

UNDERSTANDING THE INTENTION TO USE PLN MOBILE APPLICATION: THE MODERATED MEDIATION ANALYSIS

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Abstract:

Background: Mobile technology serves as a strategic element that enhances consumer experience and strengthens interactions between consumers and service providers. Prior studies indicate that such technology facilitates user customization, simplifies information retrieval, and streamlines customer-company interactions. A thorough understanding of user intention toward the PLN Mobile application is critical for reinforcing customer relationships, boosting loyalty and satisfaction, and generating revenue growth through value-added services.

Purpose: This study aims to examine the influence of perceived usefulness and technology acceptance on the intention to use the PLN Mobile application. Additionally, the study also investigates the mediating role of attitude toward use and the moderating role of subjective norm in influencing the intention to use the PLN Mobile application.

Design/methodology/approach: This study employs a quantitative survey-based design with a sample of 260 employees customers of PLN UP3 Padangsidempuan. A purposive sampling approach was adopted for participant selection. The data collection was conducted in 2024. The data were analyzed using structural equation modeling with partial least squares (SEM PLS)

Findings/Results: The results of the study demonstrate that both perceived usefulness and technology acceptance have a positive and significant impact on the intention to utilize the PLN Mobile application. Additionally, the study reveals that attitude toward use acts as a mediator in the relationship between perceived usefulness, technology acceptance, and intention to use. Moreover, the effect of perceived usefulness and technology acceptance on the intention to use the PLN Mobile application was moderated by subjective norm. The mediating role of attitude toward use underscores the necessity for extending the Technology Acceptance Model (TAM) by incorporating psychological variables to achieve a more holistic understanding of user intention. Furthermore, the moderating effect of subjective norm highlights the critical influence of social factors in technology usage.

Conclusion: Technology acceptance and perceived usefulness significantly influence the intention to use the PLN Mobile application. Positive attitudes toward the application, formed by perceived usefulness and technology acceptance, further enhance the intention to use. Additionally, subjective norm play a crucial role in motivating individuals to use the application.

Originality/value (State of the art): This study examines the role of technology acceptance as a single construct and integrates the TPB and TAM models to provide a theoretical framework.

Keywords: attitude toward use, intention to use, perceived usefulness, subjective norm, technology acceptance

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INTRODUCTION

The evolution of information and communication technology has significantly altered the modalities through which consumers engage with service providers, particularly within the utility sector, during this rapidly evolving digital epoch (Natarajan et al. 2018). Digital transformation exerts influence over entire organizations and their operational methodologies, transcending the simplistic digitalization of institutional processes and activities. The state-owned enterprise known as the Indonesia state electricity company (PLN) is responsible for the provision of electrical energy services within Indonesia. From 2010 to 2023, the number of PLN customers increased by 79 million, representing a 4.4% growth from the previous year. The largest customer base of PLN is comprised of residential consumers, which account for 72.6 million customers. A total of four million customers are from the business sector. It is therefore incumbent upon PLN to provide the best possible service to the community, irrespective of location, by prioritising customer satisfaction through the delivery of an excellent service. The advent of digital transformation will undoubtedly prove beneficial in enhancing the value of customer service. In order to facilitate greater accessibility to electricity services, the state-owned enterprise launched the PLN Mobile application, a pioneering digital innovation. This initiative serves as a testament to the ongoing digital transformation in the utility sector.

The potential of mobile technology can be regarded as a crucial strategic element and an innovation that enhances consumer experience and improves interaction between consumers and service providers (Rafique et al. 2020). Prior research has demonstrated that mobile technology facilitates the customization of the user experience, simplifies the process of information retrieval, and streamlines interaction between customers and companies (Yan et al. 2021). It is therefore imperative to gain a deeper understanding of the intention to use the PLN Mobile application, as this will enable the company to strengthen customer relationships, increase customer loyalty and satisfaction, and offer opportunities to enhance revenue by providing added value to customers. Despite its availability, only a small fraction of customers currently utilize the PLN Mobile application when compared to the company's total customer population. The disparity between potential and actual users underscores the critical need to examine adoption determinants, making this

investigation both timely and practically significant for digital transformation initiatives in Indonesia's utility sector."

