

Implementation of the EUCS and TAM methods in analyzing user satisfaction with the SEMAIK DISDUKCAPIL website as an online population administration service in Central Lombok

Reski Piandari¹, Mohammad Taufan Asri Zaen², Jihadul Akbar³

^{1,2,3}Information Systems Study Program STMIK Lombok, Praya, Indonesia

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ABSTRACT

This study aims to analyze user satisfaction and acceptance of the SEMAIK Website from the Central Lombok Disdukcapil as an online population administration service by integrating the End User Computing Satisfaction (EUCS) and Technology Acceptance Model (TAM) methods. The study uses a quantitative approach with 150 respondents who have used the SEMAIK Website. Data was collected using a Likert scale questionnaire and analyzed using PLS-SEM with SmartPLS. The test results show that Accuracy → User Satisfaction has a positive and significant effect ($\beta = 0.236$; $t = 2.238$; $p = 0.025$), Ease of Use → User Satisfaction ($\beta = 0.229$; $t = 2.069$; $p = 0.039$), User Satisfaction → ATU ($\beta = 0.229$; $t = 1.975$; $p = 0.048$), PU → ATU ($\beta = 0.315$; $t = 2.922$; $p = 0.003$), PU → BI ($\beta = 0.376$; $t = 5.302$; $p < 0.001$), ATU → BI ($\beta = 0.319$; $t = 3.794$; $p < 0.001$), and BI → AU ($\beta = 0.532$; $t = 8.512$; $p < 0.001$). Meanwhile, Content, Format, and Timeliness did not show any relationship Significant for User Satisfaction. The R^2 values of 0.212 for ATU, 0.283 for AU, 0.341 for BI, and 0.319 for User Satisfaction show the model's ability to explain endogenous constructs. The largest effect size (f^2) is in the BI → AU relationship at 0.394, while PU → BI is 0.179. These findings indicate that integrating EUCS and TAM provides a complementary perspective in explaining user satisfaction and technology acceptance in web-based population administration services.

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Corresponding Author:

Mohammad Taufan Asri Zaen,
Information Systems Study Program,
STMIK Lombok,
Jl. Basuki Rahmat Praya Mataram, Praya, Kec. Praya, Kab. Lombok Tengah, Nusa Tenggara Bar. 83511, Indonesia
Basuki Rahmat Street No. 105 Praya,
Email: opanzain@gmail.com

Introduction

The adoption of information technology has shifted public service delivery toward a digital ecosystem, including population administration. Governments use websites to simplify services, expand access, and improve information effectiveness, efficiency, and transparency. However, digital systems do not automatically guarantee successful implementation, as this also depends on public willingness to accept and use the technology. Therefore, examining user acceptance is essential for assessing digital service implementation. (Winaya et al., 2022), (Aulia Rachman & Indriyanti, 2024).

Previous research on the SEMAIK website used the WEBUSE method and showed a usability level of 87%, which falls into the very good category. These findings give an idea of the usability aspects of the SEMAIK website, but the usability evaluation hasn't specifically explained user satisfaction based

on content, accuracy, format, ease of use, and timeliness, nor has it explained how that satisfaction relates to technology acceptance. Therefore, a perspective on evaluation is needed to complement these usability findings by measuring user satisfaction and acceptance (Sari et al., 2025).

Good usability does not automatically mean high user satisfaction. Usability mainly reflects navigation, interface design, and ease of interaction, while satisfaction covers content suitability, information accuracy, presentation, operational ease, and service timeliness. Studies on the SP2KP and Golden Theatre Websites show that EUCS dimensions and information quality can capture and significantly influence user satisfaction. (Patmawati & Kadafi, 2023), (Ainul Khasanah & Nugroho, 2025).

The SEMAIK website evaluation needs to be done from the end user's perspective. One method that can be used is End User Computing Satisfaction, or EUCS. This method measures satisfaction through five dimensions, namely content, accuracy, format, ease of use, and timeliness. These five dimensions assess the relevance of content, information accuracy, presentation quality, ease of operation, and timely provision of information. Applying EUCS to E-PAKSI and information system studies shows that these dimensions can represent satisfaction based on experience. (Khatimah Ismatullah Nurul et al., 2022), (Komalasari & Ayumida, 2024).

Beyond the issue of satisfaction, another equally important aspect is users' willingness to accept technology. This can be examined through the TAM, which places perceived usefulness and perceived ease of use as two main foundations in explaining technology acceptance. Perceived usefulness relates to the extent to which users believe that the technology they use can provide benefits, while perceived ease of use reflects the belief that the technology is not difficult to understand or operate. The TAM framework has been widely used to explore technology acceptance patterns as well as to assess user satisfaction with a (Dasar, 2020), (Maulana, 2024).

