

Unveiling the Determinants of Digital Library Success: A HOT-Fit Analysis of E-Perpus Kota Depok

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Abstract

E-Perpus Kota Depok is a digital library service provided by the Depok City Library and Archives Service to reach a wider community which can be accessed via smartphone by downloading this application via Play Store. Digital libraries are public services that support the achievement of Sustainable Development Goals (SDGs), particularly SDG 4 on Quality Education and SDG 9 on Industry, Innovation, and Infrastructure. However, information system success is influenced not only by technological aspects but also by human and organizational factors. This study analyzes the determinants of the success of the E-Perpus Kota Depok digital library system using the Human-Organization-Technology Fit (HOT-Fit) model. A quantitative approach was employed using a survey involving 200 users of the E-Perpus Kota Depok application. Data were collected through an online questionnaire and analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS. The results showed that nine out of twelve hypotheses were significant. System Quality positively influenced System Use and User Satisfaction, while Information Quality significantly influenced User Satisfaction. Service Quality did not significantly affect System Use or User Satisfaction. In addition, organizational and human factors contributed significantly to Net Benefit. The model demonstrated strong predictive power, with System Use obtaining the highest R-Square value of 71.6%. The study provides practical insights for improving digital public library services, although it is limited to a single regional context.

Keywords: digital library, e-perpus kota depok, HOT-Fit, information system success, SDGs

1 Introduction

Digital library services represent an effort by libraries to ensure that information resources remain accessible to individuals who cannot directly visit library facilities. By utilizing digital library platforms, users are able to obtain electronic reading materials, retrieve information, and access library services in a more efficient manner. In the context of local government, the implementation of digital libraries has become a crucial part of improving the quality of public services, increasing public literacy, and ensuring equitable access to information. The implementation of digital library services also supports the achievement of Sustainable Development Goals (SDGs), particularly Goal 4 related to inclusive education and Goal 9 concerning digital innovation and infrastructure development. Several earlier studies identified digital libraries as important platforms for expanding public access to information and knowledge resources [1], [2], [3].

As one of the cities with a high level of technology adoption, Depok City has introduced the E-Perpus Kota Depok application as a digital library service for the community. The application was developed to expand public access to digital reading materials and library services through smartphones. The adoption of digital technology also reinforces the role of libraries as centers of information and public learning facilities [4], [5]. Based on observations of the app's download history via Play Store, the E-Perpus Kota Depok application has been downloaded over 5,000 times, yet still holds a 3.9 rating and 55 reviews. Internal system records indicate that the app recorded 156

additional registrations at the beginning of 2026. The Depok City E-Library app offers a variety of collections, from general collections for children and novels for teenagers to special collections for academics. The best reader reports are also presented as awards for users accessing the Depok City E-Library collection. This underpins the importance of evaluating the success of digital library systems from technological, human, and organizational perspectives, demonstrating how the app delivers system quality, information resources, and service quality that meet user expectations.

The success of a digital information system is shaped by technological capabilities, user engagement, and the extent of organizational support provided during implementation. The availability of a digital system alone does not guarantee successful implementation, particularly when users encounter difficulties or do not perceive meaningful benefits from using the application. Previous studies have demonstrated that these factors influence the success of digital library services [1], [6], [7].

In Indonesia, several studies have applied the HOT-Fit model to evaluate information systems, including academic digital library services [8]. Previous literature reviews also indicate that HOT-Fit studies have predominantly been conducted in the health sector, while studies in library management contexts remain relatively limited [9]. However, studies discussing public digital libraries managed by local governments remain limited. In addition, previous findings regarding the influence of Information Quality and Service Quality on system success have shown varying results across different studies [6], [10]. Compared to academic libraries, local government digital libraries involve more diverse public users with different digital literacy levels and service expectations. Therefore, evaluating E-Perpus Kota Depok provides important insights into the implementation of the HOT-Fit model within the context of public digital library services.

A previous study analyzed the satisfaction level of Depok City's E-Library using the PIECES Framework, which analyzes Performance, Information, Economy, Control, Efficiency, and Service. The results of this study showed user satisfaction with each variable, with an average score of 4. The highest scores were for the Performance variable (4.4) and the Economy variable (4.5) [11]. In this study, a comprehensive evaluation is needed from the perspective of the Human, Organizational, and Technology approach by researchers. This approach is still limited in its use in digital library services. Most previous studies have focused on academic libraries or educational institutions, while discussions regarding public digital library services with diverse user characteristics are still limited.

The Human-Organization-Technology Fit (HOT-Fit) model is employed in this study because it can comprehensively analyze the relationships among System Quality, Information Quality, Service Quality, System Use, User Satisfaction, organizational support, and system benefits [8], [9], [10], [12]. Accordingly, this study evaluates the determinants of digital library system success in E-Perpus Kota Depok through the HOT-Fit perspective. This study contributes to the evaluation of public sector information systems and provides practical insights to improve the effectiveness of digital library services at the Depok City Library and Archives Service.