Prior research has identified a number of factors that can influence the intention to use a technology. These include perceived usefulness (Amijaya et al. 2021; Sun et al. 2020), technology acceptance (Rahmawati & Narsa, 2019), attitude toward use (Charles, 2018; Gupta & Ranjan, 2021) and subjective norm (Aji, 2020; Ursavaş et al. 2019). Perceived usefulness assesses the extent to which a particular technology can enhance work performance, establishing it as a pivotal predictor in technology acceptance (Davis, 1989). Meanwhile, technology acceptance is concerned with the ease of use of a given technology, and thus impacts an individual's willingness to adopt new innovations. These factors interact to influence both the attitude toward use and the intentions to use (Charles, 2018). Subjective norms reflect social influence, indicating the extent to which individuals feel the need to align with the views of significant others in their social environment regarding technology use (Zhao & Wang, 2020). Subjective norms exert an influence on the intention to use technology, as people are often swayed by the opinions of their social environment. The probability of utilization is heightened when an application is endorsed by a user's social network.

Previous studies have examined the relationships within the Technology Acceptance Model, which consists of perceived usefulness, perceived ease of use, attitude toward use, and intention to use (Buabeng-andoh, 2018; Rafique et al. 2020; Waris et al. 2022). However, research that examines technology acceptance as a single construct is very limited. Additionally, previous studies have rarely tested the moderating role of subjective norm on the intention to use a technology. To fill this gap, this study aims to include technology acceptance as a single construct and test the moderating role of subjective norm.

This research proposes a combined TAM-TPB model to comprehensively understanding the intention to use PLN Mobile App. The TAM has been widely used in published literature to examine newly emerging technologies. The TAM has been widely used in published literature to examine emerging technologies. According to TAM, perceived ease of use and perceived usefulness are two key criteria influencing customers' decisions to use or not use a

specific technology (Dixit, 2018). In contrast, the TPB posits that a person's behavior can be explained by a combination of subjective norms, attitudes, and perceived behavioral control (Ajzen, 2020). TPB relies on three main constructs that influence individual behavioral intentions: attitudes, subjective norms, and behavioral control (Naufal et al. 2024).

This study integrates the TPB and TAM models to provide a theoretical framework. Behavioral variables form the TPB, while factors contributing to technology are generally the focus of TAM. For a more comprehensive approach, this study examines the intention to use the PLN Mobile application by combining these two models. The study aims to test the influence of perceived usefulness and technology acceptance on the intention to use the PLN Mobile application. Additionally, it examines the mediating role of attitude toward use and the moderating role of subjective norm in influencing the intention to use the PLN Mobile application

METHODS

This study employs a quantitative research methodology with a survey-based approach. The research was conducted at PLN UP3 Padangsidempuan. The sample for this study is comprised of customers of PLN UP3 Padangsidempuan. As outlined by (Hair et al. 2019) a study is deemed satisfactory if the sample size is calculated as five to ten times the number of indicators. In this study, there are 26 indicators. Accordingly, the sample size for this study is 26 multiplied by 10, or 260 respondents. The sampling technique employed is purposive sampling, which is a method for selecting samples based on specific criteria. This study employs purposive sampling, as the selection of the sample requires the fulfillment of specific criteria to ensure the acquisition of valid data. The criteria for respondents in this study are as follows: they must be medium to high-income household customers of PLN who have not accessed or used PLN Mobile in Padangsidempuan, with an electricity consumption of 900 VA or more. The data were collected via the distribution of a questionnaire via Google Forms.

This study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate the proposed framework. PLS-SEM is a multivariate analysis technique employed for the evaluation of

structural relationships between constructs. PLS-SEM is regarded as an invaluable technique for exploratory research (Hair et al. 2019). It is recommended to use PLS-SEM to evaluate mediation and moderation relationships because it allows the simultaneous study of multiple variables and then the ability to test models with multiple indicators or constructs (Sarstedt et al. 2020).

Hypothesis

Perceived Usefulness and Intention to Use

Perceived usefulness is defined as the degree to which an individual believes that using a specific system will enhance their job performance (Chen & Aklikokou, 2020). Perceived usefulness represents a pivotal factor influencing an individual's attitude toward technology utilization. In accordance with the Technology Acceptance Model (TAM), two principal components are posited to influence the intention to use: perceived usefulness and perceived ease of use. Individuals who perceive a technology as more useful are more likely to have a strong intention to use it. Perceived usefulness exerts a direct influence on the intention to use, as individuals who perceive technology as beneficial and capable of assisting them are more likely to utilize it (Ariffin & Lim, 2020). The findings of studies conducted by (Amijaya et al. 2021; Chen & Aklikokou, 2020) indicate that perceived usefulness has a positive and significant effect on intention to use.

