Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

Web Analysis of New Student Admissions (PMB) Using Unified Theory of Acceptance and Use of Technology (UTAUT)

(Study at University of Muhammadiyah Sukabumi)

Sigit Senjaya
Informatics Engineering, Universitas Muhammadiyah Sukabumi
e-mail : sigitsenjaya@ummi.ac.id
Corresponding author: sigitsenjaya@ummi.ac.id

Keywords:
New Student Admission;
Technology Acceptance;
UTAUT2;
User Satisfaction;
Partial Least Squares

Article Information:
Received: 15-02-2026
Revision: 27-03-2026
Accepted: 12-04-2026
Published: 03-05-2026

ABSTRACT

Universitas Muhammadiyah Sukabumi (UMMI) launched a web-based online New Student Admission (PMB) system (www.pmb.ummi.ac.id) to streamline the registration process. However, since its inception, there has been no comprehensive evaluation regarding user acceptance and satisfaction. This study aims to analyze the factors influencing the adoption of the PMB system using the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) model, extended with the User Satisfaction variable to measure post-adoption success. A quantitative approach was employed, distributing questionnaires to 296 new students of the class of 2025, with 290 valid responses analyzed using Partial Least Squares - Structural Equation Modeling (PLS-SEM) via SmartPLS software. The results indicate that Social Influence and Habit significantly positively affect Behavioral Intention. Furthermore, Behavioral Intention, Habit, and Facilitating Conditions positively influence Use Behavior. Crucially, the study found that Use Behavior has a substantial positive impact on User Satisfaction (R^2=0.734), confirming that intense and supported system usage is a primary driver of student satisfaction. These findings suggest that to sustain system usage, the university must focus on social engagement strategies and technical infrastructure support rather than just system features.

Introduction

The development of information technology in the past decade has had a significant impact on higher education, especially in the transformation of academic and administrative services. Universities are required to provide effective, efficient, and easily accessible services for prospective students, including in the process of accepting new students (Putra & Suryani, 2021). Universitas Muhammadiyah Sukabumi (UMMI) responded to this challenge by launching a web-based online New Student Admission (PMB) system through the address www.pmb.ummi.ac.id.

Although the system is already operational, a formal evaluation of user acceptance rates has not been conducted in depth. This evaluation is crucial because the acceptance of technology is an early indicator of the success of information system implementation (Dwivedi et al., 2019). This study aims to measure the influence of the construction of the UTAUT2 model which includes *performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value,* and *habit* on intention and behavior of use, as well as the integration of *User Satisfaction* variables.

METHOD

The methodology used in this study is a causal quantitative approach. Data was collected through a questionnaire survey to the population of UMMI new students class of 2025 who use the

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

online PMB system. The sampling technique used *simple random sampling* with a total of 290 valid data analyzed. Hypothesis testing was carried out using *the Partial Least Squares – Structural Equation Modeling* (PLS-SEM) method with the help of SmartPLS 3.0 software to test the relationships between variables in the modified UTAUT2 model.

RESULTS AND DISCUSSION

Data Responden

In this study, the researcher used a questionnaire as a data collection instrument. A total of 296 questionnaires were distributed to new students of the University of Muhammadiyah Sukabumi (UMMI) class of 2025. Of these, 6 questionnaires did not meet the criteria, so 290 questionnaires were valid which were then processed further. The research respondents consisted of new students who had used UMMI's online New Student Admission (PMB) system on the www.pmb.ummi.ac.id website. This respondent data provides a solid basis for analyzing the factors that affect the acceptance of the system based on the UTAUT2 model with the addition of *the User Satisfaction* variable. In terms of the distribution of questionnaires, researchers distribute questionnaires with Google Form. The details of the questionnaire in this study are shown in Table 1.

