

CHAPTER I

INTRODUCTION

1.1 Background

The rapid advancement of telecommunications, particularly the internet, has significantly influenced various sectors (Tirana & Sfenrianto, 2023). In Indonesia, this progress is evident through rising internet penetration, increased smartphone usage, and widespread digital adoption. Adapting to these technological changes has become essential. Between 2022 and 2023, Indonesia's internet users reached 215.63 million, covering over 78% of the population—a 1.17% rise from the previous period (APJII, 2023). This highlights the internet's growing role in daily life (Tirana & Sfenrianto, 2023). Technology is not only embraced by individuals but also by central and local governments across social, economic, and public service sectors. Its expanding use enhances efficiency and effectiveness in public services (Putri & Saputra, 2022).

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. Through an online-based system, immigration services become more effective, ensuring better public access and operational efficiency. The Directorate General of Immigration presents a new innovation by using mobile applications in providing immigration services digitally. This is done to change

the traditional way that has been done in managing immigration services, namely service users visiting the office directly to take care of the required immigration documents. Service users come from early morning to get a queue quota, and have to spend a whole day just to take care of immigration documents. Processing immigration documents requires a lot of time and energy, and costs a lot of money. The system makes it difficult for service users so that the Directorate General of Immigration makes new innovations by creating mobile applications to facilitate immigration service users.

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. In the application, service users can register for new passport applications and passport replacement applications (Siagian, 2022). The M-Paspor application also offers various features to facilitate service users, including payment of Non -Tax State Revenue (PNBP) in advance, checking the passport application quota, scheduling arrival, and payment can be made in various ways, namely through banks, and marketplaces.

The M-Paspor application is an improved version of Online Passport Queue Registration Application (APAPO). This application has the same uses as M-Paspor, namely online passport registration and checking passport quotas. However, service users complained about problems with the application that

made them disappointed, and the passport quota available to applicants was very limited (Pamadi et al., 2022)

Developed by the Directorate General of Immigration, M-Paspor aims to enhance passport services through digital integration, improving efficiency and effectiveness (Maharani, 2019). The implementation of technology in the M-Paspor application offers numerous benefits. During its initial launch, M-Paspor successfully streamlined the passport issuance process by simplifying procedures. Users no longer need to queue at the immigration office, allowing them to save time and experience a more efficient service (Suryani et al., 2024).

The following is a summary of the M-Paspor application service introduced by Indonesia's immigration authority.



Figure 1. 1 M-Paspor Application Display

Source : Appstore Application

The M-Paspor application service is intended for all Indonesian people who want to take care of making or replacing a passport. The procedure when applying for passport-making or replacement services is to open the downloaded application, register an account, and select the immigration menu to be taken care of, such as passport-making or passport replacement. Next, select the desired immigration office. Then, complete the required documents and requirements. Next, upload all documents to the application system. Next, select the desired arrival schedule. Then, pay by 2 hours after getting the schedule. Finally, service users will receive proof of payment and registration, which must be brought on the day of arrival.

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.



Figure 1. 2 M-Paspor Application Rating

Source: Appstore Application

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.

Table 1. 1 Passport Issued 2021 - 2023

Description	Year		
	2021	2022	2023
Passport Services	14.341	60.269	77.450

Source : Government Agencies Performance Accountability Report (LKjIP) Immigration Office Class I TPI Semarang 2023

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 satisfaction is a crucial measure for evaluating whether services meet public expectations (Othman et al., 2020). Every government agency that provides public services must assess community satisfaction to ensure that the quality of services aligns with public expectations. Measuring satisfaction helps evaluate service effectiveness (Desmal et al., 2022) and follows Ministerial Regulation No. 14 of 2017, which outlines standards for procedures, efficiency, costs, service quality, staff competence, complaint handling, and infrastructure.

For optimal satisfaction in digital applications, User Experience (UX) and User Interface (UI) are essential. These elements enhance usability, accessibility, and engagement, making user interaction a key factor in overall satisfaction. UX focuses on the ease and comfort of application use, while UI emphasizes visual appeal and intuitive navigation. A well-designed UX

ensures a smooth experience, and an effective UI enhances accessibility, both of which contribute significantly to user satisfaction.

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-Paspor 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.

The following are some examples of complaints from users of the M-Paspor application service.