The integration of EUCS and TAM in this study is a theoretical combination of two perspectives that complement each other in explaining user responses to the SEMAIK website. EUCS focuses on user satisfaction based on the experience of using an information system through content, accuracy, format, ease of use, and timeliness. Meanwhile, TAM explains technology acceptance through perceived usefulness, attitude toward use, behavioral intention, and actual usage. By combining these two perspectives, this study examines user satisfaction with SEMAIK services and its relationship with attitudes and technology acceptance. (Doll et al., 2004)(Sholihah & Indriyanti, 2022)(Sa'diyah & Nuryana, 2024)

The relationship between User Satisfaction and Attitude toward Use is an important part of integrating EUCS and TAM. EUCS explains users' evaluation of system quality that shapes satisfaction, while TAM explains users' attitudes toward using technology. Empirical research shows that user satisfaction positively affects user attitudes (Nazari-Shirkouhi, S., Badizadeh, A., n.d.) Therefore, User Satisfaction is placed as a precursor to Attitude toward Use on the SEMAIK Website. PEOU is not included because ease of use is already represented by the Ease of Use dimension in EUCS. This study uses PU, ATU, BI, and AU to avoid measurement overlap and focus on the relationship between user satisfaction and technology acceptance.

Previous studies show that integrating EUCS and TAM provides a broader perspective by considering user satisfaction and technology acceptance. However, studies on CamScanner, PELNI Mobile, LinkAja, ELEARIF, and SIDIA reported differences in the significance and structural relationships of these variables..(Sholihah & Indriyanti, 2022)(Taqwanur & Mega Bilqis Suryawantiningtyas, 2022)(Asher & Rachmawati, 2024)(Iskandar et al., 2024)(Sa'diyah & Nuryana, 2024) This difference shows that the influence of satisfaction and acceptance variables can depend on system characteristics, user needs, service functions, and user interaction experience. Therefore, results from one information system can't automatically be generalized to another, including the SEMAIK Website.

Based on previous research, the research gap lies in the limited explanation of the relationship between user satisfaction and technology acceptance in the SEMAIK Website. Previous research on SEMAIK focused more on usability using WEBUSE, while studies integrating EUCS and TAM in other systems showed variations in variable relationships (Doll et al., 2004) (Sholihah & Indriyanti, 2022) (Sa'diyah & Nuryana, 2024). Therefore, this study combines EUCS and TAM, where EUCS explains user satisfaction and TAM explains attitudes, behavioral intentions, and actual technology use. By placing

User Satisfaction as a precursor to Attitude toward Use, this study provides a more comprehensive explanation of user satisfaction and technology acceptance on the SEMAIK Website.

The urgency of this research is to gain a comprehensive understanding of satisfaction and technology acceptance on the SEMAIK Website. The combination of EUCS and TAM is used to identify factors related to satisfaction, attitude, intention, and actual usage. The research results are expected to serve as evaluation material for the Central Lombok Population and Civil Registration Office in improving the quality of online population administration services. Testing is conducted using PLS-SEM to evaluate the measurement and structural models (*Introduction SEM.Pdf*, n.d.).

Method

The research process began with problem identification, interviews, and a literature review, followed by instrument development, data processing, and interpretation. The study combines the EUCS dimensions of content, accuracy, format, ease of use, and timeliness with TAM variables of perceived ease of use, perceived usefulness, attitude toward using, behavioral intention to use, and actual use. The research stages are presented systematically in Figure 1