H1: Perceived usefulness positively affects Intention to Use

Technology Acceptance and Intention to Use

The concept of technology acceptance can be described as the process by which users evaluate, accept, and eventually utilize novel technology, as outlined by (Bauwens et al. 2020). This definition encompasses a range of factors that influence an individual's decision to adopt and actively utilize new technology or information systems. The primary objective of this concept is to comprehend and anticipate the factors that influence individuals' decisions to adopt technology, based on their diverse beliefs and attitudes towards it. If a technology is perceived as useful and straightforward to use, this will engender a more positive technology acceptance, thereby encouraging the intention to use it (Zheng & Li, 2020).

H2: Technology acceptance positively affects intention to use

The Mediating Role Attitude Toward Use

In the context of the Technology Acceptance Model (TAM), perceived usefulness represents a crucial determinant of user attitudes towards technology (Weng et al. 2018). Perceived usefulness influences attitudes toward use. If users perceive technology as beneficial, they are likely to develop a positive attitude. The research conducted by (Eksail & Afari, 2020; Weng et al. 2018) revealed that perceived usefulness affects attitudes toward usage. Moreover, technology acceptance has been demonstrated to influence users' attitudes (Weng et al. 2018), indicating that an individual's acceptance of technology enhances their positive attitudes toward its use. The direct relationship between technology acceptance and attitudes toward use indicates that as an individual's level of technology acceptance increases, their attitude toward using it becomes more positive. (Davis, 1989) observed that the TAM model influences perceived usefulness, collectively influencing users' approaches to information technology use. Studies by (Charles, 2018; Pan, 2020) found that technology acceptance affects attitudes toward use.

H3: Perceived usefulness positively affects attitude toward use

H4: Technology acceptance positively affects attitude toward use

The attitude toward use can function as a mediator between perceived usefulness and intention to use, as evidenced by (Charles, 2018). Individuals who hold a favorable view of technology tend to exhibit a greater intention to utilize it. An attitude toward use can influence the formation of an intention to use, particularly when the perceived usefulness of technology is taken into account. Users who perceive technology as beneficial are more likely to develop a positive attitude toward its use, which in turn affects their intention to use. The findings of (Buabeng-andoh, 2018) indicate that perceived usefulness exerts a modest indirect influence on the intention to use through attitude toward use. Moreover, individuals who hold a favorable view of technology usage are more inclined to exhibit a stronger intention to utilize it. The studies conducted by (Ariffin et al. 2021; Kim et al. 2021) revealed that technology acceptance has an impact on attitude toward use, and that attitude toward use, in turn, affects intention to use.

H5: Attitude toward use mediated the association between perceived usefulness and intention to use

H6: Attitude toward use mediated the association between technology acceptance and intention to use

The Moderating Role of Subjective Norm

Subjective norm refers to the normative influence of close individuals, such as friends, family, or colleagues, on a person's decision to use technology (Li et al. 2022). Subjective norm is an important determinant of technology acceptance and usage (Ursavaş et al. 2019). Research by (Amijaya et al. 2021; Charles, 2018) indicates that subjective norm influences intention to use. Existing studies have found that subjective norm has a significant promotional effect on the formation of behavioral intention. The stronger the role of subjective norm, the higher the behavioral intention to adopt technology (Waris et al. 2022). When an individual perceives that significant others think they should perform a certain behavior, they are more likely to engage in it.

The Theory of Planned Behavior (TPB) posits that human behavior can be largely predicted based on an individual's intention or tendency to perform a specific action, with subjective norm identified as a key influencing factor (Ajzen, 1991). If an individual perceives that important people in their social circle support or anticipate their performance of a specific action, this subjective norm can reinforce their intention to carry out the behavior.

H7: Subjective norm moderates the effect of perceived usefulness on usage intention

H8: Subjective norm moderates the effect of technology acceptance on usage intention

This research is based on Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB). Based on the research model (Figure 1), it is found that perceived usefulness and technology acceptance have a direct effect on the intention to use the PLN Mobile application. In addition to the direct effects, perceived usefulness and technology acceptance also have an indirect effect on the intention to use through attitude toward use. Subjective norm moderates the relationship between perceived usefulness and technology acceptance with the intention to use.