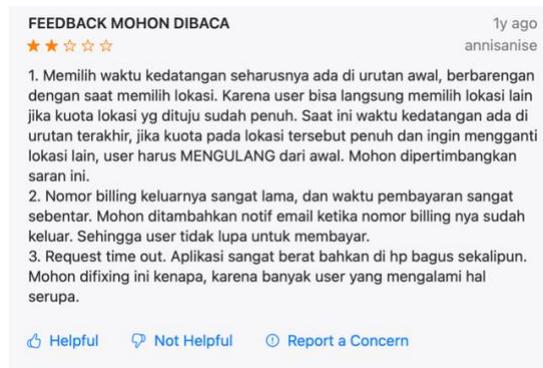


Figure 1. 3 Review of M-Paspor Application Page on Appstore

Source : Appstore Application

The first problem complained about by users at point number one is related to the order of filling out the registration which is not appropriate. In user satisfaction, this problem is included in terms of ease of use. This is because users must fill in all the requirements first, then at the final stage can only choose the arrival schedule. If the quota on the selected arrival schedule is full, then the user must repeat the registration process from the beginning.

The second problem that users complain about is payment issues. In user satisfaction, this problem is included in timeliness. This is because users complain that the billing code that comes out is very long and the payment time is very short. So that users have difficulty making these payments. The third most common user complaint is request timeouts or errors, which relate to system reliability—a key factor in user satisfaction (Hidayah et al., 2020). This is in accordance with what users complain about, namely an error in the application so that it always appears “request time out”. Because of these problems, users find it difficult when using the application. This application should have been made to facilitate service users but it is the opposite.

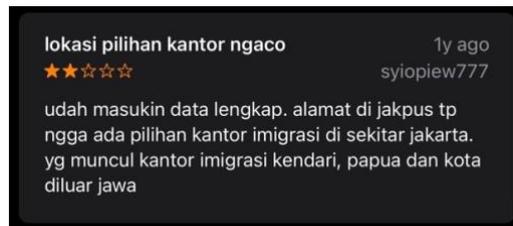


Figure 1. 4 Review of M-Paspor Application Page on Appstore

Source : Appstore Application

The next problem complained about by users is related to the selection of immigration office locations. Users have difficulty when choosing a location because the options that appear do not match their domicile. In the context of user satisfaction, the problem is related to accuracy. The application system should be improved so that the locations that appear are more accurate.

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. Based on this, the author aims to analyze *"Analysis of*

User Satisfaction on the M-Paspor Application Case Study: Registration at the Immigration Office Class I TPI Semarang."

1.2 Problem Formulation

Based on the outlined background, the research problem can be formulated as follows:

1. What are the most significant factors that affect user satisfaction with the M-Paspor application service at the Immigration Office Class I TPI Semarang?

1.3 Research Objective

Based on the problem formulation above, the objectives of this study are:

1. Analyzing the most and significant factors that influence the level of satisfaction of M-Paspor application service users at the Immigration Office Class I TPI Semarang.

1.4 Benefits of Research

1. Theoretical Benefits

The results of this study can provide empirical evidence and serve as a knowledge source for future research on user satisfaction in the digital passport service application.

2. Practical Benefits

This study aims to provide valuable insights and recommendations to improve service quality and user satisfaction with the digital passport service application.

