Analysis of User Satisfaction on the M-Paspor Application (Case Study : Registration at the Immigration Office Class 1 TPI Semarang)

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Abstract

Technology-based public services are very important for the community because it makes it easier for people to access public services. One of the government agencies that provides technology-based public services is the Directorate General of Immigration. The Directorate General of Immigration launched a passport registration application called M-Paspor. M-Passport is used by all immigration offices in Indonesia, including the Class I Immigration Office of TPI Semarang. Although this application was made to make it easier for people to register their passports, the reality is that many people still face obstacles when using the M-Passport application. The obstacles faced are also various such as slow response time, difficulty in changing data, etc. that can affect user satisfaction. This study aims to analyze what factors affect user satisfaction of the M-Passport application case study: Immigration Office Class I TPI Semarang using the EUCS (End User Computing Satisfaction) and Delone and Mclean (System Quality) methods. This study uses Purposive Sampling where questionnaires are distributed online and people who meet the criteria can fill out the questionnaire. The sample used in this study was 98 users. This study uses SEM-PLS (Structural Equation Modeling-Partial Least Square) to analyze the research data and uses SMART-PLS 4.0 in its data processing. The results of this study show that Accuracy and Ease of Use have a positive and significant effect on user satisfaction of the M-Passport application case study: Immigration Office Class I TPI Semarang. Meanwhile, Content, Format, Timeliness, System Quality also have a positive but not significant influence on user satisfaction of the M-Passport application case study: Immigration Office Class I TPI Semarang.

Keyword: M-Paspor, EUCS, System Quality, User Satisfaction

ABSTRAKSI

Pelayanan publik berbasis teknologi merupakan hal yang sangat penting bagi masyarakat karena memudahkan masyarakat dalam mengakses pelayanan public. Salah satu instansi pemerintah yang menyediakan pelayanan publik berbasis teknologi tersebut adalah Direktorat Jenderal Imigrasi. Direktorat Jenderal Imigrasi meluncurkan aplikasi pendaftaran paspor bernama M-Paspor. M-Paspor digunakan oleh seluruh kantor imigrasi yang ada di Indonesia termasuk Kantor Imigrasi Kelas I TPI Semarang. Walaupun aplikasi ini dibuat untuk memudahkan masyarakat dalam registrasi paspor, tetapi kenyataannya masyarakat masih banyak yang menghadapi kendala saat menggunakan aplikasi M-Paspor. Kendala yang dihadapipun beragam seperti response time yang lambat, sulit untuk mengubah data, dsb yang dapat mempengaruhi kepuasan pengguna. Penelitian ini bertujuan untuk menganalisis factor apa saja yang mempengaruhi kepuasan pengguna aplikasi M-Paspor studi kasus : Kantor Imigrasi Kelas I TPI Semarang menggunakan metode EUCS (End User Computing Satisfaction) dan Delone and Mclean (System Quality). Penelitian ini menggunakan Purposive Sampling dimana kuesioner disebar secara online dan masyarakat yang sesuai dengan kriteria dapat mengisi kuesioner. Sample yang digunakan pada penelitian ini sebanyak 98 pengguna. Penelitian ini menggunakan SEM-PLS (Structural Equation Modeling-Partial Least Square) untuk menganalisis data penelitian dan menggunakan SMART-PLS 4.0 dalam pengolahan datanya. Hasil dari penelitian ini menunjukkan bahwa Accuracy dan Ease of Use berpengaruh positif dan signifikan terhadap user satisfaction aplikasi M-Paspor studi kasus : Kantor Imigrasi Kelas I TPI Semarang. Sedangkan, Content, Format, Timeliness, System Quality juga memiliki pengaruh yang positif tetapi tidak signifikan terhadap user satisfaction aplikasi M-Paspor studi kasus : Kantor Imigrasi Kelas I TPI Semarang.

Kata Kunci : *M-Paspor, EUCS, System Quality, User Satisfaction*

INTRODUCTION

The Directorate General of Immigration utilizes technology-based services to enhance accessibility and efficiency. By leveraging the internet, it aims to streamline complex public service challenges and improve service quality. The Directorate General of Immigration launched an application called M-Paspor. M-Paspor was released in 2022 with the aim of facilitating service users in the passport making process (Pratama et al., 2023). The M-Paspor application was launched to meet the demands of service users in making passports. M-Paspor aims to enhance passport services through digital integration, improving efficiency and effectiveness (Maharani, 2019).