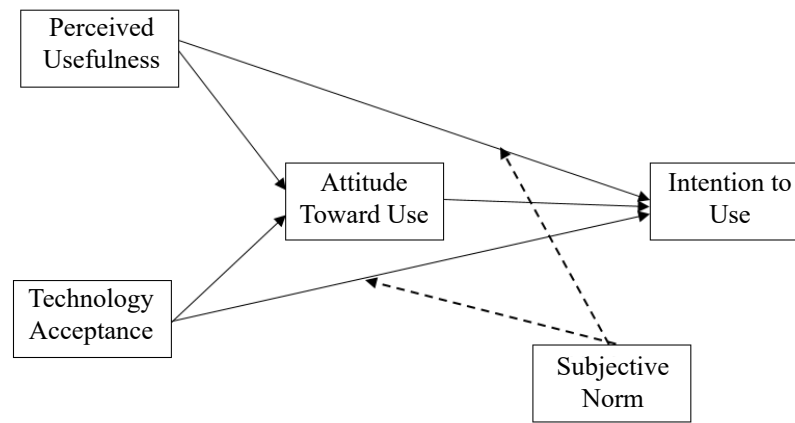


Figure 1. Research model

RESULTS

Table 1 presents the demographic profile of the respondents. The majority of the respondents were female (80.8%), aged 21–35 (51.2%), had bachelor degree (32.7%), work as civil servants (48.1%), have a monthly income ranging from Rp 2,500,000 to Rp 5,000,000 (47.7%), have an electricity capacity of 1,300 VA (61.5%).

The measurement model delineates the interrelationship between each set of indicators and their corresponding latent variables. Within this measurement model, the constructs' validity and reliability are scrutinized. Validity is gauged through the evaluation of the loading factor and the Average Variance Extracted (AVE) value, whereas reliability is assessed via Cronbach's alpha and composite reliability (Hair et al. 2014) by Hair, Hult, Ringle, and Sarstedt, provides a concise yet very practical guide to understanding and using PLS structural equation modeling (PLS-SEM). The threshold for an acceptable AVE is established at 0.50 or greater. An AVE of 0.50 or above signifies that the construct accounts for 50 percent or more of the variance associated with the indicators comprising the construct. Moreover, to ascertain the reliability of a construct, it is imperative that either the composite reliability or Cronbach's alpha exceeds the benchmark of 0.70 (Hair et al. 2014). The findings derived from the measurement model analysis indicate that all constructs are both valid and reliable (Table 2).

Once the measurement model had been demonstrated to meet all the requisite thresholds, the next step was to test the structural model. The r-square (reliability indicator) for endogenous components can be employed to evaluate the structural model. The objective of variance analysis (R^2) is to identify the manner in which exogenous variables affect endogenous variables.

As illustrated in Table 3, the R-squared value for the variable "attitude toward use" is 0.539. This value indicates that the variables perceived usefulness and technology acceptance can account for 53.9% of the variance in the attitude toward use variable. The remaining 46.1% is explained by other variables not examined in this study. The R-square value for the intention to use variable is 0.789, indicating that 78.9% of the variance in intention to use can be explained by the variables perceived usefulness, technology acceptance, attitude toward use, and subjective norm. The remaining 21.1% is explained by other variables.

For the purpose of hypothesis testing, the technique of resampling via bootstrapping can be employed to ascertain the statistical t value. This investigation incorporated bootstrapping process, alongside a two-tailed significance threshold with bias correction applied. The empirical findings pertinent to hypothesis testing are illustrated in Table 4. The empirical results provide support for our hypotheses at a significance level of 5%.