2 Literature Review

The assessment of information system success encompasses various interrelated dimensions, including system performance, information characteristics, user behavior, satisfaction, and the benefits generated for individuals and organizations. Existing success models generally emphasize the interaction between technological quality, user responses, and organizational outcomes. Within the DeLone and McLean framework, System Quality, Information Quality, and Service Quality are regarded as key determinants that influence both system usage and user satisfaction. These two factors subsequently contribute to the realization of Net Benefits. The framework has been adopted extensively in studies evaluating information systems across different settings, including digital library environments [1], [2], [6].

To provide a more comprehensive explanation of information system success, the Human-Organization-Technology Fit (HOT-Fit) framework was developed by incorporating organizational dimensions into the evaluation process. Unlike earlier models that concentrated primarily on technological and user-related factors, HOT-Fit considers organizational readiness, institutional support, and the alignment between technology, people, and organizational structures. The framework assumes that successful implementation is achieved when these dimensions operate in a mutually

supportive manner. Consequently, HOT-Fit has been applied in numerous studies involving healthcare organizations, educational institutions, and public service agencies [8], [9], [13].

In the context of digital libraries, several studies reported that System Quality and Information Quality contribute to improving User Satisfaction. Previous research on digital library services has consistently highlighted the importance of technological quality in shaping user perceptions and experiences. Reliable system performance, accessible interfaces, and relevant information resources are frequently associated with higher levels of user satisfaction [6], [9]. However, findings regarding Service Quality remain inconclusive, particularly in self-service digital environments where users interact more frequently with system features than with support personnel. In addition to technological factors, organizational aspects such as management commitment, operational support, and institutional policies also influence the effectiveness of information system implementation. Although HOT-Fit has been widely employed in academic and healthcare settings, comprehensive investigations of public digital library services managed by local governments remain relatively limited [6], [9], [14], [15], [16]. Therefore, this study examines the relationships among HOT-Fit dimensions in the E-Perpus Kota Depok application to provide empirical evidence from a local government digital library context. Based on the literature review, a conceptual framework and research hypotheses were developed to describe the relationships among the technology, human, organization, and Net Benefit dimensions, as illustrated in Figure 1.

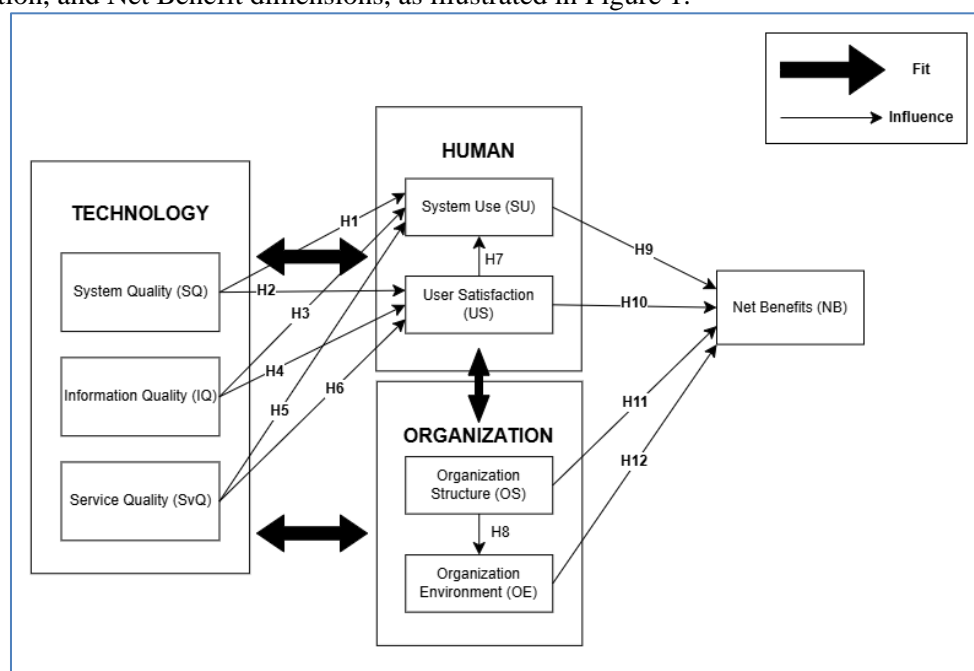


Figure 1 Conceptual framework and research hypotheses

Figure 1 illustrates that the technology dimension, consisting of System Quality, Information Quality, and Service Quality, influences the human dimension, namely System Use and User Satisfaction. Furthermore, the human and organization dimensions affect Net Benefit, while the influence of Organization Structure on Organization Environment is also examined. This model serves as the basis for testing the twelve research hypotheses. Based on the literature review, HOT-Fit studies have been predominantly applied in the education, healthcare, and internal organizational sectors. Studies examining digital libraries in local government environments remain relatively limited, particularly those evaluating system success using the HOT-Fit framework comprehensively. The novelty of this study lies in the application of the HOT-Fit model to evaluate a local government digital library service.

3 Research Method

A quantitative explanatory design was employed to investigate the causal associations among constructs incorporated within the HOT-Fit model related to the success of the E-Perpus Kota Depok

system. This approach enabled the study to evaluate hypotheses and measure relationships among latent constructs statistically based on users' perceptions [17].