The M-Paspor application continues to receive updates to minimize system bugs and enhance its overall quality. However, despite these improvements, users still encounter issues while using the application, which impacts their satisfaction. The app's rating on the App Store reflects these concerns, with a low score of just 1.3 out of 5. This rating indicates that users are generally dissatisfied with the application's performance.

To achieve optimal user satisfaction, it is not only important to consider User Experience (UX) and User Interface (UI) aspects in digital application development, but also to continuously evaluate and improve applications based on user feedback. Although the M-Passport application has undergone several updates to reduce system bugs, several issues are still frequently experienced by application users, such as: First, the order is not appropriate. Service users complained about the sequence in the M-Paspor application, namely choosing an office location - uploading documents - choosing an arrival date based on the available quota. This makes service users upset, if the quota is full then they have to repeat the registration process from the beginning.

Second, the billing number for the exit payment is very long. After completing the registration process, some users were hampered in the payment process because they did not get a payment billing number. Third, the system still often errors or requests time out. The application system often crashes and always appears the words "request time out" so that service users cannot use the application optimally.

This study explores user satisfaction with the M-Paspor application at the Immigration Office Class I TPI Semarang. As a government institution, the office oversees various public services, including passport issuance, visas, residence permits, and immigration checks (Pratama et al., 2023). As a government agency responsible for delivering public services, the Immigration Office Class I TPI Semarang holds significant authority and responsibility in managing travel and immigration document processing. Therefore, it must strive to provide the highest quality service to enhance user satisfaction.

Passport services at the Immigration Office Class I TPI Semarang have seen significant growth with the introduction of the M-Paspor application. In 2021, the number of applicants was recorded at

14,341 people, but after the M-Paspor application was launched, this number jumped drastically to 60,269 in 2022 and continues to increase to 77,450 in 2023. This technological innovation allows people to register and arrange visit schedules online, thereby speeding up the process and reducing long queues.

However, users of the M-Paspor application, particularly at the Immigration Office Class I TPI Semarang, continue to face various issues when using the system. According to the 2023 Government Agencies Performance Accountability Report (LKjIP) of the Immigration Office Class I TPI Semarang, several persistent problems include: (a) The application is deemed expired even after the applicant has completed the payment, (b) Applicant data does not appear in the DPRI (Republic of Indonesia Travel Documents) system, (c) The backend quota does not align with the actual number of applicants, resulting in more visitors than available slots. These issues indicate that the M-Paspor service remains suboptimal. Given that the application plays a crucial role in passport processing, ongoing difficulties in its use could negatively affect user satisfaction.

User complaints about the M-Paspor application, reflected in past reviews, indicate that the service has not met user expectations, leading to dissatisfaction. Addressing these issues requires an evaluation to enhance user experience. Gathering user feedback is essential for improving M-Paspor services. Surveys can assess satisfaction using the End User Computing Satisfaction (EUCS) method, introduced by Doll & Torkzadeh, which evaluates content, format, accuracy, ease of use, and timeliness (Wisna, 2022; Sholihah & Indriyanti, 2022). Harmutika et al. (2024) expanded this with system quality, service quality, and information quality. This study applies six key variables—content, format, accuracy, ease of use, timeliness, and system quality—to measure user satisfaction with M-Paspor at the Immigration Office Class I TPI Semarang.

This article focuses on Analysing of User Satisfaction on the M-Paspor Application Case Study: Registration at the Immigration Office Class I TPI Semarang. This study aims to analyze the most significant factors that influence the level of satisfaction of M-Paspor application service users at the Immigration Office Class I TPI Semarang. This problem will discuss what are the most significant factors that affect user satisfaction with the M-Paspor application service at the Immigration Office Class I TPI Semarang. It is intended that the reader would gain more information and insight as a result of reading this essay.

To understand more deeply related to the focus of the article *"Analysis of User Satisfaction on the M-Paspor Application Case Study: Registration at the Immigration Office Class I TPI Semarang"*, this article will explain about the main things namely: M-Paspor, EUCS, system quality, and user satisfaction.