1.5 Theoretical Framework / Concept / Previous Research

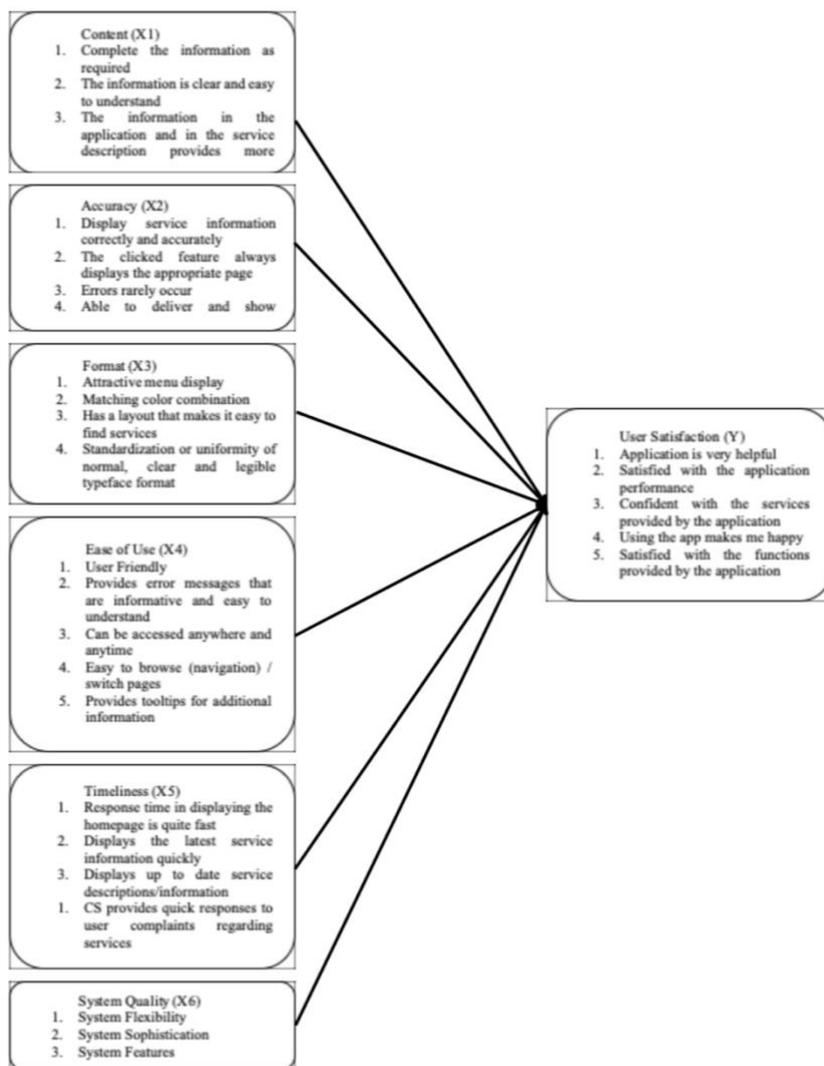


Figure 1. 5 Theoretical Framework

Source : Author's Processed Results, 2025

1.5.1 Previous Research

Table 1. 2 Previous Research Findings

No	Name	Title	Variable	Method	Sample Quantity	Results
1	Harmutika, et al. (2024)	<i>“Analisis Kepuasan Pengguna Aplikasi BRImo Menggunakan Metode End User Computing Satisfaction dan Delone & Mclean”</i>	Service Quality, Content, Format, Timeliness, Accuracy, System Quality, Ease of Use, Information Quality.	Quantitative	100	Content, usability, information quality, service quality, and timeliness play a crucial role in influencing user satisfaction with the BRImo application. However, three other aspects—precision, layout, and system performance—do not have a significant positive impact on overall user satisfaction.
2	Nawangsari et al. (2023)	<i>“Testing and Analysis User Satisfaction of Salute Bidan Application Using End-User Computing Satisfaction”</i>	Accuracy, Format, Timeliness, Content, Ease of Use.	Quantitative Research	100	The findings showed positive responses for each CAFET variable, with 59.4% (60 respondents), 64.4% (65 respondents), 55.4% (56 respondents), 64.4% (65 respondents), and 59.4% (60 respondents), respectively.
3	Hamzah et al. (2022)	<i>“Analysis of E-Library Based on Level of User Satisfaction Using EUCS and IPA Methods”</i>	Content, Accuracy, Timeliness, Format, Ease of Use	Quantitative	99	The study's findings indicate that all Importance attributes fall into the "extremely important" category, while Performance attributes, such as Content and Format, are classified as

No	Name	Title	Variable	Method	Sample Quantity	Results
						"satisfied." Variables with high satisfaction levels include Accuracy, Ease of Use, and Timeliness. The IPA matrix results highlight six attributes, with the greatest improvement seen in the Accuracy variable and the highest performance in the Content variable. Additionally, the e-Library's overall CSI score of 60.34% reflects a satisfactory level of user satisfaction with its performance.
4	Pramudito et al. (2023)	“The Implementation of End User Computing Satisfaction and Delone & Mclean Model to Analyze User Satisfaction of M.TIX Application”	System quality, information quality, service quality, content, accuracy, format, timeliness, and ease of use are key factors that influence user satisfaction and overall system performance.	Quantitative	175	The findings showed user satisfaction with the online ticketing application, with six of eight hypotheses accepted. Key factors influencing satisfaction include accuracy, ease of use, timeliness, system quality, information quality, and service quality.
5	Wijaya et al. (2021)	“Analysis of End-user Satisfaction of Zoom Application for Online Lectures”	Content, Accuracy, Format, Timeliness, Ease of Use, Performance Expectancy,	Quantitative	97	The findings suggest that all UTAUT factors—Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating

No	Name	Title	Variable	Method	Sample Quantity	Results
			Effort Expectancy, Social Influence, and Facilitating Conditions.			Conditions—have a significant influence on student satisfaction. On the other hand, within the EUCS framework, only Accuracy and Timeliness impact student satisfaction, while Content, Format, and Ease of Use show no significant effect.
6	Pratomo et al. (2023)	“The Application of End User Computing Satisfaction (EUCS) to Analyze the Satisfaction on MyPertamina User”	Accuracy, Content, Format, Ease of Use, Timeliness.	Quantitative	200	One of the five hypotheses examined in this study was rejected. Key factors influencing application user satisfaction include content, accuracy, usability, and timeliness, while the format variable has no significant effect. These findings highlight the importance of organizations focusing on the factors that enhance user experience and satisfaction.
7	Azwar et al. (2020)	“Evaluating The Library Website of The Indonesian Ministry of Education and Culture Through The End-User Computing Satisfaction (EUCS) Model”	Accuracy, Format, Content, Timeliness, Ease of Use.	Quantitative	99	The findings show that the Ministry of Education and Culture Library website performs well in terms of user satisfaction. The average scores for each dimension are as follows: Content (3.14), Accuracy