Table 1. Respondent characteristics

Category	Characteristic	Frequency	Percentage	Category	Characteristic	Frequency	Percentage
Gender	Woman	210	80.8	Salary	IDR < 2.500.000	17	6.5
	Man	50	19.2		IDR 2.500.000 – 5.000.000	124	47.7
Age	< 20 Years	1	0.4		IDR 5.000.001 – 7.5000.000	95	36.5
	21-35 Years	133	51.2		IDR 7.500.001 – 10.000.000	21	8.1
	36-50 Years	102	39.2		IDR 10.000.001 – 15.000.000	3	1.2
	>50 Years	24	9.2	Electricity Capacity	900 VA	39	15
Level of Education	SMK/SMA	101	38.84		1.300 VA	160	61.5
	Diploma	70	26.9		2.200 VA	51	19.6
	S1	85	32.7		3.500 VA	10	3.9
	S2	4	1.5				
Job	Student	2	0.8				
	Self-Employed	77	29.6				
	Civil Servant	125	48.1				
	Private Employee	2	0.8				
	Farmer	49	18.8				
	Housewife	5	1.9				

Table 2. Validity and Reliability Test

Variable	Items	Loading Factor	AVE	Cronbach Alpha	Composite Reliability
Intention to Use	NM1	0.905	0.817	0.888	0.888
	NM2	0.915			
	NM3	0.892			
Subjective Norm	NS1	0.713	0.714	0.865	0.895
	NS2	0.900			
	NS3	0.854			
	NS5	0.899			
Perceived Usefulness	PU1	0.850	0.736	0.928	0.931
	PU2	0.868			
	PU3	0.784			
	PU4	0.915			
	PU5	0.865			
	PU6	0.861			
Attitude Toward Use	SP1	0.805	0.715	0.867	0.881
	SP2	0.907			
	SP3	0.874			
	SP4	0.791			
Technology Acceptance	TA1	0.913	0.746	0.931	0.938
	TA2	0.886			
	TA3	0.765			
	TA4	0.831			
	TA5	0.931			
	TA6	0.846			

Table 3. R-Square

	R-square
Intention to Use	0.789
Attitude Toward Use	0.539

Table 4. Hypothesis testing

Hypothesis	Path	Coefficient	t-statistic	p-values	Decision
H1	Perceived Usefulness → Intention to Use	0.759	28.671	0.000	Accepted
H2	Technology Acceptance → Intention to Use	0.894	33.499	0.000	Accepted
H3	Perceived Usefulness → Attitude Toward Use	0.709	29.729	0.000	Accepted
H4	Technology Acceptance → Attitude Toward Use	0.294	10.868	0.000	Accepted
H5	Perceived Usefulness → Attitude Toward Use → Intention to Use	0.519	14.526	0.000	Accepted
H6	Technology Acceptance → Attitude Toward Use → Intention to Use	0.215	8.707	0.000	Accepted
H7	Subjective Norm x Perceived Usefulness → Intention to Use	0.061	3.004	0.003	Accepted
H8	Subjective Norm x Technology Acceptance → Intention to Use	0.097	3.785	0.000	Accepted

Table 4 demonstrates that all hypotheses in this study were empirically supported, encompassing both direct effects and indirect effects as evidenced by statistically significant path coefficients ($p < 0.05$).

The results of the study indicate that the perceived usefulness has a positive and significant effect on the intention to use the application of PLN Mobile. This finding indicates that an increase in perceived benefits is associated with a stronger intention to use the application. The more customers perceive the application as useful, the more likely they are to hold a positive attitude toward its use. Perceived usefulness has been demonstrated to exert a profound influence on the propensity of users to adopt a specific technological tool (Natarajan et al. 2018). Thus, the research hypothesis supported by the TAM holds true in this study. This finding is corroborated by prior research, including studies by (Agustian Wardana et al. 2022; Amijaya et al. 2021; Chen & Aklikokou, 2020), which demonstrated that perceived usefulness has a positive and significant effect on intention to use.

The results of the study demonstrate that technology acceptance has a positive and statistically significant effect on the intention to use PLN Mobile. This finding indicates that the more open customers are to adopting new technologies, the greater their intention to use that technology (Kim et al. 2021). In this

context, technology acceptance refers to the extent to which users are willing to accept and utilize novel technologies, such as the PLN Mobile application, developed by Indonesia state electricity company to facilitate services and convenience related to electricity for its customers. As demonstrated by (Zheng & Li, 2020), a higher level of technology acceptance is associated with a stronger intention to use it. The study findings align with the Technology Acceptance Model (TAM), which posits that technology acceptance serves as a critical factor in enhancing the behavioral intention to adopt a technology.

