is an important prerequisite, but the benefits of the portal are not generated solely through System Quality.

Information Quality had a positive and significant effect on Net Benefits ($\beta = 0.221$; $p = 0.028$). Information that meets users' needs can reduce data-search effort, accelerate work processes, and provide a stronger basis for decision-making. This finding reinforces the relevance of the DeLone and McLean Model (2003) in the context of public data services, as Information Quality not only contributes to satisfaction but also generates tangible benefits for users.

Service Quality had a positive and significant effect on Net Benefits ($\beta = 0.222$; $p = 0.011$). This result indicates that responsive services that effectively address users' needs can enhance the benefits derived from the portal. Although the direct effect was relatively small, as indicated by an *f-square* value of 0.069, Service Quality still plays an important role in helping users obtain data more effectively and in reducing barriers during the service process.

User Satisfaction had a positive and significant effect on Net Benefits ($\beta = 0.328$; $p = 0.004$). This finding indicates that users whose needs and expectations are fulfilled tend to obtain greater benefits from using Portal Satu Data Ketenagakerjaan. The result is consistent with the DeLone and McLean Model (2003) and with Faris et al. (2024), Riva'i et al. (2023), and Wilana (2025), who identified User Satisfaction as an important determinant of information system benefits. Therefore, increasing the benefits of the portal depends not only on technical, information, and service quality but also on the extent to which these dimensions create a satisfactory user experience.

Mediating Role of User Satisfaction

The indirect-effect analysis showed that User Satisfaction significantly mediated the relationships between System Quality, Information Quality, and Service Quality and Net Benefits.

Table 1 Specific Indirect Effects - Mean, STDEV, T Values, P Values

Mediating Relationship	Original Sample (O)	Sample Mean (M)	STDEV	T Statistics	P Values	Result
X3 -> Z -> Y	0,128	0,126	0,051	2,507	0,012	Significant
X1 -> Z -> Y	0,091	0,091	0,038	2,398	0,017	Significant
X2 -> Z -> Y	0,162	0,160	0,063	2,572	0,010	Significant

Source: SmartPLS Data Analysis Results, (2026)

User Satisfaction significantly mediated the effect of System Quality on Net Benefits, with an indirect coefficient of 0.091 ($p = 0.017$). This result indicates that System Quality generates benefits through two mechanisms: directly and indirectly through increased User Satisfaction. This finding differs from Wilana (2025), who did not identify a mediating role of User Satisfaction in the relationship between System Quality and net impacts. This difference suggests that, in the context of Portal Satu Data Ketenagakerjaan, users' experience of the technical performance of the system plays a stronger role in shaping the benefits they perceive.

User Satisfaction also significantly mediated the effect of Information Quality on Net Benefits, with an indirect coefficient of 0.162 ($p = 0.010$). This value was the largest indirect effect among the three mediating paths. This finding indicates that high-quality information not only generates benefits directly but also increases User Satisfaction, which subsequently strengthens the benefits obtained from using the portal. This result is consistent with Wilana

(2025) and reinforces the important role of Information Quality in the success of public data services.

The effect of Service Quality on Net Benefits through User Satisfaction was also significant, with an indirect coefficient of 0.128 ($p = 0.012$). This finding indicates that greater responsiveness, assurance, and attention to users' needs can increase User Satisfaction, which subsequently contributes to greater benefits from portal use. The result supports the DeLone and McLean Model (2003) and is consistent with studies indicating that Service Quality can generate system benefits through positive user experiences.

The direct effects of System Quality, Information Quality, and Service Quality on Net Benefits were statistically significant. All indirect effects through User Satisfaction were also significant and positive. These findings indicate that the mediation pattern is classified as complementary partial mediation. Thus, the Net Benefits of Portal Satu Data Ketenagakerjaan are generated through two complementary pathways: the direct effects of portal quality on the benefits perceived by users and the indirect effects through User Satisfaction.

From a practical perspective, these findings indicate that improving Portal Satu Data Ketenagakerjaan should not focus solely on technical system performance. Although System Quality significantly contributes to User Satisfaction and Net Benefits, the stronger contribution of Information Quality to User Satisfaction highlights the importance of providing complete, relevant, understandable, secure, and user-oriented information. The descriptive findings also indicate that usability and information personalization remain areas that could be further improved. In addition, greater responsiveness, clearer information regarding data-request procedures and status, service-progress notifications, and accessible communication channels may strengthen users' experiences with the portal. Improving these aspects is important because higher levels of User Satisfaction can reinforce the benefits obtained from the portal, particularly in supporting efficient data access, productivity, and data-driven decision-making in the labor sector.