No	Name	Title	Variable	Method	Sample Quantity	Results
						(3.07), Format (3.17), Ease of Use (3.21), Timeliness (3.05), and Overall User Satisfaction (3.04). These scores, measured on a scale of 2.52 to 3.27, indicate that the website meets user expectations satisfactorily.
8	Prasetyo et al. (2017)	“Measuring End-User Satisfaction of Online Marketplace using End-User Computing Satisfaction Model (EUCS Model) (Case Study : Tokopedia.com)”	Format, Accuracy, Content, Ease of Use, Timeliness.	Quantitative	100	The results show that all five factors—Format, Accuracy, Ease of Use, Content, and Timeliness—significantly impact Tokopedia.com user satisfaction, confirming all hypotheses.
9	Hidayah et al. (2018)	“Determining User Satisfaction Factors on University Tuition Fee Systems Using End-User Computing Satisfaction (EUCS)”	Format, Timeliness, Accuracy, Ease of Use, Content.	Quantitative	181	Of the five proposed hypotheses, one was rejected, while four were accepted. User satisfaction is influenced by accuracy, content, timeliness, and ease of use.
10	Rabbani & Fajar (2024)	“A Comprehensive Examination of User Satisfaction in Indonesian Passport Services : Insights from the M-Paspor Application”	User satisfaction, service excellence, data quality, system efficiency, perceived value, ease of	Quantitative	103	A study involving 100 M-Paspor users revealed that system quality and perceived value have a significant positive impact on user satisfaction. In contrast, information

No	Name	Title	Variable	Method	Sample Quantity	Results
			use perception, loading time, responsiveness, and navigability.			quality, service quality, and perceived ease of use showed no meaningful effect.

Source : Data processed by researchers, 2025

The review of previous studies reveals varying findings on factors influencing user satisfaction. Research has established relationships between user satisfaction (Y) and content (X1) (Harmutika et al. (2024); Nawangsari et al. (2023); Hamzah et al. (2022); Pratomo et al. (2023); Prasetyo et al. (2017); Hidayah et al. (2018)). While some researchers found that there is a relationship between Accuracy (X2) on user satisfaction (Y) (Nawangsari et al. (2023); Pramudito et al. (2023); Wijaya et al. (2021); Pratomo et al. (2023); Prasetyo et al. (2017); Hidayah et al. (2018)). Other studies have also found that there is a relationship between format (X3) and user satisfaction (Y) (Hidayah et al. (2020); Hamzah et al. (2022); Prasetyo et al. (2017)). Some researchers found that there is a relationship between ease of use (X4) on user satisfaction (Y) (Harmutika et al. (2024); Pramudito et al. (2023); Pratomo et al. (2023); Prasetyo et al. (2017); Hidayah et al. (2018)). Other studies also investigate that there is a relationship between timeliness (X5) and user satisfaction (Y) (Hidayah et al. (2020); Nawangsari et al. (2023); Pramudito et al. (2023); Wijaya et al. (2021); Pratomo et al. (2023)Prasetyo et al. (2017); Hidayah et al. (2018)). Meanwhile Harmutika et al. (2024) found that system quality (X6) does not impact user satisfaction. This study will examine these six variables

in relation to user satisfaction in the M-Paspor application at the Immigration Office Class I TPI Semarang

1.5.2 Theoretical Framework

1.5.2.1 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 administration is a discipline that combines both artistic and scientific approaches to oversee public affairs and carry out assigned responsibilities by Chandler & Plano in (Keban, 2019).

The existing literature defines the notion of public administration in various ways. Although there are many literatures that write definitions of public administration, it is difficult to make one definition of public administration that can be accepted by all parties (Shafritz & Russel in Keban (2019)). For example, according to Malawat (2022), public administration is a collaborative effort among individuals or institutions to execute governmental functions aimed at fulfilling public needs efficiently and effectively. This definition emphasizes the role of cooperation in effectively meeting public needs. Public administration is closely tied to

service delivery, as Hughes in Malawat (2022), defines it as implementing policies through public services, while Dimock et al. (in Keban, 2019) describe it as fulfilling community needs by providing quality public goods and services.

Based on various expert definitions, public administration can be defined as a collective effort by individuals or government institutions to execute governmental functions aimed at fulfilling public needs through the provision of goods and services.