Evaluation focused on the E-Perpus Kota Depok application, a public digital library platform that provides electronic book access through mobile devices. The study was conducted from June to November 2025. The research population consisted of all users of the E-Perpus Kota Depok application, totaling 1,305 users based on data obtained from the system administrator. The study adopted purposive sampling as a non-probability sampling method to identify participants who met the established inclusion criteria. Respondents were selected based on several criteria, including having an application account, having used the application at least once within the last year, and being willing to complete the questionnaire. A total of 200 respondents were successfully collected and included in this study. The selected sample size was considered sufficient to represent the target population and support robust structural model analysis using PLS-SEM. In addition, the sample size exceeded the minimum recommendation for PLS-SEM analysis involving complex structural models and multiple latent constructs, thereby providing adequate statistical power for hypothesis testing [17].

The respondent characteristics indicate that the majority of E-Perpus Kota Depok users were female (76%) and within the productive age range of 21–25 years (46%), followed by respondents aged 16–20 years (31.5%). Most respondents used the application fewer than three times per week (88%), indicating that the intensity of application usage is still relatively limited. In terms of domicile, 63.5% of respondents were from Depok City, while the remaining respondents came from outside the region. Based on occupational status, most respondents were university students (66.5%), indicating that the application is predominantly used by academic communities.

Research data were gathered using an online survey disseminated through the official WhatsApp communication channel managed by E-Perpus Kota Depok of E-Perpus Kota Depok. The research instrument was developed based on HOT-Fit model variables adapted from previous studies and adjusted to the research context. Each item was measured using a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). A four-point Likert scale was selected to avoid neutral responses and encourage respondents to provide more definitive perceptions regarding their experiences with the application. Previous studies have shown that midpoint options on Likert scales may be interpreted inconsistently by respondents, such as representing neutrality, uncertainty, or lack of opinion, potentially affecting response consistency [17], [18]. The details of variables and indicators are presented in Table 1.

Table 1 Research indicators

Variable	Indicator (Statement)	Code
System Use (SU)	The application is easy to use	SU1
	Users understand how to use the application	SU2
	The application is used according to reading needs	SU3
	The application is used regularly	SU4
User Satisfaction (US)	Users are satisfied with the application	US1
	Users perceive that the application is beneficial	US2
Organization Structure (OS)	The application features are complete according to library service needs	OS1
	Clear operational support is provided in managing the application	OS2
	The process of searching and borrowing books is easy	OS3
Organization Environment (OE)	The system receives support from related stakeholders	OE1
	The system is supported by authorized institutions	OE2
System Quality (SQ)	The application interface is simple and easy to understand	SQ1
	The application is fast and rarely experiences disruptions	SQ2
	The application is easily accessible	SQ3
	User data security is well maintained	SQ4
Information Quality (IQ)	Information is presented in language that is easy to understand	IQ1
	Information is complete and meets user needs	IQ2
	Information is updated regularly	IQ3

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	Information or collections are easy to find	IQ4
Service Quality (SvQ)	Technical assistance is easily available when problems occur	SvQ1
	The administrators provide responsive and satisfactory services	SvQ2
Net Benefit (NB)	The application helps users obtain reading materials easily	NB1
	The application saves time in searching for reading materials	NB2
	The application helps users complete assignments or work	NB3

Based on Table 1, the study used eight main constructs represented by twenty-four measurement indicators covering the technology, human, organizational, and Net Benefit dimensions in the HOT-Fit framework. The indicators were adapted from previous information system evaluation studies and adjusted to match the characteristics of public digital library services. Each construct consisted of several indicators to capture user perceptions and experiences while using the E-Perpus Kota Depok application.

To examine the proposed relationships among the research constructs, this study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3. The technique was chosen because it enables the simultaneous analysis of multiple latent constructs within a complex model and remains suitable for studies with a moderate sample size [17]. The analytical process involved evaluating the measurement model to assess validity and reliability, followed by structural model assessment and hypothesis testing through a bootstrapping procedure in Figure 2.