Table 1. Questionnaire Details

Remarks	Quantity
Return questionnaire	296
Questionnaires that do not meet the criteria	6
Questionnaire processed	290

The number of respondents obtained as many as 290 people consisted of 106 respondents were men and 184 other people were women. The demographic information data of the respondents contained in the questionnaire that the researcher distributed refers to the theory developed by Venkatesh in 2012, namely gender and age where the use of a person's technology depends on age and gender, and the researcher added about the faculty where the researcher can find out the choice of faculty that uses PMB online in registration. The majority of respondents who used PMB online ranged from 16 – 18 years old, namely 141 people (49%) where this age was included in the age of those who had just graduated from school, then respondents who had 19 – 21 years old as many as 129 people (44%), then 22 – 24 years old as many as 4 people (1%) and age ≥25 as many as 16 people (6%).

Furthermore, the researcher has summarized the overall demographic data of the respondents in this study contained in Table 2 Respondent Demographics.

Table 2. Respondent Demographics

Clasification		n=290	Percentage
Gender	Man	106	37%
	Woman	184	63%
Age	16-18	141	49%
	19-21	129	44%
	22-24	4	1%
	≥25	16	6%
Faculty Choice	Faculty of Science and Technology	43	15%

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

Clasification		n=290	Percentage
	Faculty of Agriculture	21	7%
	Faculty of Economics	24	8%
	Faculty of Social Sciences	69	24%
	Faculty of Teacher Training and Education	46	16%
	Faculty of Law	11	4%
	Faculty of Health	76	26%

Model Measurement Analysis Results

The measurement model in this study was analyzed through convergent validity and discriminant validity, where indicators were evaluated based on loading factor values, average variance extracted (AVE), and composite reliability for each latent variable. This process aims to ensure that the indicators used are truly valid and reliable in measuring the constructs being studied. This stage is generally known as the indicator validity and reliability test (Hair et al., 2022; Henseler, 2021).

The analysis of the measurement model (outer model) was carried out using the PLS Algorithm procedure with a weighting scheme and a maximum of 300 iterations. The results of the evaluation of the outer model are the basis for ensuring that the constructs in this research model can be interpreted validly and consistently as illustrated in Figure 1.

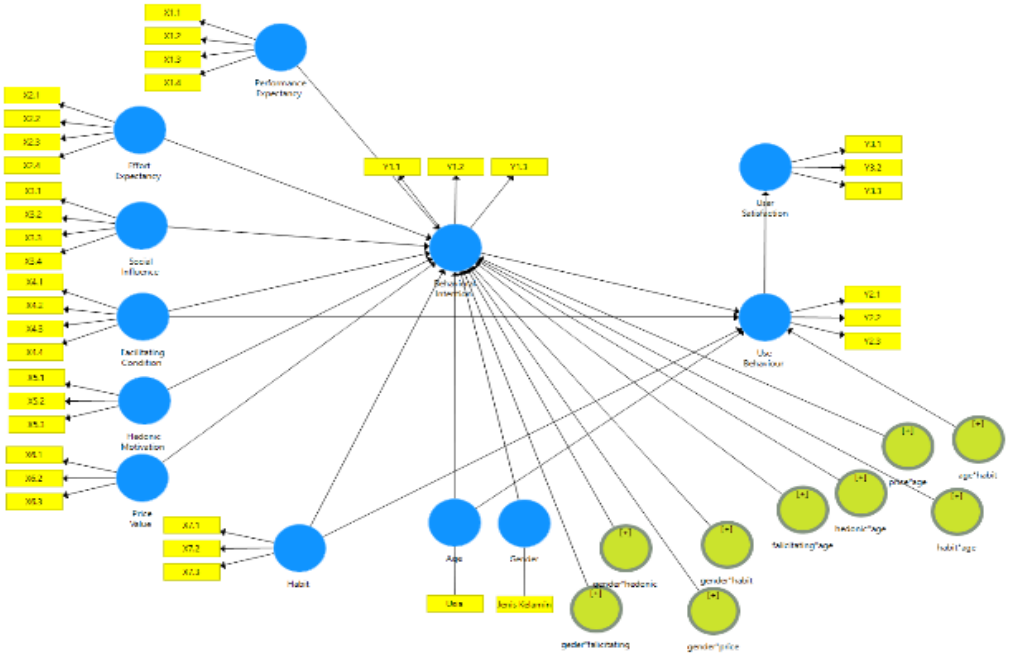

Figure 1. Path Coefficient Algorithm Using SmartPLS

Indicator Reliability

It can be seen from table 3. that all items have an outer loading above 0.6 so that it can be said that all indicators are valid for use in the research model.