LITERATURE REVIEW
Public Administration
Perceptions regarding the definition of public administration vary widely. The term "public administration"

combines "administration," a dynamic process for achieving collective goals, and "public," a concept still debated in academia (Keban, 2019). According to Dwiyanto (2021), in a normative perspective, the concept of public in public administration refers to public affairs and/or public interest.

Public Management

Various perspectives exist on the definition of public management. For instance, Overman argues that while public management is influenced by "scientific management," it is not the same thing. Existing literature also defines public management in various views. According to Keban (2019) defines that public management is defined as an interdisciplinary field that integrates fundamental organizational elements. According to Shafritz et al. (2022), public management involves utilizing resources effectively to manage organizations and achieve their objectives.

Public Service

Public services are vital in addressing community needs and guaranteeing citizens' rights. Existing literature offers various definitions of public services. Moenir (in Akay et al., 2021) describes effective and high-quality services as those that are fast, pleasant, error-free, and adhere to established procedures, ensuring they meet user expectations.

Service Quality

The quality of services including user satisfaction are inherently connected and difficult to separate. Research highlights the strong connection between service quality and user satisfaction. Parasuraman, as referenced in Hadiyati (2014) defines service quality as the difference between what customers expect and what they actually experience. Better service leads to higher satisfaction, making it a key performance indicator.

User Satisfaction

User satisfaction is crucial as it indicates how well a product or service fulfills or surpasses user expectations. Existing literature offers various definitions of user satisfaction. According to Sulistiyowati (2018) user satisfaction or dissatisfaction is determined by how well their perception of the received service (perceived performance) aligns with or surpasses their expectations.

End User Computing Satisfaction

End User Computing Satisfaction (EUCS) measures user satisfaction with an information system. According to Doll & Torkzadeh, EUCS evaluates how effectively an information system meets user needs. This analysis focuses on user experience in the technological field by measuring five key dimensions: content, accuracy, format, ease of use, and timeliness (Setyaningsih & Setiawan, 2023).

The EUCS model prioritizes user satisfaction based on direct interaction with the system (Puspitasari et al., 2021). This study also adds one variable from Delone and Mclean, system quality. System quality refers to the effectiveness of an information system in handling data, encompassing both software and data components. It evaluates the system's reliability, performance, and ability to operate smoothly while ensuring accurate and efficient data processing.
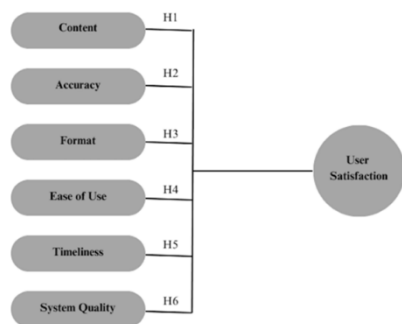
Figure 1.1 Hypothesis Development

Based on this explanation, the author propose the following hypothesis :

Ha₁: The content of the M-Paspor application influence user satisfaction.

Ho₁: The content of the M-Paspor application does not influence user satisfaction.

Ha₂: The accuracy of the M-Paspor application influence user satisfaction.

Ho₂: The accuracy of the M-Paspor application does not influence user satisfaction.

Ha₃: The format of the M-Paspor application influence to user satisfaction.

Ho₃: The format of the M-Paspor application does not influence to user satisfaction.

Ha₄: The ease of use of the M-Paspor application influences user satisfaction.

Ho₄: The ease of use of the M-Paspor application does not influence user satisfaction.

Ha₅: The timeliness of the M-Paspor application influence user satisfaction.

Ho₅: The timeliness of the M-Paspor application does not influence user satisfaction.

Ha₆: The system quality of the M-Paspor system influence user satisfaction.

Ho₆: The system quality of the M-Paspor system does not influence user satisfaction.

RESEARCH METHODS

A quantitative research using an online survey was used. Quantitative methods are research techniques that analyze numerical data and statistical patterns by collecting measurable information through surveys, experiments, or structured observations and processing it using mathematical models, statistical tools, and computational techniques (Abdullah et al., 2022). Primary data were obtained from respondents' answers. An online othvey technique using the Google Form facility was chosen because it can increase the reach of the survey distribution more efficiently and effectively. Respondents were faced with 29 survey question items. Each item oth the construct was adopted from previous research and modified according to the research object. Respondents' answers were categorized on a Likert Scale to assess all items. The Likert scale was used from 1 (strongly disagree) to 5 (strongly agree). Secondary data were collected from books, journal, and information through the internet that related with the research problem as reference sources while compiling the manuscripts.