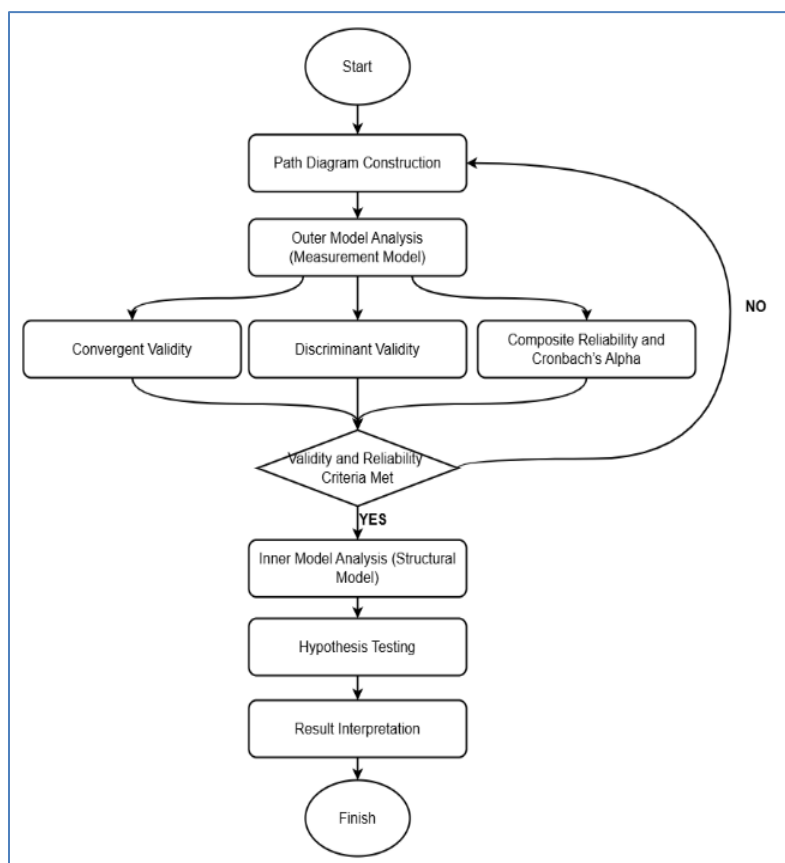


Figure 2 Research analysis stages

Figure 2 presents the analytical stages applied in this study. Model construction was initially based on the HOT-Fit framework to define relationships among variables. Evaluation of the outer model was then carried out to verify construct validity and reliability before proceeding to structural model assessment [17]. Hypothesis testing employed the bootstrapping procedure in PLS-SEM after the measurement model satisfied the required criteria. The analysis concluded with interpretation of the results to identify the dominant factors affecting the success of the E-Perpus Kota Depok digital library system. Based on the developed conceptual framework, this study proposed twelve hypotheses

describing the relationships among variables within the HOT-Fit model. The details of the research hypotheses are presented in Table 2.

Table 2 Research hypotheses

Hypothesis	Statement
H1	System Quality has a significant effect on System Use.
H2	System Quality has a significant effect on User Satisfaction.
H3	Information Quality has a significant effect on System Use.
H4	Information Quality has a significant effect on User Satisfaction.
H5	Service Quality has a significant effect on System Use.
H6	Service Quality has a significant effect on User Satisfaction.
H7	User Satisfaction has a significant effect on System Use.
H8	Organization Structure has a significant effect on the Organization Environment.
H9	System Use has a significant effect on Net Benefit.
H10	User Satisfaction has a significant effect on Net Benefit.
H11	Organization Structure has a significant effect on Net Benefit.
H12	Organization Environment has a significant effect on Net Benefit.

Table 2 shows that the research hypotheses include relationships among the technology, human, and organization dimensions, as well as their effects on Net Benefit. All hypotheses were empirically tested using the PLS-SEM method with the criteria of T-statistic >1.96 and p-value <0.05 to determine the significance of relationships among variables [17].

4 Results and Analysis

4.1 Outer Model

Prior to hypothesis testing, the measurement model was assessed to ensure that all constructs met the required validity and reliability criteria. The evaluation included convergent validity, discriminant validity, and construct reliability analysis [17].

a. Convergent Validity

Convergent validity testing was performed to verify whether indicators representing each HOT-Fit construct consistently reflected the latent variables measured in the E-Perpus Kota Depok context. The criteria used were outer loading values greater than 0.70 and Average Variance Extracted (AVE) values greater than 0.50 [17]. The results of the convergent validity test are presented in Table 3.

Table 3 Convergent validity

Variable	Indicator	Outer loading	AVE	Status
Information Quality	IQ1	0.789	0.704	Valid
	IQ2	0.887		Valid
	IQ3	0.796		Valid
	IQ4	0.879		Valid
Net Benefit	NB1	0.916	0.839	Valid
	NB2	0.931		Valid
	NB3	0.900		Valid
Organization Environment	OE1	0.944	0.877	Valid
	OE2	0.929		Valid
Organization Structure	OS1	0.850	0.735	Valid
	OS2	0.833		Valid
	OS3	0.888		Valid
System Quality	SQ1	0.861	0.732	Valid
	SQ2	0.819		Valid
	SQ3	0.914		Valid
	SQ4	0.825		Valid
System Use	SU1	0.856	0.640	Valid
	SU2	0.784		Valid

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	SU3	0.842		Valid
	SU4	0.711		Valid
Service Quality	SvQ1	0.937	0.878	Valid
	SvQ2	0.937		Valid
User Satisfaction	US1	0.922	0.850	Valid
	US2	0.922		Valid

The results presented in Table 3 indicate that all indicators achieved outer loading values above the recommended threshold of 0.70. The highest outer loading value is found in indicator OE1 at 0.944, indicating that the indicator strongly represents the Organization Environment construct. Meanwhile, the lowest outer loading value is found in indicator SU4 at 0.711. However, this value still exceeds the required minimum threshold, and therefore the indicator is considered valid.

Furthermore, all constructs produced AVE values exceeding the minimum requirement of 0.50. These findings confirm that the measurement items adequately represent their respective latent constructs and demonstrate satisfactory convergent validity.

b. Discriminant Validity

Discriminant validity was assessed using the cross-loading approach to ensure that each indicator demonstrated a stronger relationship with its designated construct than with other constructs in the model. This criterion is satisfied when the loading value of an indicator on its corresponding construct exceeds the cross-loading values observed for other constructs [17]. The results of the assessment are summarized in Table 4.