Table 3. Reliability of Indicators Based on Loadings

Laten Variable	Indicator	Loading Factor	Remarks
PE	X1.1	**0,942**	Reliabel

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

Laten Variable	Indicator	Loading Factor	Remarks
	X1.2	**0,956**	Reliabel
	X1.3	**0,947**	Reliabel
	X1.4	**0,955**	Reliabel
EE	X2.1	**0,938**	Reliabel
	X2.2	**0,961**	Reliabel
	X2.3	**0,956**	Reliabel
	X2.4	**0,918**	Reliabel
SI	X3.1	**0,898**	Reliabel
	X3.2	**0,930**	Reliabel
	X3.3	**0,925**	Reliabel
	X3.4	**0,917**	Reliabel
FC	X4.1	**0,920**	Reliabel
	X4.2	**0,921**	Reliabel
	X4.3	**0,911**	Reliabel
	X4.4	**0,908**	Reliabel
HM	X5.1	**0,952**	Reliabel
	X5.2	**0,964**	Reliabel
	X5.3	**0,955**	Reliabel
PV	X6.1	**0,922**	Reliabel
	X6.2	**0,938**	Reliabel
	X6.3	**0,939**	Reliabel
H	X7.1	**0,931**	Reliabel
	X7.2	**0,940**	Reliabel
	X7.3	**0,883**	Reliabel
BI	Y1.1	**0,96**	Reliabel
	Y1.2	**0,97**	Reliabel
	Y1.3	**0,96**	Reliabel
UB	Y2.1	**0,933**	Reliabel
	Y2.2	**0,942**	Reliabel
	Y2.3	**0,911**	Reliabel
US	Y3.1	**0,954**	Reliabel
	Y3.2	**0,955**	Reliabel
	Y3.3	**0,957**	Reliabel

After the indicator reliability test is carried out, the next process is to test the reliability of the variable or called internal consistency which is measured from the amount of composite reliability value and Cronbach's alpha of the indicator block that measures the variable.

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

Reliability Internal Consistency

Tabel 4. Nilai *Composite Reliability* Dan *Cronbach's Alpha*

Variable	Composite Reliabiliy	Cronbach's Alpha	Keterangan
BI	**0,973**	**0,958**	Reliabel
EE	**0,970**	**0,959**	Reliabel
FC	**0,954**	**0,935**	Reliabel
H	**0,942**	**0,908**	Reliabel
HM	**0,970**	**0,954**	Reliabel
PE	**0,974**	**0,964**	Reliabel
PV	**0,953**	**0,925**	Reliabel
SI	**0,955**	**0,938**	Reliabel
UB	**0,950**	**0,920**	Reliabel
US	**0,969**	**0,952**	Reliabel
Age	**1,000**	**1,000**	Reliabel
Gender	**1,000**	**1,000**	Reliabel

Of the ten latent variables of the moderation variable in this study, all of them have met the requirements where a composite reliability value and Cronbach's alpha have been obtained above 0.6 which means that overall the latent variables can be said to be reliable. In addition to the reliability test, a validity test must also be carried out on the variable (convergent validity) known through the AVE value and the indicator validity test (discriminant validity) through the comparison of the square root of the Average Variance Extracted (AVE) obtained from each variable with the relationship between the variable and other variables.