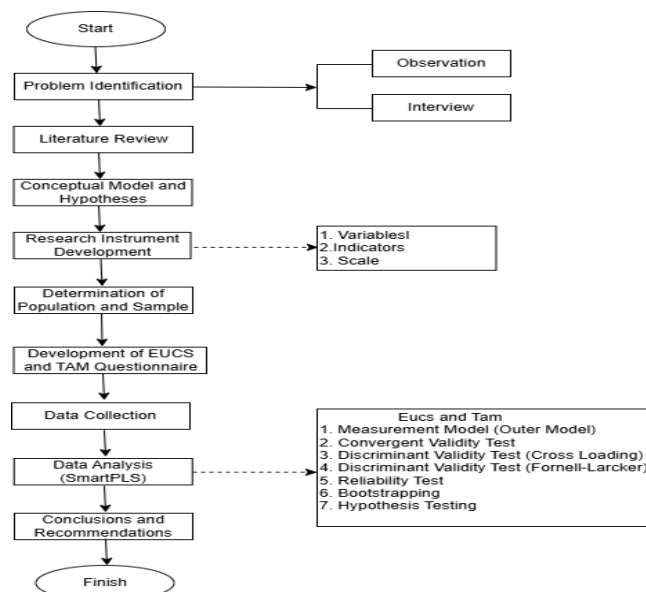


Figure 1. Research flow

Identifying the Problem

The main problem in this study is that the level of user satisfaction and acceptance of the Semaik Disdukcapil Website in Central Lombok as a digital service for making electronic ID cards (KTP-el) is not yet known. Therefore, an evaluation is needed to understand the quality of the website service based on user perceptions.

Literature Study

A literature study was conducted by reviewing theories, journals, and previous research related to the End User Computing Satisfaction (EUCS) method and the Technology Acceptance Model (TAM).

Observation and Interviews

Observations were carried out by directly examining the Semaik Disdukcapil Website in Central Lombok to see its appearance, features, ease of use, and the information available, Interviews were conducted with users or relevant parties to gather information about their experiences, challenges, and perceptions regarding the use of the website.

Conceptual Model and Hypotheses

The conceptual model is designed to illustrate the relationships between variables in the research based on EUCS and TAM theories. Next, hypotheses are formulated as temporary assumptions regarding the influence or relationships between variables that will be tested through data analysis.

Preparation of Questionnaires and Research Instruments

The data collection instrument was designed based on the integration of EUCS and TAM. EUCS measures user satisfaction through Content, Accuracy, Format, Ease of Use, and Timeliness, while TAM measures technology acceptance through PU, ATU, BI, and AU. The instrument consists of 27 statements measured using a 1–5 Likert scale, adapted from previous studies and adjusted to the context of the SEMAIK Website as an online population administration service in Lombok Tengah

Table 1. Questionnaire

Method	Variable	Statement	Source
EUCS	Content	The SEMAIK website provides information on population administration services according to my needs. The information on the SEMAIK website is complete.	(Doll et al., 2004)
	Accuracy	The information available is relevant to the services I use. The information on the SEMAIK website is accurate.	
		The data displayed on the SEMAIK website matches the actual conditions. The information provided matches the data I entered.	
	Format	The SEMAIK website's appearance is attractive and easy to understand. The menu layout on the SEMAIK website is well-organized.	
	Ease of Use	The text, colors, and icons on the SEMAIK website are easy to read and understand. The SEMAIK website is easy for new users to learn.	
		I can easily learn how to use the SEMAIK website.	
	Timeliness	I don't experience any difficulties when using the SEMAIK website. The SEMAIK website provides information in a timely manner.	
		The information on the SEMAIK website is always updated. The service processes on the SEMAIK website run quickly.	
	User Satisfaction	I am satisfied using the SEMAIK Website. The SEMAIK Website meets my expectations.	
		Overall, I am satisfied with the SEMAIK Website.	
TAM	Perceived Ease of Use	Interacting with the SEMAIK Website feels easy. The SEMAIK Website is easy to use without any difficulty. I quickly understand how to use the SEMAIK Website. Interacting with the SEMAIK Website feels easy. The SEMAIK Website is easy to use without any difficulty. I quickly understand how to use the SEMAIK Website. Interacting with the SEMAIK Website feels easy. The SEMAIK Website is easy to use without any difficulty. I quickly understand how to use the SEMAIK Website.	(Davis, 1989)
	Perceived Usefulness	The SEMAIK website helps speed up the population administration process. The SEMAIK website improves my efficiency in getting services. The SEMAIK website is useful for handling population administration.	
	Attitude Toward Using	I enjoy using the SEMAIK website. Using the SEMAIK website is a good choice. I have a positive attitude toward using the SEMAIK website.	
	Behavioral Intention	I intend to use the SEMAIK Website again in the future. I intend to use the SEMAIK Website again.	
	Actual Use	I am willing to recommend the SEMAIK Website to others. I use the SEMAIK Website when I need population administration services.	
		I have used the SEMAIK Website more than once. I choose to use the SEMAIK Website to access population administration services online.	

Table 2. Likert Scale

Scale	Description
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

The Likert scale is used to measure respondents' level of agreement with each statement in the questionnaire. This study uses a five-point scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 =

Agree, and 5 = Strongly Agree. The higher the score, the higher the respondent's level of agreement with the statement.