Table 4 Cross loading

	Information Quality	Net Benefit	Organization Environment	Organization Structure	Service Quality	System Quality	System Use	User Satisfaction	Status
IQ1	0.789	0.664	0.601	0.608	0.579	0.722	0.683	0.644	Valid
IQ2	0.887	0.721	0.614	0.692	0.678	0.686	0.636	0.675	Valid
IQ3	0.796	0.607	0.615	0.638	0.731	0.577	0.536	0.598	Valid
IQ4	0.879	0.747	0.615	0.686	0.727	0.679	0.612	0.647	Valid
NB1	0.739	0.916	0.697	0.671	0.685	0.706	0.64	0.703	Valid
NB2	0.748	0.931	0.611	0.627	0.674	0.694	0.644	0.655	Valid
NB3	0.762	0.9	0.644	0.662	0.735	0.726	0.688	0.703	Valid
OE1	0.697	0.686	0.944	0.717	0.673	0.73	0.636	0.726	Valid
OE2	0.665	0.645	0.929	0.609	0.679	0.69	0.571	0.668	Valid
OS1	0.743	0.613	0.57	0.85	0.635	0.607	0.571	0.65	Valid
OS2	0.578	0.54	0.602	0.833	0.529	0.679	0.602	0.638	Valid
OS3	0.689	0.676	0.655	0.888	0.598	0.704	0.725	0.704	Valid
SvQ1	0.739	0.705	0.641	0.637	0.937	0.655	0.601	0.63	Valid
SvQ2	0.772	0.725	0.711	0.648	0.937	0.705	0.595	0.633	Valid
SQ1	0.679	0.672	0.638	0.654	0.575	0.861	0.699	0.685	Valid
SQ2	0.626	0.565	0.597	0.69	0.579	0.819	0.62	0.626	Valid
SQ3	0.762	0.743	0.722	0.708	0.652	0.914	0.72	0.733	Valid
SQ4	0.657	0.661	0.637	0.594	0.687	0.825	0.591	0.579	Valid
SU1	0.698	0.7	0.622	0.681	0.62	0.717	0.856	0.744	Valid
SU2	0.548	0.511	0.454	0.53	0.429	0.57	0.784	0.598	Valid
SU3	0.546	0.567	0.496	0.547	0.455	0.616	0.842	0.644	Valid
SU4	0.558	0.491	0.476	0.605	0.522	0.549	0.711	0.588	Valid
US1	0.698	0.676	0.697	0.746	0.617	0.738	0.752	0.922	Valid
US2	0.715	0.71	0.677	0.685	0.625	0.683	0.741	0.922	Valid

The cross-loading results presented in Table 4 show that each indicator demonstrates a stronger association with its designated construct than with other constructs in the model. For instance, indicator IQ2 records the highest loading on the Information Quality construct (0.887), while indicator NB2 exhibits its strongest loading on Net Benefit (0.931). Likewise, indicator US1 shows the highest loading value on User Satisfaction (0.922). These findings confirm that the indicators are able to differentiate their respective constructs from other latent variables, indicating satisfactory discriminant validity. Therefore, all variables in the research model have met the discriminant validity criteria.

c. Composite Reliability and Cronbach's Alpha

Construct reliability was assessed to determine the consistency of measurement indicators within each latent variable. Reliability requirements were considered fulfilled when the Composite Reliability and Cronbach's Alpha values exceeded the recommended threshold of 0.70 [17]. The assessment results are summarized in Table 5.

Table 5 Reliability

Variable	Cronbach's Alpha	Composite Reliability	Status
Information Quality	0.858	0.904	Reliable
Net Benefit	0.904	0.940	Reliable
Organization Environment	0.860	0.934	Reliable
Organization Structure	0.820	0.893	Reliable
Service Quality	0.861	0.935	Reliable
System Quality	0.877	0.916	Reliable
System Use	0.811	0.876	Reliable
User Satisfaction	0.824	0.919	Reliable

As shown in Table 5, all constructs achieved Cronbach's Alpha and Composite Reliability values above the recommended threshold of 0.70, demonstrating acceptable reliability. Net Benefit recorded the highest Composite Reliability value (0.940), followed by Service Quality (0.935) and Organization Environment (0.934). In terms of Cronbach's Alpha, the highest value was also observed for Net Benefit (0.904), whereas System Use produced the lowest value (0.811). Despite being the lowest among the constructs, this value remains above the acceptable level. Overall, the reliability assessment confirms that all constructs exhibit adequate internal consistency and are suitable for further structural model evaluation.

4.2 Inner Model

Following the assessment of the measurement model, the structural model was evaluated to examine the relationships among the proposed constructs. This stage focused on determining the explanatory and predictive capabilities of the model through R-Square and Effect Size (f^2) analysis. The structural model results are presented in Figure 3.