Convergence Validity

Tabel 5. Nilai *Average Variance Extracted* (AVE)

Variable	AVE	Remark
BI	**0,923**	Valid
EE	**0,890**	Valid
FC	**0,837**	Valid
H	**0,844**	Valid
HM	**0,916**	Valid
PE	**0,903**	Valid
PV	**0,870**	Valid
SI	**0,842**	Valid
UB	**0,863**	Valid
US	**0,913**	Valid
Age	**1,000**	Valid
Gender	**1,000**	Valid

The AVE values of the latent and moderation variables are shown in table 5. indicating that the ten Latent Variables and the two Moderation Variables have an AVE value above 0.5, this can be interpreted that the latent variable and this moderation variable are considered good and valid. The

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

next stage in the PLS analysis will be a test of the validity of the indicator with its variable called discriminant validity

Discriminan Validity

To prove or test whether a measurement instrument meets discriminant validity, it can be done by comparing the square root of AVE for each variable with the correlation between the construct and the other construct. This can be seen in Table 6. The yellow box is the square root value of AVE of each latent variable.

Table 6. Fornell-Lacker Analysis in Discriminant Validity Testing

	BI	EE	FC	H	HM	PE	PV	SI	UB	US
BI	0,961									
EE	0,766	0,943								
FC	0,785	0,855	0,915							
H	0,813	0,784	0,825	0,919						
HM	0,773	0,786	0,819	0,830	0,957					
PE	0,742	0,854	0,799	0,747	0,750	0,950				
PV	0,795	0,827	0,826	0,834	0,828	0,784	0,933			
SI	0,789	0,748	0,764	0,780	0,773	0,734	0,797	0,918		
UB	0,804	0,783	0,826	0,825	0,808	0,761	0,807	0,777	0,929	
US	0,807	0,836	0,865	0,808	0,811	0,826	0,841	0,726	0,857	0,955

From Table 6. it is understandable that the comparison of the square root value of the AVE of the EE variable of 0.942 is higher than the correlation value between the EE construct and BI. Likewise with BI, FC, HB, HM, PE, PV, SI, UB, and US which have a higher square root value of AVE compared to the correlation value between latent variables and other latent variables. Therefore, of the ten latent variables, it can be declared to have discriminating validity as seen in Table 7.

Tabel 7. Hasil Pengujian Validitas

Variable Laten	Remarks
BI	Valid
EE	Valid
FC	Valid
H	Valid
HM	Valid
PE	Valid
PV	Valid
SI	Valid
UB	Valid
US	Valid

Betok: Journal of Management Business, Economic, and Computer Science
Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

Structural Model Analysis (Inner Model)

Internal model analysis was carried out to find out whether the research hypothesis was accepted or rejected based on empirical data, as well as to measure the model's prediction strength using the determination coefficient (R2). If the R2 value is higher, it proves that the predictive ability of the research model is getting better. Hair et al. (2022) and Henseler (2021) categorized an R2 value of 0.75 as a strong model, 0.50 indicating a moderate model, and 0.25 describing a weak model. Based on the results of data processing (Table 8), the R2 value for each endogenous variable was obtained as follows:

Table 8. R-Square Value Variable

Variabel Endogen	**R Square**	Kategori
Behavioral Intention	0,766	Kuat
Use Behavior	0,772	Kuat
User Satisfaction	0,734	Moderate

Referring to the above criteria, the values of R^2 for Behavioral Intention (0.766) and Use Behavior (0.772) are above 0.75, so they are categorized as strong models. Similarly, the User Satisfaction variable with a value of 0.734 shows a substantial prediction in explaining user satisfaction.

Hypothesis Testing

Based on the results of bootstrapping, it was found that Social Influence and Habit factors have a positive and significant influence on Behavioral Intention. This is in line with the findings of Alalwan et al. (2017) and Goto & Munyai (2022) who emphasize that in the context of education, the encouragement of the social environment (friends/teachers) and digital habits strongly determine the intention of technology adoption. On the other hand, Performance Expectancy and Effort Expectancy had no significant effect, indicating that new students felt that this system was an administrative obligation so that the convenience aspect was not the main determinant of their intentions. Furthermore, Behavioral Intention, Habit, and Facilitating Condition have been shown to have a significant effect on Use Behavior. This confirms that a strong intention, supported by adequate facilities (internet/devices), will manifest into real usage behavior.

