Available online at: https://journal.pencerah.org/index.php/jspi

Journal of Social and Policy Issues

E-ISSN: 2807-3843 I P-ISSN: 2829-8632

Adoption of Mobile Paspor (M-Paspor) Innovation in Island Communities: A Unified Theory of Acceptance and Use of Technology Approach (Study at The Immigration Office Class II TPI Tanjung Balai Karimun)

Neelam Noeridha, Dian Prima Safitri, Alfiandri Alfiandri
Universitas Maritim Raja Ali Haji, Kota Tanjung Pinang, Kepulauan Riau 29115, Indonesia

ARTICLE INFORMATION

Received: February 16, 2025
Revised: June 02, 2025
Available online: June 30, 2025

KEYWORDS

Adoption Innovation, M-Paspor, UTAUT (Unified Theory of Acceptance and Use of Technology)

CORRESPONDENCE

Name: Dian Prima Safitri
E-mail: dianprimasafitri@umrah.ac.id

A B S T R A C T

Community adoption of public service innovations is an important element in determining the success of the implementation of these innovations. This study aims to analyze the factors that influence community adoption of M-Paspor. The author uses the UTAUT model to identify aspects of M-Paspor adoption by using the variables of performance expectancy, effort expectancy, social influence, and facilitating conditions to see people's desire to adopt M-Paspor in the passport service process at the Tanjung Balai Karimun Immigration Office. This research is associative research with a quantitative approach. Partial Least Square-Structural Equation Modeling (PLS-SEM) analysis and SmartPLS 4.1.0.2 applications were used to analyze the research data. The results showed that performance expectancy, social influence, and facilitating conditions have a positive and significant effect on behavioral intentions to adopt M-Paspor. Meanwhile, effort expectancy have no effect on behavioral intentions to adopt M-Passports. The conclusion is that the intention, willingness, and desire of the people of Karimun Regency to adopt M-Paspor are influenced by three factors, namely the perceived benefits and added value of using M-Paspor, encouragement and advice from the social environment regarding the use of M-Paspor, and the availability of facilities that support the use of M-Paspor.

INTRODUCTION

The importance of researching the adoption of M-Paspor innovations at the Tanjung Balai Karimun Immigration Office is due to the location of Karimun Regency, which borders Malaysia and Singapore. As a result, Tanjung Balai Karimun has become the main gate for any departure abroad in the Karimun Regency area. The purpose of departure abroad through Tanjung Balai Karimun is not only limited to tourist trips, where most of the people in Karimun Regency work as Indonesian Migrant Workers (PMI) in Malaysia and Singapore. Apart from work related, the strategic location of Karimun Regency has made several community activities in the field of education and health also begin to be the destination of departure abroad in the area of Karimun Regency. Therefore, the Tanjung Balai Karimun Immigration Office has an important role in organizing passport services for the people of Karimun Regency.

In addition to the strategic geographical location of Karimun Regency, the importance of research the adoption of M-Paspor innovations by the people of Karimun Regency is also due to the characteristics of the Karimun Regency area as an archipelago. The characteristics of the Karimun Regency area as an archipelago cause problems with the community's right to access services in the form of a wide span of control and must be reached by using sea and land transportation to access services from the Karimun Regency Government, most of which are located in Tanjung Balai Karimun (Noeridha, 2023), including passport services at Tanjung Balai Karimun Immigration Office.

The main concern of this research is the geographical location and regional characteristics of Karimun Regency as an archipelago. As the data from the Central Statistics Agency (BPS) of Karimun Regency in Table 1 shows, several sub-districts in Karimun Regency are far away from the Regency Government Center. The characteristics of this region certainly pose a challenge to the Tanjung Balai Karimun Immigration Office in organizing optimal passport services for the community.

Table 1. Distance of Sub-District Capitals to Karimun Regency Government Center

Sub-District	2016	
	Sub-District Capital	Distance to the Regency Government Center
Meral Barat	Darussalam	2 Km
Tebing	Tebing	6 Km
Meral	Meral Kota	8 Km
Karimun	Tanjung Balai Kota	10 Km
Buru	Buru	17 Km
Belat	Sebele	40 Km
Kundur Utara	Tanjung Berlian Kota	42 Km
Kundur Barat	Sawang	44 Km
Moro	Moro	45 Km
Kundur	Tanjung Batu Kota	60 Km
Ungar	Sei Buluh	65 Km
Durai	Telaga Tujuh	108 Km

Source: BPS Karimun Regency, 2024.

https://doi.org/10.58835/jspi.v5i2.436

Mobile Paspor (M-Paspor) is an immigration service application that the public can use to submit applications and replace expired passports online. As with any application, there are technical barriers to the use of the M-Paspor that result in complaints from the public. One of these technical problems is that the M-Paspor application often experiences system interruptions or errors when used by the community (Nurkumalawati & Muhammad, 2023).

The Tanjung Balai Karimun Immigration Office began using the M-Paspor innovation in January 2023. The findings of Asrianingsih et al., (2023) suggest that the barriers in using the M-Paspor at the Tanjung Balai Karimun Immigration Office are not only related to technical problems. The barriers in using M-Paspor are also caused by users (the public) who still do not understand the flow and procedure of services through the M-Paspor application, as well as network quality that is less supportive of using the application, especially outside of Karimun Island.

The problems in using the M-Paspor application as perceived by the community can be demonstrated by looking at the application service quality rating on the Google Play Store, where the M-Paspor application receives a low rating of only 2.4 out of 5.0. This shows that the community's adoption of the M-Paspor innovation is still low.

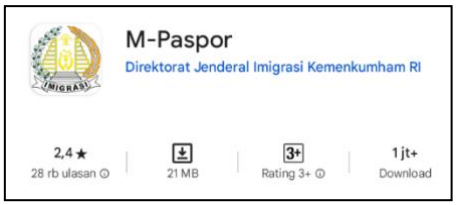

Figure 1. Review of the M-Paspor Application
Source: Google Play Store, 2024.

One of the essential elements in implementing a public service innovation based on digital technology is the acceptance of this technology. Several previous studies (Hazineh et al., 2022; Mudawi et al., 2020; Mustafa et al., 2020; Sabani, 2021; Samsor, 2021) state that the success of a public service innovation depends not only on the implementation of the service system, but also on the desire of individuals or communities as users to adopt these innovations. Therefore, it is important to pay attention to the public acceptance and adoption of public service innovation systems (Ali et al., 2019; Obaid et al., 2022).