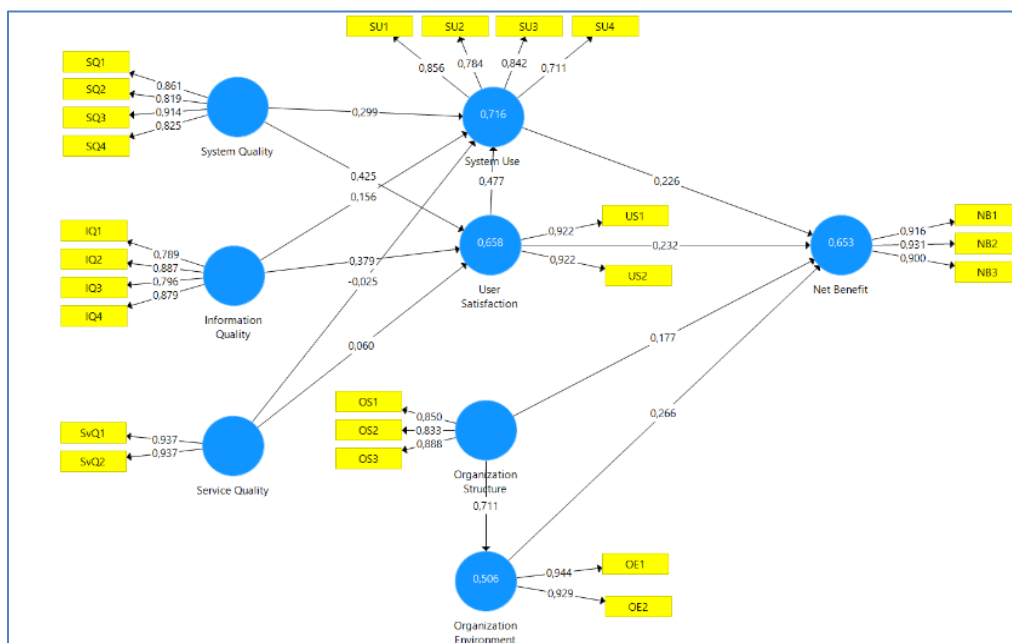


Figure 3 Inner model results

Figure 3 illustrates the estimated relationships among the latent variables within the proposed research model. The diagram displays the path coefficients connecting the constructs and the coefficient of determination (R²) values obtained for the endogenous variables. The model produced

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R² values of 0.716 for System Use, 0.658 for User Satisfaction, 0.653 for Net Benefit, and 0.506 for Organization Environment.

a. R-Square Value

The coefficient of determination (R²) was used to evaluate the proportion of variance in each endogenous construct that could be explained by its predictor variables. Higher R² values indicate greater explanatory power of the structural model [17]. The results of the R² assessment are summarized in Table 6.

Table 6 R-Square values

Variable	R Square	Status
Net Benefit	0.653	Moderate
Organization Environment	0.506	Moderate
System Use	0.716	Substantial
User Satisfaction	0.658	Moderate

As presented in Table 6, System Use achieved the highest R² value (0.716), indicating that approximately 71.6% of its variance is explained by System Quality, Information Quality, Service Quality, and User Satisfaction. This result reflects substantial predictive capability for the construct. User Satisfaction produced an R² value of 0.658, suggesting that the combined influence of System Quality, Information Quality, and Service Quality accounts for 65.8% of the variance observed in the construct. Although classified as moderate, the result demonstrates adequate explanatory strength. The R² value for Net Benefit reached 0.653, indicating that System Use, User Satisfaction, Organization Structure, and Organization Environment collectively explain 65.3% of its variance. In addition, Organization Environment recorded an R² value of 0.506, meaning that slightly more than half of its variance can be attributed to Organization Structure. Overall, the structural model exhibits satisfactory explanatory capability in representing the factors influencing the success of the E-Perpus Kota Depok application.

b. Effect Size

Effect size (f²) analysis was conducted to assess the relative contribution of each predictor variable to the endogenous constructs. According to established guidelines, f² values may be interpreted as indicating small, moderate, or substantial effects depending on their magnitude [17]. Effect size assessment are presented in Table 7.

Table 7 Effect size values

Variable	IQ	NB	OE	OS	SvQ	SQ	SU	US
IQ							0.02	0.107
NB								
OE		0.082						
OS		0.03	1.024					
SvQ							0.001	0.003
SQ							0.091	0.181
SU		0.046						
US		0.037					0.274	

The strongest effect observed in Table 7 is the structural model was found in the relationship between Organization Structure and Organization Environment, with an f² value of 1.024. This finding indicates that Organization Structure plays a dominant role in shaping the organizational environment associated with the implementation of the E-Perpus Kota Depok system. Moderate contributions were identified for the relationships between User Satisfaction and System Use (f² = 0.274) and between System Quality and User Satisfaction (f² = 0.181), highlighting the importance of both user experience and system performance in supporting system success.

Several other relationships demonstrated relatively limited effects, including Information Quality on User Satisfaction (f² = 0.107), Organization Environment on Net Benefit (f² = 0.082), System Use

on Net Benefit ($f^2 = 0.046$), Organization Structure on Net Benefit ($f^2 = 0.030$), and Information Quality on System Use ($f^2 = 0.020$). In contrast, Service Quality exhibited minimal influence on both System Use ($f^2 = 0.001$) and User Satisfaction ($f^2 = 0.003$). Overall, the results indicate that organizational factors, user satisfaction, and system quality contribute more substantially to the success of the E-Perpus Kota Depok digital library than service-related factors.

4.3 Hypothesis Testing Results

The proposed hypotheses were evaluated through the bootstrapping procedure in SmartPLS to determine the significance of the relationships among the HOT-Fit constructs. Hypotheses were considered supported when the T-statistic exceeded 1.96 and the p-value was below 0.05. The outcomes of the structural path analysis are summarized in Table 8.