Population and Sample

The study involved 150 respondents, determined using PLS-SEM requirements and a priori power analysis with G*Power ($\alpha = 0.05$, power = 0.80, medium effect size, and five predictors) (Hair et al., 2022). Respondents were Central Lombok residents who had used the SEMAIK Website for online population administration services. Most respondents were female (57.5%), aged 17–25 years (64.1%), and high school/vocational school graduates (49.7%). These characteristics provide an overview of SEMAIK Website users in this study.

Questionnaire Preparation

The prepared questionnaire was then distributed via Google Form to users of the Semaik Disdukcapil Website in East Lombok Regency. The data obtained is used to analyze the level of user satisfaction and acceptance of the Semaik website as an Online Population Administration service in Central Lombok.

Data Collection

The questionnaire was distributed via Google Form to people who have used the Semaik Disdukcapil Website in Central Lombok as an Online Population Administration service. After distributing the questionnaire, the next step is data collection. At this stage, all responses provided by the respondents are gathered and checked to ensure the completeness and accuracy of the data obtained. The collected data is then compiled and organized systematically so that it is ready to be processed and analyzed using the SmartPLS application.

Data Analysis

The collected data was then processed using SmartPLS by integrating the EUCS and TAM approaches. The analysis steps included evaluating the outer model to assess validity and reliability, checking the inner model values, and testing hypotheses to explore the relationships and influences between constructs in shaping user satisfaction and acceptance of the SEMAIK Disdukcapil website in Central Lombok.

Conclusion and Suggestions

The final stage of this research is to draw conclusions based on data analysis results to answer the research questions and achieve the study's objectives. Additionally, suggestions are provided as evaluation material for the managers of the Semaik Disdukcapil Website in Central Lombok and as a reference for future research related to user satisfaction and acceptance evaluation of information systems.

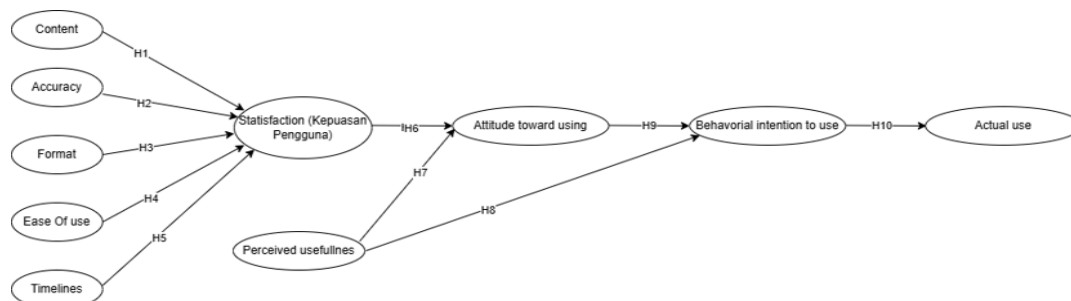


Figure 2. Research model

Notes:

H1: Content contributes positively to the level of user satisfaction.

H2: Accuracy contributes positively to the level of user satisfaction.

H3: Format contributes positively to the level of user satisfaction.

H4: Ease of Use contributes positively to the level of user satisfaction.

- H5: Timeliness contributes positively to the level of user satisfaction.
 H6: Perceived Usefulness has a positive effect on Attitude toward Using.
 H7: Perceived Usefulness has a positive effect on Behavioral Intention to Use.
 H8: User satisfaction has a positive effect on Attitude toward Using.
 H9: Attitude Toward Using has a positive effect on Behavioral Intention to Use.
 H10: Behavioral Intention to Use has a positive effect on Actual Use.

Results And Discussions

Respondent Characteristics

Table 3. Respondent characteristics

Characteristics	Category	Percentage (%)
Gender	Female	57,5
	Male	42,5
Age	< 17 years	1,3
	17–25 years	64,1
	26–35 years	33,3
	36–45 years	1,3
Last Education	Elementary school	0,0
	Middle School	2,6
	Vocational/High School	49,7
	Diploma (D1–D3)	26,8
	Bachelor's (S1)	20,9

A total of 150 SEMAIK Website users participated in this study. Most respondents were female (57.5%) and aged 17–25 years (64.1%), followed by 26–35 years (33.3%). In terms of education, SMA/SMK graduates dominated (49.7%), followed by Diploma (26.8%), Bachelor's degree (20.9%), and SMP (2.6%). Overall, respondents were predominantly young adults with secondary to higher education backgrounds

Measurement Model (Outer model)

The measurement model is carried out to make sure that the research instruments used have good validity and reliability. Evaluating this model includes testing convergent validity, construct reliability, Average Variance Extracted (AVE) values, as well as discriminant validity.