The adoption of technology in society can be studied through various theoretical models, such as the Technology Acceptance Model (TAM), the Innovation Diffusion Theory (IDT), and the Unified Theory of Acceptance and Use of Technology (UTAUT). This study examines the adoption of M-Paspor innovation in the people of Karimun Regency through the Unified Theory of Acceptance and Use of Technology (UTAUT) approach proposed by Venkatesh et al., (2003). There are two main reasons for using the UTAUT model:

1. UTAUT is the most comprehensive theoretical framework to explain important factors in technology adoption with 70% higher accuracy than other technology acceptance theories (Maznorbalia & Muhammad, 2021).
2. The key factors in the UTAUT model are a combination of several indicators from eight previous technology acceptance models, so they are able to explain the adoption of new technologies more completely and cover various gaps in previous models (Mensah, 2019; Soong et al., 2020).

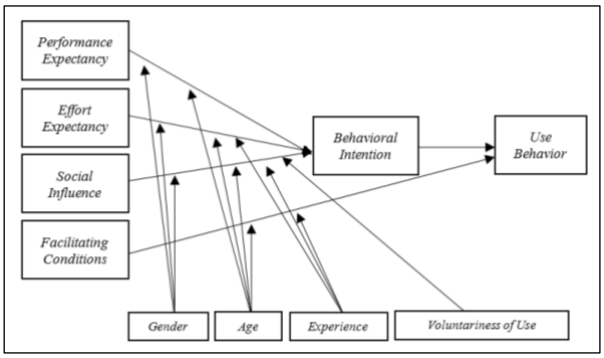

Figure 2. Model of Unified Theory of Acceptance and Use of Technology
Source: Venkatesh et al., (2003)

The UTAUT model explains that user acceptance of new information technology systems is influenced by 4 (four) main variables or constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). Over time, the UTAUT model (Venkatesh et al., 2003) has evolved into UTAUT2 (Venkatesh et al., 2012) and UTAUT3 (Farooq et al., 2017). The UTAUT2 model was developed to focus more on the acceptance of new technologies from the consumer perspective, such as the use of e-wallets and e-commerce (Kilani et al., 2023; Venkatesh et al., 2012). The UTAUT3 model focuses more on highlighting technology adoption in the form of e-learning in the education sector (Farooq et al., 2017; Gunasinghe et al., 2020). Therefore, this study does not use the UTAUT2 and UTAUT3 because the M-Paspor is a form of e-government.

This research empirically fills the gap in the previous research literature (Helpiastuti et al., 2023; Nurkumalawati & Muhammad, 2023; Pamadi et al., 2022; Wulandari et al., 2023; Yaziji et al., 2023) as a novelty by investigating the adoption of M-Paspor innovations among the people of Karimun Regency as an archipelago in Riau Islands Province through the Unified Theory of Acceptance and Use of Technology (UTAUT). In addition to covering the previously described research gaps, this study also raises differences with the UTAUT model because the effort expectancy variable is found to have no effect on the adoption of M-Paspor innovations in the community, so it will lead theoretical discussions on other factors that are more dominant in influencing the community's adoption of e-government as a novelty.

This study uses performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention variables from the UTAUT model to determine essential factors in adopting M-Paspor innovations in the people of Karimun Regency. In this case, performance expectancy (X1), effort expectancy (X2), social influence (X3), and facilitating conditions (X4) are independent variables that will be tested for their influence on behavioral intention to adopt M-Paspor (Y) as the dependent variable. Therefore, there are 4 (four) hypotheses proposed in this study, which are as follows:

https://doi.org/10.58835/jspi.v5i2.436

Table 2. Research Hypothesis

	Research Hypothesis
H1	Performance Expectancy positively and significantly affects the intention to adopt Mobile Paspor (M-Paspor) innovation.
H2	Effort Expectancy positively and significantly affects the intention to adopt Mobile Paspor (M-Paspor) innovation.
H3	Social Influence positively and significantly affects the intention to adopt Mobile Paspor (M-Paspor) innovation.
H4	Facilitating Conditions positively and significantly affects the intention to adopt Mobile Paspor (M-Paspor) innovation.

Source: Processed by Researcher, 2024.

METHOD

This study uses a quantitative approach to identify the factors that influence the adoption of M-Paspor innovations among the people of Karimun Regency through the Unified Theory of Acceptance and Use of Technology (UTAUT). Data collection was done through questionnaires with sampling techniques using Non-Probability Sampling techniques, namely Accidental Sampling. The questionnaire was distributed directly to the research respondents, namely 70 people who performed passport services at the Tanjung Balai Karimun Immigration Office in March 2024. In more detail, the method used in this study can be seen from Figure 3 below:

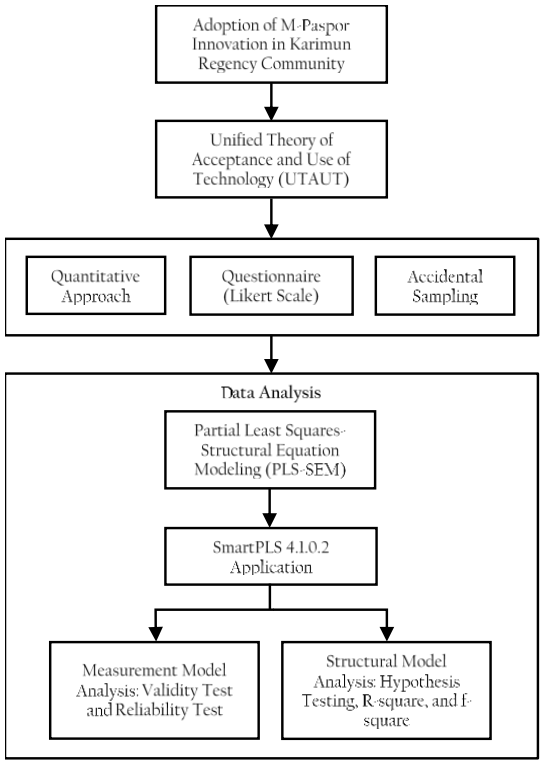

Figure 3. Research Methods
Source: Processed by Researcher, 2024

The data analysis technique is divided into 2 (two), namely Measurement Model Analysis (Outer Model) and Structural Model Analysis (Inner Model). The provisions for analyzing the data used in the study can be seen in the following Table 3:

Table 3. Terms of Data Analysis

Measurement Model Analysis		
Validity Test		
1	Convergent Validity Test	An indicator has good convergent validity to measure variables if it has an Outer Loadings value › 0.7 (Ghozali & Hengky, 2015; Hamid & Suhardi, 2019).
		An indicator has good convergent validity to measure variables if it has an an Average Variance Extracted (AVE) value › 0.5 (Ghozali & Hengky, 2015; Hamid & Suhardi, 2019).
2	Discriminant Validity Test	An indicator has good discriminant validity if the Cross Loading value of each indicator on the measured variable is higher than the Cross Loading value of the indicator on other variables (Haryono, 2016).
		A variable is declared to have good discriminant validity if its square root value of Average Variance Extracted (AVE) is higher than the correlation value between these constructs and other research variables (Haryono, 2016).
Reliability Test		
1	Cronbach's Alpha	A variable or construct is reliable with a Cronbach's Alpha value › 0.6 (Subagiyo & Ahmad, 2022).
2	Composite Reliability	A variable or construct is reliable with a Composite Reliability value › 0.7 (Subagiyo & Ahmad, 2022).
Structural Model Analysis		
Hypothesis Test		
1	Original Sample	If the Original Sample value is close to +1, then there is a unidirectional influence / correlation (positive) between the independent variable and the dependent variable. However, if the Original Sample value is close to -1, the influence / correlation between the independent and dependent variables is in the opposite direction (negative) (Rahadi, 2023).
2	P-Values	An independent variable is declared to have a significant influence / correlation with the dependent variable if the P-Values value ‹ 0.05 (Hamid & Suhardi, 2019; Rahadi, 2023).
3	T-Statistics	An independent variable is declared to have a significant influence / correlation with the dependent variable if the T-Statistics value › 1.96 (Hamid & Suhardi, 2019; Rahadi, 2023).

R-square
Classifications of the R-square value: the R-square value of 0.67 is categorized as a substantial influence (strong), the R-square value of 0.33 is categorized as a moderate influence, and the R-square value of 0.19 is categorized as a weak influence (Chin, 1998).
f-square
Classifications of the f-square value: the f-square value of 0.35 is categorized as a significant influence, the f-square value of 0.15 is categorized as a moderate influence, and the f-square value of 0.02 is categorized as a minor influence (Cohen, 1988).

Source: Processed by Researcher, 2024.

RESULTS AND DISCUSSION

Demographics Analysis

Respondents in this study were people of Karimun Regency who performed passport services at the Tanjung Balai Karimun Immigration Office with a total of 70 people. Respondent demographics are as follows:

Table 4. Respondent Characteristics

Variable	Item	Frequency	Percentage
Gender	Male	27	39%
	Female	43	61%
Age	< 20 Years	6	9%
	20-29 Years	32	46%
	30-39 Years	16	23%
	40-49 Years	13	18%
	≥ 50 Years	3	4%
Last Education	High School	33	47%
	Diploma III/IV	4	6%
	S-1	30	43%
	S-2	3	4%
Domicile (District)	Karimun	11	16%
	Tebing	5	7%
	Meral	8	11%
	Meral Barat	2	3%
	Buru	3	4%
	Kundur	16	23%
	Kundur Barat	6	9%
	Kundur Utara	3	4%
	Ungar	4	6%
	Moro	7	10%
	Durai	5	7%

Source: Processed by Researcher, 2024.

Based on Table 4, the characteristics of respondents in this study are as follows:

1. Respondents are dominated by female gender as much as 61%, while the remaining 39% are male.
2. Respondents consisted of an age range < 20 years as much as 9%, an age range of 20-29 years as much as 46%, an age range of 30-39 years as much as 23%, an age range of 40-49 years as much as 18%, and an age range ≥ 50 years as much as 4%.
3. Most respondents' last education is High School/Equivalent with 47%. In comparison, the rest are S-1 as much as 43%, Diploma III/IV as much as 6%, and S-2 as much as 4%.
4. Respondents were dominated by people who live in Kundur District 23%, while the rest live in Karimun District 16%, Meral District 11%, Moro District with 10%, West Kundur District with 9%, Tebing District and Durai District with 7%, Ungar District with 6%, West Meral District and North Kundur District with 4%, and West Meral District with 3%.

Measurement Model Analysis (Outer Model)

a. Validity Test

The validity test is carried out through 2 (two) tests, namely the convergent validity test and the discriminant validity test. The results of testing convergent validity using Outer Loadings and Average Variance Extracted (AVE) are as follows:

Table 5. Convergent Validity (Outer Loadings and AVE)

Variable	Indicator	Outer Loadings	AVE	Conclusion
Performance Expectancy (X1)	PE1	0.729	0.580	Valid
	PE2	0.718		Valid
	PE3	0.709		Valid
	PE4	0.850		Valid
	PE5	0.792		Valid
Effort Expectancy (X2)	EE1	0.837	0.761	Valid
	EE2	0.907		Valid
	EE3	0.918		Valid
	EE4	0.824		Valid
Social Influence (X3)	SI1	0.825	0.627	Valid
	SI2	0.822		Valid
	SI3	0.780		Valid
	SI4	0.735		Valid
Facilitating Conditions (X4)	FC1	0.764	0.646	Valid
	FC2	0.797		Valid
	FC3	0.815		Valid
	FC4	0.851		Valid
	FC5	0.788		Valid
Behavioral Intention to Adopt M-Paspor (Y)	BI1	0.837	0.705	Valid
	BI2	0.811		Valid
	BI3	0.869		Valid

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

The data processing results in Table 5 above show that all indicators of the research variables have an Outer Loadings value greater than 0.7, and each research variable also has an Average Variance Extracted (AVE) value greater than 0.5. Therefore, it can be concluded that all indicators of the performance expectancy (X1), effort expectancy (X2), social influence (X3), facilitating conditions (X4), and behavioral intention to adopt M-Paspor (Y) are declared valid, and have good convergent validity.