Discussion

This study specifically highlights the role of User Satisfaction as a measure of post-adoption success. The results of the path coefficient analysis showed that Use Behavior had a very strong positive influence on User Satisfaction of 0.857 (significant in the t-> 1.96 statistic). These findings provide important theoretical and practical implications. Theoretically, this proves that the UTAUT2 model is relevant to be extended to the satisfaction variable, where user satisfaction does not arise only from application features, but from an intense and smooth actual use experience. In line with the latest study from Bilgah & Frimayasa (2024), when the supporting infrastructure (Facilitating Conditions) is adequate, technical barriers are reduced, so the frequency of use increases and leads to high user satisfaction. For UMMI, this statistical data hints that the strategy to increase the satisfaction of prospective students is not enough just by beautifying the web interface. Universities should invest in server stability and responsive technical assistance services (helpdesks). When students can use the

Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

system repeatedly without problems (high Use Behavior), their satisfaction (User Satisfaction) will automatically increase drastically, as shown by the R2 satisfaction value of 73.4%.

CONCLUSION

This study concludes that the acceptance of UMMI's PMB Online system is more predominantly influenced by social factors (*Social Influence*) and habits (*Habit*), not by technical performance expectations alone. In addition, this study has succeeded in empirically proving that *User Satisfaction* is a crucial variable that is significantly influenced by *Use Behavior*. Strategic recommendations for institutions include: (1) Strengthening social aspects through digital promotion involving senior student testimonials; (2) Providing easy-to-understand technical guidance to form habits; and (3) Increasing the capacity of the server infrastructure to ensure smooth access, which has proven to be the main key to user satisfaction.

REFERENCES

Alalwan, A.A., Y.K. Dwivedi, dan N.P. Rana. 2017. Digital banking adoption: A systematic review. *International Journal of Information Management* 37(3): 108–121.

Bilgah, B. & Frimayasa, A. 2024. Analisis Pendekatan Model UTAUT 2 Terhadap Penerimaan Penggunaan E-Banking Livin Pada Bank Mandiri. *Innovative: Journal Of Social Science Research*, 4(4): 8492–8503.

Dwivedi, Y.K., N.P. Rana, A. Jeyaraj, M. Clement, dan M.D. Williams. 2019. Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers* 21(3): 719–734.

Goto, J. & Munyai, A. 2022. The Acceptance and Use of Online Learning by Law Students in a South African University: An Application of the UTAUT2 Model. *The African Journal of Information Systems*, 14(1).

Hair, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. 2022. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd ed. Thousand Oaks: SAGE Publications.

Henseler, J. 2021. *Composite-based Structural Equation Modeling: Analyzing Latent and Emergent Variables*. Springer.

Indrawati. 2015. *Metode Penelitian Manajemen dan Bisnis: Konvergensi Teknologi Komunikasi dan Informasi*. Bandung: Refika Aditama.

Martins, C., T. Oliveira, dan A. Popovič. 2019. Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management* 34(1): 1–13.

Maulana, S., Khasanah, I. & Yusuf, A. 2023. Analisis Penerimaan Pengguna terhadap Financial Technology Bareksa Menggunakan Model UTAUT. *Jurnal Maksipreneur: Manajemen, Koperasi, Dan Entrepreneurship*, 12(2): 527.

Putra, A., dan E. Suryani. 2021. Analisis penerimaan sistem informasi akademik menggunakan UTAUT2. *Jurnal Sistem Informasi* 17(2): 85–96.

Sarstedt, M., Ringle, C.M. & Hair, J.F. 2019. *Handbook of Market Research: Partial Least Squares Structural Equation Modeling*. Springer.

Venkatesh, V., J.Y.L. Thong, dan X. Xu. 2012. Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*

Published by: Alahyan Publisher
e-ISSN: XXXX - XXXX
DOI: https://doi.org/10.61492/betok.v.i..
Volume: XX Issues: XX (May: XXXX) hal: 37-45

36(1): 157–178.