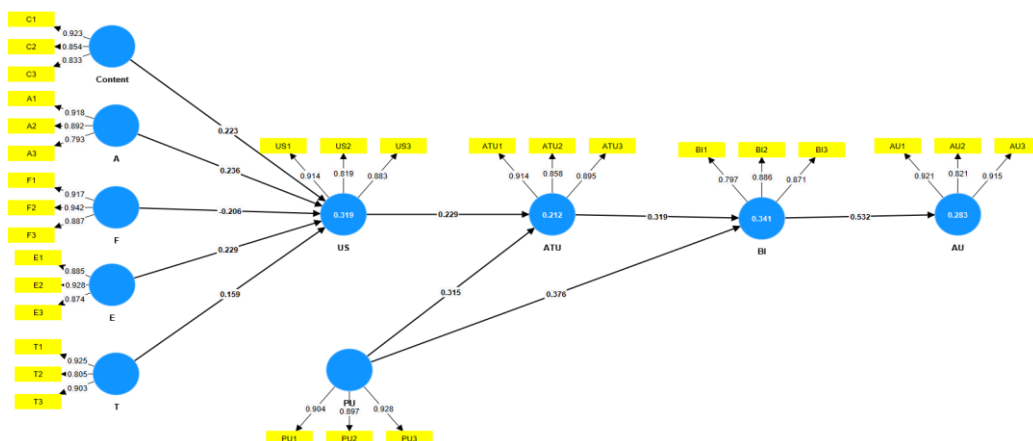


Figure 3. Outer model analysis results

The evaluation of the measurement model is aimed at confirming the feasibility of the instrument in producing valid and consistent measurements. This check is carried out through the assessment of convergent validity, construct consistency, AVE, as well as discriminant validity as a basis for ensuring the accuracy of each construct used.

Convergent Validity Test

Referring to table 4, each indicator shows an outer loading value that exceeds the 0.70 threshold. This achievement indicates that all statement items have met the convergent validity requirements and can be considered valid. With these criteria fulfilled, the data processing can continue to the next round of evaluation.

Table 4. Convergent validity test

Variable	Indicator	Loading Factor	AVE	Description
Accuracy (A)	A1	0,918	0,756	Valid
	A2	0,892		Valid
	A3	0,793		Valid
Attitude Toward Using (ATU)	ATU1	0,914	0,790	Valid
	ATU2	0,858		Valid
	ATU3	0,895		Valid
Actual Use (AU)	AU1	0,921	0,787	Valid
	AU2	0,821		Valid
	AU3	0,915		Valid
Behavioral Intention (BI)	BI1	0,797	0,727	Valid
	BI2	0,886		Valid
	BI3	0,871		Valid
Content (C)	C1	0,923	0,760	Valid
	C2	0,854		Valid
	C3	0,833		Valid
Ease of Use (E)	E1	0,885	0,803	Valid
	E2	0,928		Valid
	E3	0,874		Valid
Format (F)	F1	0,917	0,840	Valid
	F2	0,942		Valid
	F3	0,887		Valid
Perceived Usefulness (PU)	PU1	0,904	0,829	Valid
	PU2	0,897		Valid
	PU3	0,928		Valid
Timeliness (T)	T1	0,925	0,774	Valid
	T2	0,805		Valid
	T3	0,903		Valid

Note: An indicator is considered valid if it has a loading factor value ≥ 0.70 , while a variable is considered to meet convergent validity if it has an AVE value ≥ 0.50 .

Discriminant Validity Test

Discriminant validity assessment is carried out by tracing the cross-loading patterns of each indicator. An indicator is considered to have adequate discriminating power if the cross-loading value is > 0.70 and its correlation with the original construct is higher than its correlation with other constructs. The details of the discriminant validity check results are shown in Table 5.