The results of testing discriminant validity using Cross Loadings are as follows:

Table 6. Discriminant Validity (Cross Loadings)

	Cross Loadings				
Indicator	PE (X1)	EE (X2)	SI (X3)	FC (X4)	BI (Y)
PE1	**0.729**	0.458	0.229	0.467	0.435
PE2	**0.718**	0.454	0.176	0.369	0.374
PE3	**0.709**	0.501	0.219	0.499	0.387
PE4	**0.850**	0.675	0.406	0.673	0.588
PE5	**0.792**	0.726	0.409	0.684	0.669

https://doi.org/10.58835/jspi.v5i2.436

Cross Loadings					
Indicator	PE (X1)	EE (X2)	SI (X3)	FC (X4)	BI (Y)
EE1	0.664	**0.837**	0.353	0.641	0.351
EE2	0.710	**0.907**	0.406	0.698	0.573
EE3	0.710	**0.918**	0.317	0.650	0.556
EE4	0.584	**0.824**	0.510	0.558	0.465
SI1	0.292	0.304	**0.825**	0.405	0.430
SI2	0.385	0.433	**0.822**	0.460	0.518
SI3	0.322	0.353	**0.780**	0.356	0.310
SI4	0.240	0.317	**0.735**	0.237	0.212
FC1	0.522	0.442	0.396	**0.764**	0.583
FC2	0.654	0.686	0.299	**0.797**	0.535
FC3	0.567	0.459	0.433	**0.815**	0.586
FC4	0.611	0.643	0.424	**0.851**	0.720
FC5	0.603	0.700	0.389	**0.788**	0.603
BI1	0.611	0.549	0.430	0.610	**0.837**
BI2	0.404	0.339	0.426	0.606	**0.811**
BI3	0.662	0.539	0.416	0.692	**0.869**

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

The data processing results in Table 6 above show that all indicators of the research variables have higher Cross Loadings values than the Cross Loadings values of the indicators on other variables. Therefore, the 21 indicators used as research instruments are declared to have good discriminant validity.

The results of testing discriminant validity using Fornell-Larcker Criterion are as follows:

Table 7. Discriminant Validity (Fornell-Larcker Criterion)

Root Value of Average Variance Extracted (AVE)					
Variable	PE (X1)	EE (X2)	SI (X3)	FC (X4)	BI (Y)
PE (X1)	**0.761**				
EE (X2)	0.765	**0.873**			
SI (X3)	0.404	0.451	**0.792**		
FC (X4)	0.734	0.730	0.486	**0.804**	
BI (Y)	0.674	0.572	0.504	0.760	**0.840**

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

The data processing results in Table 7 above show that the effort expectancy (X2), social influence (X3), facilitating conditions (X4), and behavioral intention to adopt M-Paspor (Y) have a higher Average Variance Extracted (AVE) square root value than the Average Variance Extracted (AVE) square root value of the correlation between constructs and other variables. This differs from the performance expectancy variable (X1), which has an AVE square root value of 0.761, where the AVE square root value is lower than the AVE square root value of the performance expectancy (X1) on the effort expectancy (X2), which is 0.765.

Therefore, the variables of effort expectancy (X2), social influence (X3), facilitating conditions (X4), and behavioral intention (Y) have good discriminant validity. This is inversely proportional to the performance expectancy (X1) because it does not have good discriminant validity. This means that the performance expectancy (X1) and the effort expectancy (X2) are interrelated. This is in line with the research results from (Bhuasiri et al., 2016; Mensah, 2019; Wan et al., 2020) which state that effort expectancy (X2) has a positive and significant effect on performance expectancy (X1)

Overall, it can be concluded that all indicators of the performance expectancy (X1), effort expectancy (X2), social influence (X3), facilitating conditions (X4), and behavioral intention to adopt M-Paspor (Y) are declared valid because they have good convergent validity and discriminant validity to be used as instruments in this study, so that further testing can be carried out.

b. Reliability Test

The results of testing convergent validity using Cronbach's Alpha and Composite Reliability values are as follows:

Table 8. Reliability Test

Variable	Cronbach's Alpha	Composite Reliability	Conclusion
Performance Expectancy (X1)	0.822	0.873	Reliable
Effort Expectancy (X2)	0.896	0.927	Reliable
Social Influence (X3)	0.815	0.870	Reliable
Facilitating Conditions (X4)	0.863	0.901	Reliable
Behavioral Intention to Adopt M-Paspor (Y)	0.791	0.877	Reliable

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

The data processing results in Table 8 above show that all variables in this study have a Cronbach's Alpha value greater than 0.6 and have a Composite Reliability value greater than 0.7. Therefore, it can be concluded that all indicators of the performance expectancy (X1), effort expectancy (X2), social influence (X3), facilitating conditions (X4), and behavioral intention to adopt M-Paspor (Y) are declared reliable or consistent with being used as instruments in research, so that further testing can be carried out.

Structural Model Analysis (Inner Model)

a. Hypothesis Test

The results of hypothesis testing using SmartPLS 4.1.0.2 software through the Bootstrapping method in Path Coefficient testing by looking at the Original Sample (O), P-Values, and T-Statistics value are as follows:

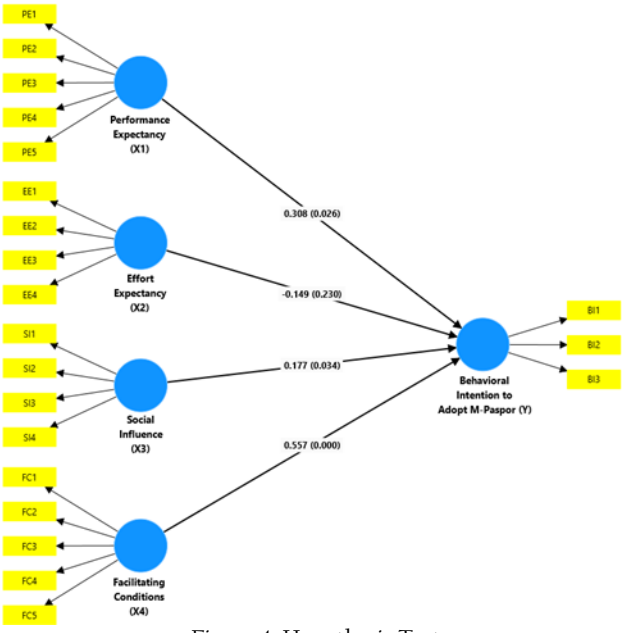

Figure 4. Hypothesis Test
Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Figure 4 shows that there are 3 (three) accepted research hypotheses (H1, H3, H4) and there is 1 (one) rejected research hypothesis (H2). The results of hypothesis testing are explained in more detail below.