1.5.2.2 Public Management

Public management can be defined from various perspectives depending on the educational background and experience of the experts. Public Management comes from two words, namely management and public. Management is a comprehensive process of how to manage an organization, both with regard to determining the design of planning, organizing, controlling and relating to the use of other organizational resources. Meanwhile, public has a broad meaning. Public has different meanings depending on the purpose. The term "public" refers to the broader community. Based on this understanding, public management can be defined as the process of managing public organizations. These organizations are established by the government to deliver services to the community.

There are various perspectives on the definition of public management. For instance, Overman argues that while public management is influenced by "scientific management," it is not the same. Additionally, it differs from both "policy analysis" and public administration, as it embodies the tension between policy's political orientation and administrative execution. Furthermore, public management can be interpreted in multiple ways. According to Donovan and Jackson in Keban (2019) it is an activity that requires diverse skills. Based on these definitions, public management can be understood as a complex and multidimensional field that demands a broad set of skills and competencies to effectively navigate political and social challenges.

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. It combines management functions such as planning, organizing, and controlling with the management of various resources, including human, financial, physical, informational, and political resources. According to Shafritz et al. (2022), public management involves utilizing resources effectively to manage organizations and achieve their objectives. This definition highlights the significance of optimizing resource use to ensure organizational success.

1.5.2.3 Public Service

Public services are vital in addressing community needs and guaranteeing citizens' rights. These services involve the provision of essential resources, assistance, and administrative facilitation. The interpretation of public services differs, but as outlined in Law No. 25 of 2009, they include actions undertaken by service providers to cater to the necessities of citizens and residents for goods, amenities, and bureaucratic support, in accordance with prevailing regulations.

According to Regulation Number 15 of 2014, issued by the governing body responsible for administrative/bureaucratic reform Indonesia, public service refers to a series of actions aimed at meeting service demands while complying with legal regulations. These services, which include goods, assistance, and administrative support, are accessible to all citizens and residents. Service standards serve as essential benchmarks and guidelines for assessing service quality, ensuring efficiency, and maintaining regulatory adherence.

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. Meanwhile, Thoha (in Mustafa, 2017) defines public services as efforts by individuals, groups, or institutions to provide comfort to the community and achieve set goals.

From the definitions above, public services can be interpreted as actions carried out by service providers to address community needs. These services may include essential goods or assistance necessary for society. The main objective of public services is to ensure the fulfillment of citizens' fundamental needs and rights in accordance with existing laws and regulations.

1.5.2.4 Service Quality

The quality of services including user satisfaction are inherently connected and difficult to separate. Regular evaluations of service quality are essential to ensure that the services provided align with public expectations. According to Zeithaml, Parasuraman, and Berry, as cited in Arum & Mawar (2023), service quality can be assessed through five key indicators: tangibles, reliability, responsiveness, assurance, and empathy.

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. Continuous evaluation and improvement based on user feedback are essential for excellence in public services.

1.5.2.5 User Satisfaction

In public services, user satisfaction is a crucial aspect. People, as service users, have expectations of the services they receive in the form of goods and services. User satisfaction is when someone is satisfied with the product or service service they get. 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. Similarly, Kuswandi (2004), states that user satisfaction occurs when there is a positive gap between a user's perception of the service and their expectations.

There are various causes of dissatisfaction of service users with the services provided by service providers can be identified as follows:

- a. Service providers do not know what service users expect
- b. Incorrect/inappropriate service standard setting
- c. Low service performance
- d. What is promised does not match what is given

Based on the definitions above, user satisfaction serves as a key indicator in evaluating public services. It is assessed by comparing users' perceptions of the service (perceived performance) with their expectations. Several factors influence user satisfaction, including service providers' awareness of user expectations, the establishment of service standards,

actual service performance, and the alignment between promises and delivery. By addressing these factors, public service providers can enhance service quality and better meet user needs.

1.5.2.6 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)

1. Content

Content is a key dimension in assessing user satisfaction with the information provided by a system. This variable evaluates how well the system delivers relevant and appropriate information that meets user needs (Puspitasari et al., 2021). The more comprehensive and relevant the content, the greater the level of satisfaction experienced by end users when utilizing the system (Siregar, 2016).

2. Accuracy

User satisfaction can be evaluated by assessing the system's level of accuracy (Siregar, 2016). Accuracy is a dimension used to assess user satisfaction by evaluating how precisely the system processes input data into accurate and reliable information (Puspitasari et al., 2021). The more precise the accuracy, the user satisfaction will also increase.

3. Format

The format dimension measures user satisfaction by assessing the visual presentation and aesthetic quality of the system's interface. It evaluates the design's appeal and the ease of navigating the display, ultimately contributing to user effectiveness (Siregar, 2016).