Table 8 Hypothesis testing results / path coefficients

Path Coefficient	T Statistics	P Values	Status
SQ - SU	3.933	0.000	Supported
SQ - US	4.954	0.000	Supported
IQ - SU	1.678	0.094	Not Supported
IQ - US	4.542s	0.000	Supported
SvQ - SU	0.331	0.741	Not Supported
SvQ - US	0.702	0.483	Not Supported
US - SU	6.403	0.000	Supported
OS - OE	16.940	0.000	Supported
SU - NB	2.634	0.009	Supported
US - NB	2.743	0.006	Supported
OS - NB	1.977	0.049	Supported
OE - NB	3.310	0.001	Supported

The hypothesis testing results in Table 8 indicate that nine of the twelve proposed relationships were statistically supported. Significant effects were observed for System Quality, User Satisfaction, Organization Structure, and Organization Environment, suggesting that these constructs play important roles in determining the success of the E-Perpus Kota Depok application. In contrast, the Service Quality construct did not demonstrate significant effects on either System Use or User Satisfaction. This finding suggests that users may place greater emphasis on application functionality and access to digital collections than on service-related aspects. A detailed interpretation of each hypothesis is discussed in the following section.

H1: System Quality Has a Significant Effect on System Use

Based on Table 8, H1 shows a T-statistic value of 3.933 and a p-value of 0.000 (<0.05), indicating that the hypothesis is supported. Simple navigation, stable access, and minimal technical disruption encouraged users to access the application more regularly. Respondents also reported that borrowing and search features could be used without major operational difficulties. Similar patterns were reported in previous digital library evaluations [19].

H2: System Quality Has a Significant Effect on User Satisfaction

H2 shows a T-statistic value of 4.954 and a p-value of 0.000 (<0.05), indicating that the hypothesis is supported. Respondents tended to report higher satisfaction levels when the application functioned reliably and allowed uninterrupted access to digital library resources. Security features and interface accessibility also contributed to positive user perceptions toward the system. Comparable findings were reported in earlier information system studies [19].

H3: Information Quality Has a Significant Effect on System Use

H3 shows a T-statistic value of 1.678 and a p-value of 0.094 (>0.05), indicating that the hypothesis is not supported. This result indicates that Information Quality in the E-Perpus Kota Depok application does not directly influence System Use. Although the available information is considered

sufficiently complete and easy to understand, users tend to use the application primarily because of their need to access reading materials rather than the quality of the information provided. In the context of digital public library services, system accessibility and ease of use may play a more dominant role in encouraging system usage than informational aspects alone. These findings imply that application administrators should focus not only on improving information presentation but also on enhancing interactive features that encourage more active system utilization. These findings are consistent with previous studies which also found that Information Quality did not significantly influence System Use in academic information systems [20].

H4: Information Quality Has a Significant Effect on User Satisfaction

H4 shows a T-statistic value of 4.542 and a p-value of 0.000 (<0.05), indicating that the hypothesis is supported. Availability of updated collections and relevant information improved user perceptions toward the application. Respondents tended to report higher satisfaction when digital materials were easier to access and understand. Similar relationships between Information Quality and User Satisfaction were identified in previous AIS studies [21].

H5: Service Quality Has a Significant Effect on System Use

H5 shows a T-statistic value of 0.331 and a p-value of 0.741 (>0.05), indicating that the hypothesis is not supported. This result indicates that Service Quality in the E-Perpus Kota Depok application does not directly affect System Use. The findings suggest that users place greater importance on primary functionalities, particularly book discovery and borrowing features, compared with support-related services. Since the application operates as a self-service digital platform, users may rarely interact with administrative or technical assistance during system usage. These findings suggest that improving system performance and usability may have a greater impact on user engagement than focusing solely on support services. These findings are consistent with previous studies showing that Service Quality did not significantly influence System Use in information system implementation [22].

H6: Service Quality Has a Significant Effect on User Satisfaction

H6 shows a T-statistic value of 0.702 and a p-value of 0.483 (>0.05), indicating that the hypothesis is not supported. This result indicates that Service Quality in the E-Perpus Kota Depok application has not become a primary factor in shaping User Satisfaction. Users tend to evaluate their experience based on system performance and Information Quality rather than supporting services. This condition suggests that users prioritize application accessibility, system stability, and the availability of digital collections over interactions with technical support services. Therefore, improving core system functionality may contribute more significantly to user satisfaction than enhancing support services alone. These findings are consistent with previous studies which also found that Service Quality did not significantly affect User Satisfaction in information system implementation [22].

H7: User Satisfaction Has a Significant Effect on System Use

H7 shows a T-statistic value of 6.403 and a p-value of 0.000 (<0.05), indicating that the hypothesis is supported. Continued usage behavior was strongly associated with positive user experience during application use. Users who perceived the platform as useful and convenient tended to access the system more frequently over time [23].

H8: Organization Structure Has a Significant Effect on Organization Environment

H8 shows a T-statistic value of 16.940 and a p-value of 0.000 (<0.05), indicating that the hypothesis is supported. This result demonstrates that the organizational structure supporting the management of the E-Perpus Kota Depok application is capable of creating a conducive Organization Environment. The availability of complete features and internal organizational support strengthen system implementation. These findings are consistent with previous HOT-Fit studies emphasizing the importance of organizational factors [24].