Table 5. Discriminant Validity Test

Indicator Code	A	ATU	AU	BI	C	E	F	PU	T	US
A1	0,918	0,573	0,463	0,324	0,457	0,555	0,551	0,386	0,553	0,414
A2	0,892	0,474	0,394	0,208	0,408	0,533	0,488	0,390	0,435	0,410
A3	0,793	0,595	0,482	0,455	0,349	0,526	0,542	0,368	0,564	0,350
ATU1	0,651	0,914	0,661	0,465	0,480	0,586	0,638	0,433	0,782	0,355
ATU2	0,417	0,858	0,606	0,374	0,646	0,423	0,482	0,304	0,704	0,292
ATU3	0,576	0,895	0,646	0,413	0,557	0,531	0,516	0,343	0,673	0,305
AU1	0,504	0,677	0,921	0,487	0,453	0,467	0,503	0,605	0,748	0,367
AU2	0,455	0,590	0,821	0,375	0,470	0,352	0,457	0,437	0,592	0,411
AU3	0,410	0,642	0,915	0,531	0,469	0,356	0,422	0,611	0,711	0,360
BI1	0,143	0,267	0,534	0,797	0,302	0,257	0,184	0,393	0,344	0,303
BI2	0,392	0,434	0,394	0,886	0,410	0,454	0,381	0,474	0,492	0,277
BI3	0,403	0,501	0,433	0,871	0,400	0,555	0,457	0,428	0,534	0,276
C1	0,383	0,532	0,407	0,366	0,923	0,441	0,396	0,393	0,480	0,396
C2	0,550	0,579	0,507	0,381	0,854	0,581	0,552	0,473	0,498	0,399
C3	0,271	0,511	0,443	0,396	0,833	0,415	0,465	0,343	0,476	0,345
E1	0,565	0,459	0,358	0,406	0,476	0,885	0,576	0,477	0,478	0,428

Indicator Code	A	ATU	AU	BI	C	E	F	PU	T	US
E2	0,570	0,530	0,386	0,426	0,498	0,928	0,547	0,432	0,548	0,467
E3	0,523	0,595	0,458	0,529	0,519	0,874	0,520	0,470	0,620	0,351
F1	0,580	0,538	0,467	0,381	0,475	0,552	0,917	0,477	0,527	0,275
F2	0,598	0,621	0,553	0,405	0,479	0,570	0,942	0,505	0,630	0,258
F3	0,484	0,546	0,403	0,325	0,528	0,558	0,887	0,492	0,579	0,284
PU1	0,363	0,384	0,561	0,458	0,376	0,449	0,450	0,904	0,436	0,345
PU2	0,465	0,354	0,560	0,436	0,425	0,479	0,528	0,897	0,453	0,406
PU3	0,374	0,380	0,598	0,488	0,468	0,467	0,488	0,928	0,471	0,380
T1	0,536	0,749	0,689	0,541	0,507	0,582	0,595	0,410	0,925	0,376
T2	0,451	0,644	0,687	0,406	0,453	0,509	0,598	0,464	0,805	0,317
T3	0,560	0,742	0,680	0,468	0,506	0,512	0,494	0,448	0,903	0,432
US1	0,466	0,375	0,332	0,319	0,442	0,489	0,308	0,333	0,418	0,914
US2	0,257	0,253	0,343	0,227	0,367	0,345	0,181	0,281	0,279	0,819
US3	0,430	0,297	0,441	0,319	0,327	0,374	0,273	0,468	0,415	0,883

The evaluation results show that all indicators had cross loading > 0.70 , with the highest correlation still being with the construct they represent, not with other constructs. This consistency is further supported by the Fornell-Larcker Criterion, where the square root of the AVE for each construct exceeds its correlation with other constructs. Based on these two checks, all variables can be said to meet the discriminant validity requirements, as shown in Table 5.

Table 6. Discriminant Validity Test (Fornell-Larcker Criterion)

Variable	A	ATU	AU	BI	C	E	F	PU	T	US
A	0,869									
ATU	0,626	0,889								
AU	0,510	0,718	0,887							
BI	0,370	0,473	0,532	0,852						
C	0,468	0,622	0,520	0,436	0,871					
E	0,618	0,583	0,442	0,499	0,553	0,896				
F	0,604	0,620	0,516	0,403	0,541	0,612	0,916			
PU	0,439	0,410	0,630	0,507	0,466	0,510	0,536	0,910		
T	0,591	0,812	0,776	0,538	0,557	0,606	0,631	0,498	0,879	
US	0,452	0,360	0,422	0,335	0,437	0,469	0,298	0,413	0,432	0,873

Based on the data presented in Table 6, the square root of AVE values shown on the diagonal of each construct are higher than the correlation values with other constructs. The diagonal values range from 0.852 to 0.916, while the highest correlation between constructs is 0.812 for the relationship between T and ATU. Therefore, each construct has an AVE square root value greater than the correlations between constructs, meaning all constructs in this study meet the discriminant validity criteria according to the Fornell-Larcker Criterion.(Fornell, C., & Larcker, 2016).