Table 9. Hypothesis 1 Test (H1)

Hypothesis	β	P-Values	T-Statistics	Conclusion
H1	0.308	0.026	2.232	Accepted

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Hypothesis 1 examines the influence of performance expectancy on behavioral intention to adopt an M-Paspor. The data processing results in Table 9 above state a positive and significant effect of performance expectancy (X1) on behavioral intention to adopt M-Paspor (Y). The Path Coefficient value of 0.308 indicates that the impact of performance expectancy on behavioral intention to adopt M-Paspor is positive. Furthermore, the P-Values value (0.026) is smaller than 0.05, and the T-Statistics value (2.232) is more significant than 1.96, indicating that performance expectancy significantly affects behavioral intention to adopt M-Paspor. Therefore, hypothesis 1 in this study can be accepted, and it is stated that performance expectancy has a positive and significant effect on the intention to adopt M-Paspor innovation.

Table 10. Hypothesis 2 Test (H2)

Hypothesis	β	P-Values	T-Statistics	Conclusion
H2	-0.149	0.230	1.200	Rejected

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Hypothesis 2 examines the influence of effort expectancy on behavioral intention to adopt an M-Paspor. The data processing results in Table 10 above state that there is no positive and significant effect of effort expectancy (X2) on behavioral intention to adopt M-Paspor (Y). The Path Coefficient value of -0.149 indicates that the impact of effort expectancy on behavioral intention to adopt M-Paspor is negative. This is not in line with hypothesis 2, which proposes that effort expectancy positively affects behavioral intention to adopt M-Paspor. Furthermore, the P-Values (0.230) value is more significant than 0.05, and the T-Statistics (1.200) value is smaller than 1.96. It does not meet the requirements of the previously stated provisions, so effort expectancy has no significant effect on behavioral intention to adopt M-Paspor. Therefore, hypothesis 2 in this study is rejected, saying that effort expectancy does not affect the intention to adopt M-Paspor innovation.

Table 11. Hypothesis 3 (H3) Test

Hypothesis	β	P-Values	T-Statistics	Conclusion
H3	0.177	0.034	2.125	Accepted

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Hypothesis 3 examines the influence of social influence on behavioral intention to adopt an M-Paspor. The data processing results in Table 11 above state a positive and significant effect of social influence (X3) on behavioral intention to adopt M-Paspor (Y). The Path Coefficient value of 0.177 indicates that the impact of social influence on behavioral intention to adopt M-Paspor is positive. Furthermore, the P-Values value (0.034) is smaller than 0.05, and the T-Statistics value (2.125) is more significant than 1.96, indicating that social influence significantly affects behavioral intention to adopt M-Paspor. Therefore, hypothesis 3 in this study can be accepted, and it is stated that social influence has a positive and significant effect on the intention to adopt M-Paspor innovation.

Table 12. Hypothesis 4 (H4) Test

Hypothesis	β	P-Values	T-Statistics	Conclusion
H4	0.557	0.000	3.614	Accepted

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Hypothesis 4 examines the influence of facilitating conditions on behavioral intention to adopt an M-Paspor. The data processing results in Table 12 above state a positive and significant effect of facilitating conditions (X4) on behavioral intention to adopt M-Paspor (Y). The Path Coefficient value of 0.557 indicates that the impact of facilitating conditions on behavioral intention to adopt M-Paspor is positive. Furthermore, the value of P-Values (0.000) is smaller than 0.05, and the value of T-Statistics (3.614) is more significant than 1.96, indicating that facilitating conditions significantly affect behavioral intention to adopt M-Paspor. Therefore, hypothesis 4 in this study can be accepted, and it is stated that facilitating conditions have a positive and significant effect on the intention to adopt M-Paspor innovation.

b. Coefficient of Determination (R-square)

The results of testing coefficient of determination using R-square values are as follows:

Table 13. Coefficient of Determination (R-square)

	R-square	Adjusted R-square	Description
BI	0.634	0.611	Moderate

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

The data processing results in Table 13 above show that the R-square value on the dependent variable (behavioral intention

https://doi.org/10.58835/jspi.v5i2.436

to adopt M-Paspor) is 0.634. Based on this value, it can be stated that the behavioral intention to adopt the M-Paspor (Y) variable is influenced by the performance expectancy (X1), social influence (X3), and facilitating conditions (X4) by 63.4%. At the same time, the remaining 36.6% is influenced by other variables not tested in this study. Furthermore, the R-square value (0.634) is more significant than 0.33, indicating that the effect of performance expectancy (X1), social influence (X3), and facilitating conditions (X4) on behavioral intention to adopt M-Paspor (Y) is categorized as a moderate influence.

c. Effect Size (f-square)

The results of testing effect size using f-square values are as follows:

Table 14. Effect Size (f-square)

Variable	Effect Size			Description
	R^2 Included	*R^2 Included*	*f-square*	
PE → BI	0.634	0.601	0.090	Minor
EE → BI	0.634	0.627	0.019	-
SI → BI	0.634	0.612	0.060	Minor
FC → BI	0.634	0.529	0.287	Moderate

Source: SmartPLS 4.1.0.2 Data Processing, 2024.

Based on the results of data in Table 14 above, it can be concluded that performance expectancy (X1) and social influence (X3) have a minor impact on behavioral intention to adopt M-Paspor (Y). Furthermore, there is 1 (one) variable that has a moderate impact on behavioral intention to adopt M-Paspor (Y), namely facilitating conditions (X4). Meanwhile, effort expectancy (X2) is stated not to impact behavioral intention to adopt M-Paspor (Y). This is because the f-square value of effort expectancy on behavioral intention to adopt M-Paspor (0.019) is less than 0.02. Hair Jr et al., (2017) explained that the f-square value ‹ 0.02 indicates that the independent variable does not influence the dependent variable.

Discussion

The findings of this study differ from the Unified Theory of Acceptance and Use of Technology (UTAUT) theory, which conceptualizes that performance expectancy, effort expectancy, social influence, and facilitating conditions influence user adoption of new technology (Venkatesh et al., 2003). In contrast, this study shows that only the variables of performance expectancy, social influence, and facilitating conditions affect the adoption of M-Paspor innovations in the people of Karimun Regency. However, the findings of this study are also supported by the results of previous studies (Bhuasiri et al., 2016; Kamarudin et al., 2021; Kurfali et al., 2017; Mensah, 2019), which state that public adoption of E-Government systems is influenced by 3 (three) factors, namely performance expectancy, social influence, and facilitating conditions. Therefore, the research results state that of the 4 (four) research hypotheses that have been proposed previously, there are 3 (three) accepted research hypotheses, namely H1, H3, and H4, and there is 1 (one) rejected research hypothesis, namely H2.