H9: System Use Has a Significant Effect on Net Benefit

H9 shows a T-statistic value of 2.634 and a p-value of 0.009 (<0.05), indicating that the hypothesis is supported. Frequent use of the application helped users obtain digital reading materials more efficiently. Easier access to collections and borrowing features contributed directly to perceived system benefits. Similar outcomes were also identified in previous HOT-Fit implementations [25].

H10: User Satisfaction Has a Significant Effect on Net Benefit

H10 shows a T-statistic value of 2.743 and a p-value of 0.006 (<0.05), indicating that the hypothesis is supported. Favorable user experiences strengthened perceptions that the system improves service efficiency and facilitates access to information resources. Higher satisfaction levels were associated with stronger perceptions of system usefulness [24].

H11: Organization Structure Has a Significant Effect on Net Benefit

H11 shows a T-statistic value of 1.977 and a p-value of 0.049 (<0.05), indicating that the hypothesis is supported. Internal organizational support contributed to better implementation of the E-Perpus Kota Depok application. Management readiness and operational coordination also affected how users perceived the benefits generated by the system [23].

H12: Organization Environment Has a Significant Effect on Net Benefit

H12 shows a T-statistic value of 3.310 and a p-value of 0.001 (<0.05), indicating that the hypothesis is supported. A supportive organizational environment strengthened implementation of the digital library system and increased perceived system benefits. Institutional readiness and operational support remained important factors in maintaining successful service delivery [24].

To provide additional perspective on the findings, Table 9 compares the results of this study with those reported in previous HOT-Fit research.

Table 9 Comparison of results with previous research

Relationship	Result in This Study	Previous Study Findings	Consistency
H1: SQ - SU	Significant	System Quality significantly influences System Use in digital health information systems [19]	Consistent
H2: SQ - US	Significant	System Quality significantly affects User Satisfaction in information system studies [19]	Consistent
H3: IQ - SU	Not Significant	Information Quality did not affect System Use in academic information systems [20]	Consistent
H4: IQ - US	Significant	Information Quality significantly influences User Satisfaction in AIS evaluation studies [21]	Consistent
H5: SvQ - SU	Not Significant	Service Quality did not significantly affect System Use in information system implementation [22]	Consistent
H6: SvQ - US	Not Significant	Service Quality did not significantly affect User Satisfaction in information system implementation [22]	Consistent
H7: US - SU	Significant	User Satisfaction significantly influences continued system use [23]	Consistent
H8: OS - OE	Significant	Organizational structure positively influences organizational environment and system implementation [24]	Consistent
H9: SU - NB	Significant	System Use contributes positively to perceived system benefits [25]	Consistent
H10: US - NB	Significant	User Satisfaction significantly affects Net Benefit in information systems [24]	Consistent
H11: OS - NB	Significant	Organizational structure contributes to information system benefits [23]	Consistent
H12: OE - NB	Significant	Organizational environment plays an important	Consistent

Table 9 shows that most findings in this study are aligned with previous HOT-Fit research. Significant relationships were identified for System Quality, User Satisfaction, Organization Structure, and Organization Environment, indicating that these factors play important roles in information system success. Overall, the hypothesis testing results demonstrate that most proposed relationships within the HOT-Fit model were supported. The findings further suggest that System Quality, User Satisfaction, Organization Structure, and Organization Environment are key determinants of E-Perpus Kota Depok success. In contrast, Service Quality did not show a significant influence, indicating that users tend to prioritize system functionality and accessibility over support-related services. These results reflect the characteristics of self-service digital library systems, where system performance is often considered more important than service support.

The findings provide practical insights for application administrators to focus on improving System Quality, accessibility, and user experience while maintaining organizational support. From a theoretical perspective, the results further support the HOT-Fit framework by highlighting the contribution of technological, human, and organizational dimensions to system success. This study was limited to respondents from a single regional context and relied on user perception data, which may restrict broader generalization. Therefore, future studies are encouraged to examine similar models in different public digital service settings and consider additional external variables that may influence information system success.

5 Conclusion

The HOT-Fit model was used to evaluate the success factors of the E-Perpus Kota Depok digital library system. Analysis using the PLS-SEM approach showed that nine of the twelve proposed hypotheses were supported. System Quality, User Satisfaction, Organization Structure, and Organization Environment contributed significantly to system success and Net Benefit. In contrast, Service Quality did not significantly influence System Use or User Satisfaction, indicating that users of self-service digital library platforms tend to prioritize accessibility, usability, and system performance over supporting services. The findings also show that successful implementation of public digital library services depends not only on technological performance but also on user involvement and organizational support. Application of the HOT-Fit model in a local government digital library context further expands its use beyond academic and institutional environments. From a practical perspective, the results may assist digital library administrators in improving system accessibility, interface quality, user experience, and organizational support strategies. This study was limited to respondents from a single regional public library system and relied primarily on perception-based survey data. Further studies may involve broader public service platforms or additional external variables to strengthen the generalizability of the findings while supporting sustainable digital services aligned with SDG 4 and SDG 9.

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