Diskriminant Validity HTMT

Table 7. Discriminant Validity (HTMT)

Variabel	ATU	AU	A	BI	C	E	F	PU	T	US
ATU	—									
AU	0,827	—								
A	0,729	0,610	—							
BI	0,557	0,627	0,457	—						
C	0,739	0,614	0,548	0,530	—					
E	0,668	0,513	0,722	0,597	0,644	—				
F	0,693	0,590	0,700	0,469	0,619	0,686	—			
PU	0,458	0,706	0,510	0,594	0,533	0,579	0,597	—		
T	0,939	0,903	0,701	0,644	0,657	0,710	0,729	0,574	—	
US	0,409	0,506	0,522	0,400	0,513	0,529	0,332	0,476	0,495	—

Based on the HTMT table, all Heterotrait-Monotrait Ratio (HTMT) values between constructs are below the 0.90 threshold. The highest HTMT value is found in the relationship between Attitude toward Using (ATU) and Actual Use (AU) at 0.827, while the lowest is in the relationship between Format (F) and User Satisfaction (US) at 0.332. Therefore, all construct pairs meet the discriminant

validity criteria based on HTMT, meaning each construct can be empirically distinguished from the others.

Reliability Test

Table 8. Reliability Test

Variabel	Cronbach's Alpha	rho_A	Composite Reliability	Description
Accuracy	0,836	0,847	0,902	Reliable
Actual Use	0,864	0,891	0,917	Reliable
Attitude Toward Using	0,868	0,883	0,919	Reliable
Behavioral Intention to Use	0,810	0,812	0,888	Reliable
Content	0,840	0,846	0,904	Reliable
Ease of Use	0,877	0,894	0,924	Reliable
Format	0,904	0,904	0,940	Reliable
Perceived Usefulness	0,896	0,898	0,935	Reliable
Timeliness	0,852	0,874	0,910	Reliable
User Satisfaction	0,845	0,874	0,905	Reliable

Based on the data presented in the table above, all constructs have Cronbach's Alpha, rho_A, and Composite Reliability values that meet the reliability criteria. The Cronbach's Alpha values range from 0.810 to 0.904, while rho_A values range from 0.812 to 0.904. Meanwhile, Composite Reliability values range from 0.888 to 0.940. Therefore, all constructs in this study are considered reliable, meaning the research instrument has adequate internal consistency for the Structural Model (Inner Model).

Multicollinearity Test (VIF)

Table 9. Multicollinearity Test (VIF)

Construct Relationship	VIF
ATU → BI	1,202
Accuracy → User Satisfaction	1,971
BI → AU	1,000
Content → User Satisfaction	1,689
Ease of Use → User Satisfaction	2,135
Format → User Satisfaction	2,136
PU → ATU	1,206
PU → BI	1,202
Timeliness → User Satisfaction	2,122
User Satisfaction → ATU	1,206

Based on the Variance Inflation Factor (VIF) test results in the structural model, all VIF values are in the range of 1.000–2.136. The highest VIF value is found in the relationship between Format → User Satisfaction at 2.136, while the lowest value is in the relationship BI → AU at 1.000. According (Hair & Alamer, 2022) VIF values are used to evaluate collinearity between predictor constructs in a structural model, with a VIF value of ≥ 5 indicating a critical collinearity problem. Since all VIF values in this study are below 5, it can be concluded that there are no multicollinearity issues in the structural model. Therefore, the model meets collinearity criteria and can proceed to the next stage of structural model testing.

Structural Model (Inner Model)

Table 10. R-Square Value

Endogenous Variable	R-Square	R-Square Adjusted
Actual Use	0,002	-0,005
Attitude Toward Using	0,091	0,079
Behavioral Intention to Use	0,753	0,749
User Satisfaction	0,043	0,010

Based on the test results, the R-Square values were 0.002 for Actual Use, 0.091 for Attitude toward Using, 0.753 for Behavioral Intention to Use, and 0.043 for User Satisfaction. The highest value was Behavioral Intention to Use (0.753), indicating that 75.3% of its variation is explained by the constructs in the model, while 24.7% is explained by factors outside the model (Achar, 2016).

Effect Size (f^2)

Effect size (f^2) testing was done to find out the impact of each construct on the endogenous construct. The largest f^2 value was found for BI → AU at 0.394, which is considered a large effect, while PU → BI was 0.179, considered a medium effect. Most other relationships had small effects, while T → US at 0.017 didn't even reach the small effect category. So, BI → AU has the biggest effect size in the research model (Gamil, 2026).