Table 15. Summary of Hypothesis Testing Results

	Research Hypothesis	Results	Description
H1	Performance Expectancy (X1) → Behavioral Intention to Adopt M-Paspor (Y)	Positive and Significant Effects	Accepted
H2	Effort Expectancy (X2) → Behavioral Intention to Adopt M-Paspor (Y)	No Effects	Rejected
H3	Social Influence (X3) → Behavioral Intention to Adopt M-Paspor (Y)	Positive and Significant Effects	Accepted
H4	Facilitating Conditions (X4) → Behavioral Intention to Adopt M-Paspor (Y)	Positive and Significant Effects	Accepted

Source: Processed by Researcher, 2024.

a. The Effect of Performance Expectancy on Behavioral Intention to Adopt M-Paspor Innovation.

Performance expectancy is an individual's belief that using M-Paspor innovation will result in better passport service performance. The Unified Theory of Acceptance and Use of Technology by Venkatesh et al., (2003) conceptualizes that performance expectancy influences adopting new technology. Based on the results of data analysis, hypothesis 1 in this study is accepted, and it is stated that performance expectancy has a positive and significant effect on the intention to adopt M-Paspor innovation.

The findings of this study are in line with the basic concept of UTAUT (Venkatesh et al., 2003) and several previous research results (Afieroho et al., 2023; Li, 2021; Sabani, 2021; Soong et al., 2020; Zeebaree et al., 2022) which show that performance expectancy has a positive and significant effect on the intention to adopt E-Government. Performance expectancy was found to have a minor impact on the intention to adopt M-Paspor innovation in the people of Karimun Regency. Thus, the findings of this study suggest that the intention to adopt M-Paspor innovation will increase if the people of Karimun Regency feel that the use of M-Paspor innovation will make it easier for them to access passport services and improve the performance and quality of passport services perceived at the Tanjung Balai Karimun Immigration Office.

b. The Effect of Effort Expectancy on Behavioral Intention to Adopt M-Paspor Innovation.

Effort expectancy is defined as the ease an individual feels regarding using M-Paspor innovation to access passport services. This study's findings differ from the basic concept of UTAUT (Venkatesh et al., 2003), which conceptualizes that effort expectancy influences adopting new technology. In contrast, this study shows that effort expectancy does not affect the intention to adopt M-Paspor innovation, so hypothesis 2 in this study is rejected.

However, the findings of this study are also supported by some previous research results (Ayaz & Mustafa, 2020; Bhuasiri et al., 2016; Kamarudin et al., 2021; Kurfali et al., 2017; Mensah, 2019; Yudiatmaja et al., 2022) which state that effort expectancy does not affect the intention to adopt E-Government. Therefore, high or low effort expectancy does not influence the intention to

adopt M-Paspor innovation among the people of Karimun Regency. Other important factors are more dominant in controlling the intention to adopt M-Paspor innovation in the people of Karimun Regency than effort expectancy, namely performance expectancy, social influence, and facilitating conditions.

c. The Effect of Social Influence on Behavioral Intention to Adopt M-Paspor Innovation.

Social influence is the extent to which an individual's decision to adopt M-Paspor innovation in the passport service process is influenced by their social environment. The Unified Theory of Acceptance and Use of Technology by Venkatesh et al., (2003) conceptualizes that social influence affects adopting new technology. Based on the data analysis results, hypothesis 3 in this study is accepted, and it is stated that social influence has a positive and significant effect on the intention to adopt M-Paspor innovation.

The findings of this study are in line with the basic concept of UTAUT (Venkatesh et al., 2003) and several previous research results (Afieroho et al., 2023; Li, 2021; Sabani, 2021; Soong et al., 2020; Zeebaree et al., 2022) which state that social influence has a positive and significant effect on the intention to adopt E-Government. Social influence was found to have a minor impact on the intention to adopt M-Paspor innovation in the people of Karimun Regency. Thus, the findings of this study suggest that the intention to adopt M-Paspor innovations will increase if the people of Karimun Regency feel influenced by their social environment to use M-Paspor innovations, such as encouragement from the Tanjung Balai Karimun Immigration Office, recommendations and suggestions from friends or family, and opinions from the community regarding the use of M-Paspor innovations on social media networks.

d. The Effect of Facilitating Conditions on Behavioral Intention to Adopt M-Paspor Innovation.

Facilitating conditions are defined as the belief of an individual that adequate resources are available to support the use of M-Paspor innovations in accessing passport services. The Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al., (2003) conceptualizes that facilitating conditions influence the adoption of new technology. Based on the results of data analysis, hypothesis 4 in this study is accepted, and it is stated that facilitating conditions have a positive and significant effect on the intention to adopt M-Paspor innovation.

The findings of this study are in line with the basic concept of UTAUT (Venkatesh et al., 2003) and several previous research results (Afieroho et al., 2023; Hermanto et al., 2022; Li, 2021; Sabani, 2021; Zeebaree et al., 2022) which state that facilitating conditions have a positive and significant effect on the intention to adopt E-Government. Facilitating conditions were found to moderately influence the intention to adopt M-Paspor innovation in the people of Karimun Regency. Thus, the findings of this study suggest that the intention to adopt M-Paspor innovations will increase if the people of Karimun Regency feel that they have resources, such as internet facilities, devices (smartphones), and adequate knowledge to support the use of M-Paspor innovations in the process of providing passport services at the Tanjung Balai Karimun Immigration Office.

CONCLUSION

This current research examines the adoption of Mobile Paspor (M-Paspor) innovations among the people of Karimun Regency at the Tanjung Balai Karimun Immigration Office using the UTAUT model. Specifically, the effect of performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention to adopt M-Paspor innovation was examined. The results show that performance expectancy, social influence, and facilitating conditions have a positive and significant influence on the intention to adopt M-Paspor innovation. Furthermore, it shows the effort expectancy has no impact on the intention to adopt M-Paspor innovation.