The novelty of this study lies in the application of the DeLone and McLean Information Systems Success Model to Portal Satu Data Ketenagakerjaan as an integrated government public data service supporting the implementation of Satu Data Indonesia in the labor sector, while examining User Satisfaction as a mediating mechanism in generating Net Benefits. The results show that System Quality, Information Quality, and Service Quality not only have direct effects on Net Benefits but also exert indirect effects through User Satisfaction, forming a complementary partial mediation pattern. Within this mechanism, Information Quality has the strongest effect on User Satisfaction ($\beta = 0.494$; $f^2 = 0.607$) and produces the largest indirect effect on Net Benefits through User Satisfaction ($\beta = 0.162$). These findings provide empirical evidence that the success of Portal Satu Data Ketenagakerjaan as a government public data service is determined not only by technical quality, information quality, and service quality directly, but also by the ability of these dimensions to enhance User Satisfaction, which subsequently strengthens the benefits derived from the portal.

CONCLUSION

Conclusion

The results show that System Quality, Information Quality, and Service Quality have positive and significant effects on User Satisfaction and the Net Benefits of Portal Satu Data Ketenagakerjaan. User Satisfaction also has a positive and significant effect on Net Benefits and significantly mediates the effects of System Quality, Information Quality, and Service Quality on Net Benefits. The direct and indirect effects are statistically significant and positive, indicating that User Satisfaction acts as a complementary partial mediator. These findings indicate that the benefits of Portal Satu Data Ketenagakerjaan are determined not only directly by technical system quality, information quality, and service quality, but are also strengthened through User Satisfaction in utilizing the portal. Among the factors influencing User

Satisfaction, Information Quality makes the strongest contribution, indicating that providing complete, relevant, easy-to-understand, secure information that meets users' needs is essential for improving the success of the portal. From a theoretical perspective, this study provides empirical evidence for the application of the DeLone and McLean Information Systems Success Model in the context of government public data services and strengthens the understanding of User Satisfaction as a mechanism linking information system quality to the benefits perceived by users.

Limitations

This study has several limitations. First, the study was conducted only on Portal Satu Data Ketenagakerjaan; therefore, the findings cannot be directly generalized to Portal Satu Data Indonesia or government data portals in other sectors. Second, the study employed a questionnaire-based quantitative approach, meaning that the results depend on respondents' perceptions, experiences, and assessments at the time of data collection. Third, the research model was limited to System Quality, Information Quality, Service Quality, User Satisfaction, and Net Benefits, while other factors such as data literacy, intensity of use, user trust, organizational support, digital culture, and infrastructure readiness were not examined. Fourth, the study was conducted within a specific period and therefore does not capture changes in user perceptions over the long term following developments in portal features, systems, services, or policies. In addition, the research approach did not explore in depth the qualitative reasons underlying users' experiences and assessments. Therefore, the findings should be interpreted within the scope and period of this study.

Recommendations

Based on the findings, the management of Portal Satu Data Ketenagakerjaan is encouraged to continuously improve System Quality by strengthening access availability, reliability, response speed, ease of use, and the portal's ability to adapt to users' needs. Improvements in Information Quality should focus on data completeness, relevance, ease of understanding, security, updating, and integration, while Service Quality should be strengthened through greater responsiveness, clearer service procedures, information on the status of data requests, service progress notifications, and easily accessible communication channels. User Satisfaction evaluations, outreach activities, and user education should also be conducted periodically to optimize the portal as the primary channel for labor data services. Future studies are recommended to broaden the research object and increase the number of respondents, incorporate additional variables such as data literacy, intensity of use, user trust, organizational support, digital culture, data governance quality, or infrastructure readiness, and apply mixed-method or longitudinal approaches. Comparative studies involving other government data portals may also be conducted to obtain a broader understanding of the success of digital public data services.

Author Contributions

The first author was primarily responsible for developing the research concept, collecting and analyzing the data, interpreting the research findings, and preparing the initial draft of the manuscript. The second author contributed to refining the conceptual framework and providing critical review and revisions to the manuscript. Both authors reviewed and approved the final manuscript for submission and publication.

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