Table 11. Effect Size (f^2) Results

Construct Relationship	f^2
ATU → BI	0,128
Accuracy → User Satisfaction	0,042
BI → AU	0,394
Content → User Satisfaction	0,043
Ease of Use → User Satisfaction	0,036
Format → User Satisfaction	0,029
PU → ATU	0,105
PU → BI	0,179
Timeliness → User Satisfaction	0,017
User Satisfaction → ATU	0,055

Predictive Relevance (Q^2)

Table 12. Predictive Relevance (Q^2) Results

Endogenous Construct	Q^2
Actual Use (AU)	0,210
Attitude Toward Using (ATU)	0,148
Behavioral Intention to Use (BI)	0,240
User Satisfaction (US)	0,212

Based on the results of the Predictive Relevance (Q^2) test, the Q^2 values are 0.210 for AU, 0.148 for ATU, 0.240 for BI, and 0.212 for US. A Q^2 value greater than 0 shows that the model has predictive relevance for the endogenous constructs. Therefore, AU, ATU, BI, and US have predictive relevance in this research model. The highest Q^2 value is found in BI at 0.240, while the lowest value is in ATU at 0.148

Hypothesis Testing Results

Testing the relationships between constructs was done using the bootstrapping technique with a 5% significance level. A hypothesis is considered supported if the T-Statistic value > 1.975 and the P-Value < 0.05. Based on the results, out of the six hypotheses tested, five showed significant results and can be accepted, while one did not reach the significance threshold and must be rejected. These findings show that most of the relationship paths in the model have statistically significant evidence. The Composite Reliability values for all variables met the set criteria (> 0.70), so all variables are considered reliable.

Table 13. Hypothesis testing

Relationship	β	T-statistic	P-value	95% Confidence Interval	Description
ATU → BI	0.319	3.794	0.000	0.153–0.480	Significant
Accuracy → User Satisfaction	0.236	2.238	0.025	0.030–0.446	Significant
BI → AU	0.532	8.512	0.000	0.401–0.643	Significant
Content → User Satisfaction	0.223	1.881	0.060	-0.006–0.462	Not Significant
Ease of Use → User Satisfaction	0.229	2.069	0.039	0.022–0.448	Significant
Format → User Satisfaction	-0.206	1.706	0.088	-0.442–0.021	Not Significant

PU → ATU	0.315	2.922	0.003	0.086–0.516	Significant
PU → BI	0.376	5.302	0.000	0.233–0.509	Significant
Timeliness → User Satisfaction	0.159	1.053	0.293	-0.142–0.450	Not Significant
User Satisfaction → ATU	0.229	1.975	0.048	-0.008–0.446	Significant

Based on the bootstrapping results using SmartPLS, ATU → BI has a positive and significant effect ($\beta = 0.319$; $T = 3.794$; $P = 0.000$), showing that a positive attitude increases the intention to use. Accuracy → User Satisfaction is also significant ($\beta = 0.236$; $T = 2.238$; $P = 0.025$), indicating that information accuracy improves satisfaction. BI → AU has a positive and significant effect ($\beta = 0.532$; $T = 8.512$; $P = 0.000$), showing that a strong intention to use is related to actual usage, in line with (Achar, 2016) Content → User Satisfaction is not significant ($\beta = 0.223$; $T = 1.881$; $P = 0.060$), while Ease of Use → User Satisfaction is significant ($\beta = 0.229$; $T = 2.069$; $P = 0.039$). Format → User Satisfaction ($\beta = -0.206$; $T = 1.706$; $P = 0.088$) and Timeliness → User Satisfaction ($\beta = 0.159$; $T = 1.053$; $P = 0.293$) are also not significant. These findings show that not all EUCS dimensions affect user satisfaction, in line with the research. (Rahayu, n.d.) PU → ATU ($\beta = 0.315$; $T = 2.922$; $P = 0.003$) and PU → BI ($\beta = 0.376$; $T = 5.302$; $P = 0.000$) have a positive and significant effect. User Satisfaction → ATU is also significant ($\beta = 0.229$; $T = 1.975$; $P = 0.048$). Overall, 7 hypotheses are supported and 3 are not, indicating that EUCS and TAM together can explain user satisfaction and acceptance of the SEMAIK Website.

Conclusions

This study shows that the integration of EUCS and TAM can be used to analyze user satisfaction and acceptance of the SEMAIK Website at Disdukcapil Lombok Tengah. The results indicate that some relationships in the model are proven significant, while others are not. Theoretically, this study contributes to the application of integrating EUCS and TAM to evaluate satisfaction and technology acceptance in web-based population administration services. Practically, the results can provide input for SEMAIK managers to improve the quality of information, ease of use, appearance, and website services. This study has limitations in the use of purposive sampling, cross-sectional design, self-report for Actual Use, a limited number of respondents, coverage of only one website and one region, as well as the possibility of common method bias. Future research can expand the number and region of respondents and use actual usage data.

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