The research site of this study is at at the Immigration Office Class I TPI Semarang. The target population of this research was the users of the M-Paspor application service at the Immigration Office Class I TPI

Semarang. Consequently, the respondents' criteria were determined. The criteria for the respondents were Indonesian citizens who used M-Paspor application to make a passport at Immigration Office Class I TPI Semarang. The researcher use purposive sampling because respondents filled out the questionnaire based on the criteria that was made by the researcher.

This study applies Structural Equation Modelling (SEM), which integrates path and factor analysis to assess causal relationships(Hamid & Anwar, 2019). Specifically, it uses the Partial Least Squares (PLS-SEM) approach via Smart PLS to evaluate measurement and structural models. SEM is preferred for its flexibility in identifying patterns and developing exploratory theories (Hair et al., 2014).

This study conducts validity and reliability tests to ensure accurate measurement. The validity test determines whether the questionnaire effectively captures the intended concepts. A questionnaire is considered valid if each item aligns with the research objectives (Rosita et al., 2021). The evaluation of the measurement model's suitability is conducted through convergent validity and discriminant validity research questionnaire was respondents aged <20 years as many as 9 people (9%). Based on the research data obtained, respondents who have the latest high school / high school education are 25 people (26%), then respondents who have the latest S1 education are 50 people (51%), then respondents who have the latest S2 education are 13 people (13%), then respondents who have the latest

(Huda, 2023). Convergent Validity (CV) is used to evaluate the validity of each indicator in representing a single latent variable. Convergent Validity is considered acceptable when the outer loading is 0.60 or higher, with the Average Variance Extracted (AVE) needing to be at least 0.50 to ensure validity (Chin, 1998). If both criteria are met, Convergent Validity can be deemed valid. Discriminant Validity (DV) evaluates how distinct latent variables are from each other. Additionally, the reliability test measures the consistency of questionnaire indicators using Composite Reliability and Cronbach's Alpha. For acceptable reliability, the value must exceed 0.70, while scores below 0.60 indicate insufficient reliability (Hair et al., 2014). The hypothesis test for this study was conducted using SmartPLS, as it involves multiple regression analysis. The sample for this study is 98 samples.

RESULTS AND DISCUSSION
Respondent Information

Based on the research data obtained, the age range that mostly filled out this research questionnaire was respondents aged 20-30 years as many as 52 people (53%), then the age range that least filled out this

S3 education are 1 person (1%), and the last respondent who chose other as many as 9 people (9%). Based on the research data obtained, 36 respondents were male (37%), while 62 respondents were female (63%).

Outer Model Testing
Convergent Validity

Convergent validity is a test result used to see the extent to which the study's indicators have a positive

correlation and to ensure that each indicator used in the study to measure a construct has a strong relationship with each other (Hair et al., 2014). The following table shows the results of the Convergent Validity test in this study.

Construct	Code	Loading (>0.60)	AVE
Content	C1	0.684	0.589
	C2	0.820	
	C3	0.782	
	C4	0.778	
Accuracy	A1	0.775	0.585
	A2	0.787	
	A3	0.649	
	A4	0.835	
Format	F1	0.811	0.654
	F2	0.834	
	F3	0.869	
	F4	0.712	
Ease of Use	E1	0.811	0.673
	E3	0.714	
	E4	0.862	
	E5	0.883	
Timeliness	T1	0.850	0.735
	T2	0.869	
	T3	0.871	
	T4	0.839	
System Quality	S1	0.904	0.803
	S2	0.856	
	S3	0.928	
User Satisfaction	U1	0.700	0.680
	U2	0.861	
	U3	0.847	
	U4	0.850	
	U5	0.853	

Table 1. Convergent Validity and Reliability

Discriminant Validity testing ensures that each indicator is unique and accurately measures its designated construct. This study employs the Fornell-Larcker criterion,

which requires that each construct's square root of the Average Variance Extracted (AVE) exceed its correlation with other constructs. The results of the Fornell-Larcker Discriminant Validity assessment are as follows:

	A	C	E	F	S	T	U	Discriminant Validity
A	0.765							Valid
C	0.731	0.768						Valid
E	0.718	0.554	0.820					Valid
F	0.677	0.499	0.702	0.809				Valid
S	0.677	0.592	0.768	0.634	0.896			Valid
T	0.709	0.528	0.798	0.802	0.788	0.857		Valid
U	0.758	0.594	0.803	0.673	0.709	0.763	0.825	Valid

Table 2. Discriminant Validity Result : Fornell Larcker Value

Variable	Path Coefficient	T statistics (|O/STDEV|)	P Values	Interpretation	Description
C -> U	0.051	0.584	0.559	Positive, Insignificant	Ha rejected, Ho accepted
A -> U	0.271	2.428	0.015	Positive, Significant	Ha accepted, Ho rejected
F -> U	0.010	0.096	0.924	Positive, Insignificant	Ha rejected, Ho accepted
E -> U	0.386	3.682	0.000	Positive, Significant	Ha accepted, Ho rejected
T -> U	0.202	1.418	0.156	Positive, Insignificant	Ha rejected, Ho accepted
S -> U	0.033	0.253	0.800	Positive, Insignificant	Ha rejected, Ho accepted

Table 3. Hypothesis Testing Result

H1: The content variable does not significantly impact the User Satisfaction variable in the M-Passport application, as observed in the case study of registration at the Immigration Office Class I TPI Semarang. The low path coefficient (0.051 or 5%) and T-statistic value (0.548, below the threshold of 1.659) indicate that the relationship is weak and statistically insignificant. Therefore, the hypothesis suggesting that Content influences User Satisfaction is not supported in this study, meaning that **Ha is rejected and Ho is accepted**.

H2: The results of the second hypothesis test show that accuracy has a positive path coefficient of 0.271 which shows that Accuracy has

an influence on User Satisfaction of 27.1%. Furthermore, the T Statistics value shows a value of 2,428 or it can be said to be significant. Therefore, it can be concluded that the Accuracy variable has an influence on the User Satisfaction Variable on the M-Passport application, a case study of registration at the Immigration Office Class I TPI Semarang, which means **that Ha is accepted and Ho is rejected**.

H3: The results of the third hypothesis test show that the format has a positive path coefficient of 0.010 which shows that the format has an influence on User Satisfaction of 0.1%. Furthermore, the T Statistics value shows a value of 0.096 or it can be said to be insignificant. Therefore, it can be concluded that the Format variable has no influence on the User Satisfaction Variable in the M-Passport application case study of registration at the Semarang TPI Class I Immigration Office which means **that Ha is rejected and Ho is accepted.**

H4: The fourth hypothesis test confirms that ease of use significantly impacts user satisfaction, with a positive path coefficient of 0.386 (38.6%) and a T-statistic of 3.682, indicating significance. Thus, **Ha is accepted, and Ho is rejected** in the M-Passport application case study at the Immigration Office Class I TPI Semarang.

H5: The results of the fifth hypothesis test show that timeliness has a positive path coefficient of 0.202 which shows that Timeliness has an influence on User Satisfaction of 20.2%%. Furthermore, the T Statistics value shows a value of 0.156 or it can be said to be

insignificant. Therefore, it can be concluded that the Timeliness variable has no influence on the User Satisfaction variable in the M-Passport application, a case study of registration at the Semarang TPI Class I Immigration Office, which means that **Ha is rejected and Ho is accepted.**

H6: The sixth hypothesis test results indicate that System Quality has a positive path coefficient of 0.033, reflecting a 0.3% influence on User Satisfaction. However, the T-Statistics value of 0.253 suggests that this influence is insignificant. Therefore, it can be concluded that System Quality does not significantly impact User Satisfaction in the M-Passport application case study at the Semarang TPI Class I Immigration Office. As a result, **that Ha is rejected and Ho is accepted.**

CONCLUSION

Based on the results of data analysis using SEM PLS, it can be concluded that there are 2 variables that have a significant influence on user satisfaction, namely Accuracy of 27.1% with a T statistic value of 2,428 and Ease of Use of 38.6% with a T statistic value of 3,682. This study also shows that the variables of content, format, timeliness, and system quality do not have a significant influence on user satisfaction in the M-Paspor application case study of the Immigration Office Class I TPI Semarang.

RESEARCH LIMITATIONS

1. This study only used six variables to measure the level of user satisfaction.

2. This research was only conducted at the Semarang Immigration Office.
3. This study does not involve direct interviews with users as a data collection method.

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