Suggestions for increasing the adoption of M-Paspor innovations among the people of Karimun Regency are as follows:

1. Conducting massive socialization of M-Paspor innovations on social media (Instagram, Tiktok, Youtube) from Tanjung Balai Karimun Immigration Office to influence public perception on the benefits and added value of using M-Passport innovations.
2. Implement programs involving local communities, community leaders, influencers, and previous users of the M-Paspor innovation to disseminate positive information and testimonials regarding the benefits, usefulness, and ease of use of the M-Paspor innovation in the community environment of Karimun Regency.
3. To develop service assistance centers for people who experience difficulties in using the M-Paspor and to increase the availability of facilities such as internet networks to support the use of the M-Paspor innovation for people outside Karimun Island.
4. Although effort expectancy has no effect on the intention to adopt M-Paspor innovation among people in Karimun Regency, it is important to increase people's positive views regarding the ease of use of M-Paspor by distributing positive testimonials regarding the ease of procedures for using M-Paspor innovation on various social media by Tanjung Balai Karimun Immigration Office.

This study has several limitations, first, this study uses only 4 (four) main variables of the UTAUT model in examining the adoption of M-Paspor innovations in the community. Future research can consider other factors such as perceived privacy and security, self-efficacy, perceived trust, citizen satisfaction, and government support to examine the adoption of M-Paspor innovations in the community. Second, this study did not identify the influence of moderator variables such as gender, age, tenure, and voluntariness of use in the model. In the future, analysis of these moderator variables is needed when studying the adoption of M-Paspor innovations in the community to complement the knowledge of the UTAUT model. Third, this study used a small number of research samples, which limited the predictive power of the analysis. Therefore, future research can use a larger number of research samples so that the research results can reflect the population more broadly. Finally, this study conducted a quantitative analysis to test the adoption of M-Paspor innovations in the community. Quantitative methods only test the effect of independent and dependent variables without understanding the meaning and reasons behind these variables. This indicates the need to use a qualitative approach in the future to gain a deeper understanding of the adoption of M-Paspor innovations in the community.

https://doi.org/10.58835/jspi.v5i2.436

REFERENCES

Afieroho, P., Robert, P., Xiyu, (Thomas) Zhou, Bogdan, H., & Greg, P. (2023). Adopting E-Government to Monitor Public Infrastructure Projects Execution in Nigeria: The Public Perspective. *Heliyon*, *9*(8), 1–17. https://doi.org/10.1016/j.heliyon.2023.e18552

Ali, M. B., Saleh, S. W., & Ronald, R. (2019). Aspectual Analysis of E-Government Adoption Barriers: A Citizens Perspective. *British Academy of Management (BAM) Conference*, *23*(5), 34–51.

Asrianingsih, D., Agus, H., & Okparizan. (2023). Penerapan Teknologi Informasi pada Pelayanan Pengurusan Paspor di Kantor Imigrasi Kelas II TPI Tanjung Balai Karimun. *Doktrin: Jurnal Dunia Ilmu Hukum dan Politik*, *1*(3), 272–287. https://doi.org/10.59581/Doktrin-widyakarya.v1i1.1057

Ayaz, A., & Mustafa, Y. (2020). An Analysis on the Unified Theory of Acceptance and Use of Technology Theory (UTAUT): Acceptance of Electronic Document Management System (EDMS). *Computers in Human Behavior Reports*, *2*(100032), 1–7. https://doi.org/10.1016/j.chbr.2020.100032

Bhuasiri, W., Hangjung, Z., Hwansoo, L., & Andrew, P. C. (2016). User Acceptance of E-Government Services: Examining an E-Tax Filing and Payment System in Thailand. *Information Technology for Development*, *22*(4), 672–695. https://doi.org/10.1080/02681102.2016.1173001

Chin, W. W. (1998). The Partial Least Squares Approach to Structural Equation Modeling. *Modern Methods for Business Research*, *295*(2), 295–336.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). New York: Routledge.

Farooq, M. S., Maimoona, S., Norizan, J., Alain, F., Kartinah, A., Mirjana, R.-M., & Ali, S. (2017). Acceptance and Use of Lecture Capture System (LCS) in Executive Business Studies: Extending UTAUT2. *Interactive Technology and Smart Education*, *14*(4), 329–348. https://doi.org/10.1108/ITSE-06-2016-0015

Ghozali, I., & Hengky, L. (2015). *Partial Least Squares: Konsep, Teknik, dan Aplikasi Menggunakan Program SmartPLS 3.0 Untuk Penelitian Empiris*. Semarang: Universitas Diponegoro.

Gunasinghe, A., Junainah, A. H., Ali, K., & S., M. F. A. (2020). The Adequacy of UTAUT-3 in Interpreting Academician's Adoption to E-Learning in Higher Education Environments. *Interactive Technology and Smart Education*, *17*(1), 86–106. https://doi.org/10.1108/ITSE-05-2019-0020

Hair Jr, J. F., Lucy, M. M., Ryan, L. M., & Marko, S. (2017). PLS-SEM or CB-SEM: Updated Guidelines on which Method to Use. *Int. J. Multivariate Data Analysis*, *1*(2), 107–123.

Hamid, R. S., & Suhardi, M. A. (2019). *Structural Equation Modeling (SEM) Berbasis Varian: Konsep Dasar dan Aplikasi dengan Program SmartPLS 3.2.8 dalam Riset Bisnis*. Jakarta: PT Inkubator Penulis Indonesia.

Haryono, S. (2016). *Metode SEM untuk Penelitian Manajemen dengan AMOS LISREL PLS*. Jakarta: PT Intermedia Personalia Utama.

Hazineh, S. A. ., Derar, E., & Maan, A. (2022). E-Government: Limitations and Challenges: A General Framework for to Consider in Both Developed and Developing Countries. *International Journal of Scientific & Technology Research*, *11*(01), 97–103.

Helpiastuti, S. B., Irba, S., & Hermanto, R. (2023). Kualitas Pelayanan M-Paspor di Kantor Imigrasi Kelas I TPI Jember. *Jurnal Ilmiah Manajemen Publik dan Kebijakan Sosial*, *7*(1), 15–30. https://doi.org/10.25139/jmnegara.v7i1.5464

Hermanto, A. H., Nila, A. W., & Mustika, S. P. (2022). Taxpayers' Adoption of Online Tax Return Reporting: Extended meta-UTAUT Model Perspective. *Cogent Business & Management*, *9*(1), 1–27. https://doi.org/10.1080/23311975.2022.2110724

Kamarudin, S., Siti, Z. O., Zeinab, Z., Jusang, B., & Mohd, N. O. (2021). Factors Predicting the Adoption of E-Government Services in Telecenters in Rural Areas: The Mediating Role of Trust. *Asia-Pacific Social Science Review*, *21*(1), 20–38.