4. Ease of Use

Ease of use is a dimension that assesses user satisfaction based on how easily they can navigate and utilize the system. It measures whether the system facilitates user interaction with features such as data entry, processing, and retrieving information according to their needs (Siregar, 2016).

5. Timeliness

The timeliness dimension evaluates how promptly the system delivers data. This variable is used to assess user satisfaction regarding the system's ability to provide the necessary data and information in a timely manner (Puspitasari et al., 2021)

1.5.2.7 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.

1.6 Hypothesis

A hypothesis serves as a provisional response to a research problem formulated as a question. The hypotheses in this study are as follows:

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.

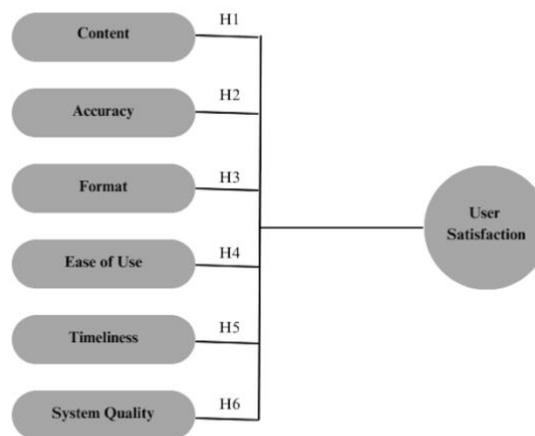


Figure 1. 6 Hypothesis Development

Source : Author's Processed Results, 2025

1.7 Conceptual Definition

Conceptual definitions explain variables based on theories and expert views (Setiawati, 2019). This study focuses on service quality and user

satisfaction. Service quality reflects how well a service meets customer expectations (Grönroos, 2001; Lewis & Mitchell in Wantara, 2015), while user satisfaction is the level of fulfillment or disappointment based on product performance compared to expectations (Budiman et al., 2018) It is commonly assessed using the EUCS model (Doll & Torkzadeh, 1988) and the system quality model (DeLone & McLean, 2003) , which evaluate six factors: content, accuracy, format, timeliness, ease of use, and system quality.

Content refers to the system's functions or modules that users can utilize, evaluated based on their relevance to user needs. Accuracy measures the precision of the system's output when in use. Then the format, assesses the system's visual presentation and user comfort while navigating the interface. Next ease of use indicates how simple and intuitive the system is for users to operate. Furthermore, timeliness evaluates how promptly the application provides the necessary data and information. Then system quality represents the overall reliability and efficiency of the system, where a higher-quality system produces better information for users (Zakiyamani et al., 2022).

1.8 Operational Definition

The operational definition becomes a guide and reference for measuring variables so that by looking at the operational definition the purpose and objectives of the study will be clearer and more focused. In this study, the operational definitions of the variables used are as follows:

1. Content (X1)

The content of the information system which is assessed based on its function and usefulness and its ability to produce information.

2. Accuracy (X2)

Accuracy in producing the information needed by users.

3. Format (X3)

The interface's appearance and aesthetics should be visually appealing and designed to enhance user experience, making navigation and interaction with the application more intuitive and seamless.

4. Ease of Use (X4)

The ease with which users engage with the application, from entering data and processing it to searching for the required information, ensures a smooth and efficient user experience.

5. Timeliness (X5)

The speed and accuracy that the application provides when users run the application and provide output quickly without having to wait long.

6. System Quality (X6)

System quality refers to the efficiency of an information system in processing data and software, assessing its technical reliability and overall performance.

7. User Satisfaction (Y)

How far users are satisfied with the application provided.

Table 1. 3 Resarch Questionnaire Development

Variable	Code	Indicator	Statement	Measurement scale	Reference
Content (X1)	C1	Complete the information as required	The M-Paspor application provides information according to my needs	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	C2	The information is clear and easy to understand	The M-Paspor application provides complete information and is easy to understand	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	C3	The information in the application and in the service description provides more knowledge about the passport service	M-Paspor provides an informative guide regarding the requirements and documents needed to submit a passport application	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	C4	The text in the service description is easy to understand and accurately describes the service	I feel comfortable reading the text on M-Paspor because the information is presented in a structured and clear manner.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)

Variable	Code	Indicator	Statement	Measurement scale	Reference
Accuracy (X2)	A1	Display service information correctly and accurately	The M-Paspor application displays service information correctly and accurately	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	A2	The clicked feature always displays the appropriate page	The feature that I click on the M-Paspor application always displays the page that I am looking for	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	A3	Errors rarely occur	M-Paspor functions smoothly without any glitches during use	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
	A4	Able to deliver and show information that corresponds with my search goals	The M-Paspor application provides and displays information that matches what I am looking for	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
Format (X3)	F1	Attractive menu display	The menu display in the M-Paspor application is very interesting to me	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	F2	Matching color combination	The color combination in the M-Paspor	Scale 1-5 1 = strongly disagree	(Kurniasih & Pibriana, 2021)

Variable	Code	Indicator	Statement	Measurement scale	Reference
			application is very harmonious, creating an appearance that is comfortable on the eyes	5 = strongly agree	
	F3	Has a layout that makes it easy to find services	The layout of the M-Paspor application is well designed, so it is easy for me to find the services I need.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	F4	Standardization or uniformity of normal, clear and legible typeface format	The M-Paspor application uses normal and clear fonts, ensuring all users can read it easily.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
Ease of Use (X4)	E1	User Friendly	The M-Paspor application is very user friendly, so I can use it without difficulty.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Doll & Torkzadeh, 1988)
	E2	Provides error messages that are informative and easy to understand	The M-Paspor application conveys error messages in simple language	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
	E3	Can be accessed	I can access the M-Paspor application at	Scale 1-5 1 = strongly disagree	(Kurniasih & Pibriana, 2021)

Variable	Code	Indicator	Statement	Measurement scale	Reference
		anywhere and anytime	any time, whether at home or when traveling.	5 = strongly agree	
	E4	Easy to browse (navigation) / switch pages	Navigation in the M-Paspor application is very easy, so I can move between pages quickly.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
	E5	Provides tooltips for additional information	The M-Paspor app provides informative tool tips, helping me understand the function of each feature better.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Kurniasih & Pibriana, 2021)
Timelines (X5)	T1	Response time in displaying the homepage is quite fast	The M-Paspor application displays the homepage with a fast response time, so I don't have to wait long.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
	T2	Displays the latest service information quickly	The M-Paspor application displays passport service information quickly	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
	T3	Displays up to date service descriptions/information	The M-Paspor application displays up to date passport	Scale 1-5 1 = strongly disagree	(Bayu Suryawan & Prihandoko, 2017)

Variable	Code	Indicator	Statement	Measurement scale	Reference
			service information	5 = strongly agree	
	T4	CS provides quick responses to user complaints regarding services	CS provides quick responses to user complaints regarding passport services	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Bayu Suryawan & Prihandoko, 2017)
System Quality (X6)	S1	System flexibility	M-Paspor application users can easily make data changes to their passport application	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Gorla et al., 2010)
	S2	System Sophistication	The M-Paspor application uses automation technology to speed up the document verification process, thereby reducing waiting time and increasing service efficiency.	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Gorla et al., 2010)
	S3	System Features	The M-Paspor application is able to process passport applications quickly, allowing users	Scale 1-5 1 = strongly disagree 5 = strongly agree	(Gorla et al., 2010)

Variable	Code	Indicator	Statement	Measurement scale	Reference
			to receive confirmation and application status within minutes of submission		
User Satisfaction (Y)	U1	Application is very helpful	I think the M-Paspor application is very helpful	Scale 1-5 1 = strongly disagree 5 = strongly agree	Huda (2023)
	U2	Satisfied with the application performance	I am satisfied with the performance of the M-Paspor application	Scale 1-5 1 = strongly disagree 5 = strongly agree	Huda (2023)
	U3	Confident with the services provided by the application	I am confident with the Passport service provided by the M-Paspor application	Scale 1-5 1 = strongly disagree 5 = strongly agree	Huda (2023)
	U4	Using the app makes me happy	The experience of using the M-Paspor application made me happy	Scale 1-5 1 = strongly disagree 5 = strongly agree	Huda (2023)
	U5	Satisfied with the functions provided by the application	Overall I am satisfied with the functions provided by the M-Paspor application	Scale 1-5 1 = strongly disagree 5 = strongly agree	Huda (2023)

1.9 Research Methods

1.9.1 Type of Research

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). Quantitative methods serve as research procedures that generate numerical data, typically presented in tables and diagrams (Sugiyono, 2013). According to Prasetyo & Jannah (2016) the type of quantitative research is divided into three, namely exploratory, descriptive, and explanatory research.

This study utilizes descriptive research to outline a specific phenomenon, focusing on user satisfaction with the M-Paspor application at the Immigration Office Class I TPI Semarang. In this research, the descriptive in question is quantitative descriptive because the description uses size, number, or frequency. Quantitative descriptive research involves applying numerical analysis and descriptive techniques to interpret data systematically, providing academic insights into patterns and trends (Alfatih, 2022).

1.9.2 Research Site

The research location refers to the setting where data and information are gathered. This study takes place at the Immigration Office

Class I TPI Semarang, aiming to assess user satisfaction with the M-Paspor application service.