Kilani, A. A.-H. Z., Dana, F. K., Ghazi, A. A.-W., & Mutaz, M. A.-D. (2023). Consumer post-adoption of e-wallet: An extended UTAUT2 perspective with trust. *Journal of Open Innovation: Technology, Market, and Complexity*, *9*(3). https://doi.org/10.1016/j.joitmc.2023.100113

Kurfali, M., Ali, A., Gul, T., & Yudum, P. (2017). Adoption of E-Government Services in Turkey. *Computers in Human Behavior*, *66*, 168–178. https://doi.org/10.1016/j.chb.2016.09.041

Li, W. (2021). The Role of Trust and Risk in Citizens' E-Government Services Adoption: A Perspective of the Extended UTAUT Model. *Sustainability*, *13*(7671), 1–17. https://doi.org/10.3390/su13147671

Maznorbalia, A. S., & Muhammad, A. A. (2021). Users Acceptance of E-Government System in Sintok, Malaysia: Applying the UTAUT Model. *Policy & Governance Review*, *5*(1), 66–81. https://doi.org/10.30589/pgr.v5i1.348

Mensah, I. K. (2019). Predictors of Electronic Government Services Adoption: The African Students' Perspective in China. *International Journal of Public Administration*, 1–13. https://doi.org/10.1080/01900692.2019.1572621

Mudawi, N. Al, Natalia, B., & Martin, W. (2020). Issues and Challenges: Cloud Computing E-Government in Developing Countries. *International Journal of Advanced Computer Science and Applications*, *11*(4), 7–11. https://doi.org/10.14569/IJACSA.2020.0110402

Mustafa, A., Othman, I., & Fathey, M. (2020). E-Government Adoption: A Systematic Review in the Context of Developing Nations. *International Journal of Innovation*, *8*(1), 59–76. https://doi.org/10.5585/iji.v8i1.343

Noeridha, N. (2023). Inovasi Pelayanan Publik Berbasis Teknologi Informasi Digital pada Kantor Kementerian Agama Kabupaten Karimun. *JISIPOL: Jurnal Ilmu Sosial dan Ilmu Politik Raja Haji*, *5*(1), 1182–1198. https://doi.org/10.56552/jisipol.v5i1.116

Nurkumalawati, I., & Muhammad, S. R. (2023). Public Review of M-Paspor Application in Indonesia: Mobile Government, Digital Resilience, Cyber Security. *Proceedings of the Fifth Annual International Conference on Business and Public Administration (AICoBPA 2022)*, *764*, 404–412. https://doi.org/10.2991/978-2-38476-090-9_32

Obaid, T., Eneizan, B., Samy, S. A. N., Ghaith, A., Ahmed, A. A. A., Hussein, M. E. A., & Nadhmi, A. G. (2022). Factors Contributing to an Effective E- Government Adoption in Palestine. *Lecture Notes on Data Engineering and Communications Technologies*, *127*, 1–14. https://doi.org/10.1007/978-3-030-98741-1_55

Pamadi, J. D. P., Dian, S. K. D., & Ekapti, W. D. (2022). Evaluasi Implementasi E-Government di Kantor Imigrasi Kelas II Non Tempat Pemeriksaan Imigrasi Ponorogo. *Jurnal Ilmiah Ilmu Pemerintahan (MODERAT)*, *8*(4), 756–768. https://doi.org/10.25157/moderat.v8i4.2855

Rahadi, D. R. (2023). *Pengantar Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Tasikmalaya: CV Lentera Ilmu Madani.

Sabani, A. (2021). Investigating the Influence of Transparency on the Adoption of E-Government in Indonesia. *Journal of Science and Technology Policy Management*, *12*(2), 236–255. https://doi.org/10.1108/JSTPM-03-2020-0046

Samsor, A. M. (2021). Challenges and Prospects of E-Government Implementation in Afghanistan. *International Trade, Politics and Development*, *5*(1), 51–70. https://doi.org/10.1108/ITPD-01-2020-0001

Soong, K.-K., Elsadig, M. A., & Khong, S. T. (2020). Factors Influencing Malaysian Small and Medium Enterprises Adoption of Electronic Government Procurement. *Journal of Public Procurement*, *20*(1), 38–61.

https://doi.org/10.1108/JOPP-09-2019-0066

Subagiyo, R., & Ahmad, S. (2022). *Pelatihan SmartPLS 3.0 Untuk Pengujian Hipotesis*. Jakarta: Alim's Publishing.

Venkatesh, V., James, Y. L. T., & Xin, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, *36*(1), 157–178.

Venkatesh, V., Michael, G. M., Gordon, B. D., & Fred, D. D. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly*, *27*(3), 425–478. https://www.jstor.org/stable/30036540

Wan, L., Shoumei, X., & Ai, S. (2020). Toward an Understanding of University Students' Continued Intention to Use MOOCs: When UTAUT Model Meets TTF Model. *SAGE Open*, *10*(3), 1–15. https://doi.org/10.1177/2158244020941858

Wulandari, F. A., Ismail, & Tri, P. (2023). Analisa Kualitas Pelayanan Pengurusan Paspor melalui M-Paspor Dalam Rangka Penyederhanaan Layanan di Kantor Imigrasi Kelas I Khusus TPI Surabaya. *Jurnal Ilmiah Muqoddimah: Jurnal Ilmu Sosial, Politik, dan Humaniora*, *7*(3), 804–808. https://doi.org/10.31604/jim.v7i3.2023.804-808

Yaziji, W., Relaci, A., Dana, I. S., Sofian, L., & Prasetyo, A. W. (2023). Assessing Service Quality in Passport Application Mobile Apps (M-Paspor) and its Influence on User Satisfaction: A Case Study using e-GovQual. *Indonesian Journal of Computer Science (IJCS)*, *12*(6), 3500–3513. https://doi.org/10.33022/ijcs.v12i6.3545

Yudiatmaja, W. E., Yoserizal, Y., Edison, E., Dwi, K., Krismena, T., Tri, S., & Jalaluddin, A. M. (2022). Adoption of Online Learning in Indonesian Higher Education during the COVID-19 Pandemic. *The Journal of Behavioral Science (TJBS)*, *17*(2), 73–89. https://so06.tci-thaijo.org/index.php/IJBS/article/view/255171

Zeebaree, M., Mary, A., & Musbah, A. (2022). Sustainable Adoption of E-Government from the UTAUT Perspective. *Sustainability*, *14*(5370), 1–24. https://doi.org/10.3390/su14095370

https://doi.org/10.58835/jspi.v5i2.436