1.9.3 Population and Sample

1.9.3.1 Population

Population is the generalization area of the unit of analysis to be studied. According to Arikunto (2010), population refers to the entire research subject. In other words, the population includes all individuals who will be the object of research. The population refers to a group of individuals who share similar characteristics and are relevant to the research focus. Sugiyono (2013), defines a population as a generalized group of objects or subjects possessing specific qualities and characteristics, selected by researchers for analysis and conclusion drawing. Researchers define the population to analyze and derive conclusions based on collected data. In the study "*Analysis of User Satisfaction on the M-Paspor Application (Case Study: Registration at the Immigration Office Class I TPI Semarang)*," the population consists of users of the M-Paspor application service at the Immigration Office Class I TPI Semarang.

1.9.3.2 Sample

According to Hair et al. (2014), the sample is a group of individuals selected from a larger population to represent the characteristics of that population. The number of samples used in this study using G*Power

software using linear regression test with an effect size of 0.15, a significant error probability of 5% (0.05) or the maximum tolerable error of 5 percent and statistical power of 80% (0.8); and number of predictors of 6. Based on these parameters, this study includes a total of 98 respondents. Hair et al. (2014) stated that an acceptable statistical power test value is 80%, ensuring that the sample size meets the necessary requirements for statistical analysis.

1.9.4 Sampling Techniques

Sampling methods are categorized into probability and non-probability techniques, where the former gives all population members an equal chance of selection, while the latter does not (Priyono, 2016; Retnawati, 2017; Sugiyono, 2013). This research on "User Satisfaction Analysis on M-Paspor Application" uses non-probability sampling, meaning not all individuals have an equal chance of selection. Specifically, purposive sampling is employed, where samples are selecting respondents based on specific criteria set by the researcher (Sugiyono, 2019). The criteria for respondents will be determined before selecting the sample.

1. Respondents must be at least 17 years old
2. Respondents must have used the "M-Paspor" application
3. Respondents must make passport at the Immigration Office Class I TPI

Semarang

In collecting samples, researchers utilize online networks to efficiently reach respondents. The sampling process is conducted by

distributing questionnaires to users of the M-Paspor application at the Immigration Office Class I TPI Semarang.

1.9.5 Type and Sources of Data

1.9.5.1 Types of Data

Data is categorized into two types: quantitative and qualitative. According to Rahmadi (2011), quantitative data is represented numerically and serves as a tool for obtaining information about a specific subject. This study utilizes quantitative data, which is presented in numbers, scales, and tables. The quantitative data in this research is derived from the responses collected through distributed questionnaires.

1.9.5.2 Sources of Data

a. Primary Data

Primary data is information collected firsthand from the original source by researchers (Sugiyono, 2013). In this study, primary data was gathered directly through questionnaires distributed to users of the M-Paspor application who registered at the Immigration Office Class I TPI Semarang.

b. Secondary Data

Secondary data is pre-existing information obtained from sources like databases, past research, or government records. This type of data is useful for supporting research by providing existing insights and contextual background (Hair et al, 2013). In this research, the materials used in collecting secondary data are books, journals, and information obtain through the internet related to the research problem.

1.9.6 Measurement Scale

The measurement scale serves as a reference for determining the interval size on a measuring instrument to generate quantitative data. This study uses a 1-5 measurement scale proposed by Rensis Likert in 1932 (Simamora, 2022). The Likert scale is commonly used to assess individuals' or groups' attitudes, perceptions, and opinions (Sugiyono, 2013). Respondents are asked to respond to each questionnaire item based on the Likert scale by selecting one of the provided answer choices (Setyaningsih & Setiawan, 2023). By using a Likert scale, answer will be given a value as in the table below with adjustments to the answer options according to the question or statement asked :

Table 1. 4 Questionnaire Answer Scores

Information	Score
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

1.9.7 Data Collection Technique

In this research, the data collected is quantitative, meaning it is in numerical form and can be analyzed as needed. The data collection techniques used include questionnaires, observation, and document analysis (Sugiyono, 2013). Thus the research will use data collection techniques including:

1. Questionnaire

This study employs a Google Form questionnaire as the primary data collection method. A questionnaire is a technique in which a set of statements or questions is given to respondents to obtain their answers (Sugiyono, 2013). The questionnaire is structured based on variables from the End-User Computing Satisfaction (EUCS) model and is distributed to end users of the system. The questionnaire results are in numerical form, which will later be processed for research analysis. This questionnaire is in the form of multiple choices that contain numbers with a Likert scale. In its implementation, respondents will choose to answer each indicator that has been given a numerical scale that indicates the size of satisfaction.

1.9.8 Technique of Analysis

In quantitative research, data analysis techniques are activities carried out after collecting data from respondents (Siyoto & Sodik, 2015). 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 (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.