The statistical results support the TAM that perceived usefulness and technology acceptance are significantly related to attitude toward use. The findings of this study suggest that as customers perceive the PLN Mobile application as more useful and beneficial, they are more likely to exhibit a positive attitude toward its use. These findings are consistent with those of previous research, including the study conducted by (Eksail & Afari, 2020; Weng et al. 2018), which demonstrated that perceived usefulness is a key determinant of attitude toward use. Moreover, an increase in technology acceptance is associated with a more favorable attitude toward utilizing the PLN Mobile application. A higher level of technology acceptance among customers is associated with a more positive attitude toward using the application. This finding is consistent with previous

research, including studies by (Charles, 2018; Pan, 2020), which demonstrated that technology acceptance is a significant predictor of attitude toward use.

Moreover, The study findings show that attitude toward use exerts a significant influence on the intention to use the PLN Mobile application. These results indicate that a higher level of favorable attitude toward usage corresponds to a stronger intention to adopt the PLN Mobile application. This finding aligns with the Technology Acceptance Model (TAM), which posits that attitude toward use is a key factor driving technology adoption intentions. The results are consistent with prior research, such as studies by (Ariffin & Lim, 2020) which demonstrated that attitude toward use has a positive and statistically significant effect on behavioral intention to use technology.

The study indicates that an individual's attitude toward PLN Mobile mediates the link between perceived usefulness and intention to use. A positive attitude is influenced by users' perceptions of the application's usefulness. This highlights the critical role of perceived usefulness in shaping attitudes, which subsequently affect adoption intentions. These results align with (Weng et al. 2018), who found that attitude mediates the impact of perceived usefulness on intention. Additionally, attitude mediates the influence of technology acceptance on the intention to use PLN Mobile. Acceptance of technology and ease of use foster a positive attitude, thereby affecting intention to utilize the application. Users with favorable attitudes toward technology exhibit stronger intentions to use (Charles, 2018). These findings validate the Technology Acceptance Model (TAM) as a predictor of behavioral intention regarding application adoption. Research by (Ariffin et al. 2021; Kim et al. 2021) supports the notion that technology acceptance shapes attitudes, which in turn affect usage intentions.

The moderation effect test revealed that subjective norm plays a moderating role in the relationship between perceived usefulness and technology acceptance on intention to use PLN Mobile. This suggests that when an individual holds the belief that PLN Mobile is advantageous, they may also feel more inclined to utilize it if they perceive social support from those in their immediate vicinity. This social influence functions to reinforce the intention to adopt the application. The observation that individuals within one's immediate

social circle endorse the application (subjective norm) has been demonstrated to serve as a reinforcing factor in users' intentions to utilize the application. As posited by (Sun et al. 2020), the subjective norm is a significant factor in determining the intention to use a technology. These findings underscore the applicability of the Theory of Planned Behavior (TPB) in predicting behavioral intention to use technology. The study conducted by (Waris et al. 2022) indicates that the subjective norm has the potential to reinforce the impact of increasing the intention to use a technology.

Managerial Implications

The findings of this study provide practical guidance for companies, marketing managers, and developers of the PLN Mobile application. To enhance the likelihood of users engaging with the PLN Mobile application, it is essential for companies to prioritize four pivotal factors: perceived usefulness, technology acceptance, attitude toward use, and subjective norm. Consequently, it is incumbent upon companies to ensure that customers perceive the application as useful, readily acceptable, and develop a favorable attitude toward its use. To enhance customers' perceived usefulness, it is essential for companies to cultivate an understanding among customers that utilizing PLN Mobile facilitates the expeditious completion of transactions and receipt of services. This can be achieved by ensuring that the application functions without lag or crashes and that the customer service team responds promptly and effectively to inquiries and complaints. To facilitate technology acceptance, the PLN Mobile app developers may consider creating comprehensive and accessible guides for various app features, including the provision of visual aids and video tutorials.

The study revealed that an individual's attitude toward the use of a particular technology, in this case the PLN Mobile application, plays a pivotal role in determining their intention to use it. This intention is influenced by two key factors: the perceived usefulness of the technology in question and the individual's technology acceptance. Additionally, the subjective norm, or the social pressure an individual may face in using or not using a particular technology, has been identified as a significant moderating factor in this relationship. Consequently, marketing managers may foster constructive customer relationships through responsive and helpful customer service, encourage

the dissemination of positive reviews and testimonials from existing users, and implement incentive or reward programs for customers who demonstrate active engagement with the application.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The findings of the study demonstrate that the level of technology acceptance and the perceived benefits derived from utilizing the PLN Mobile application are significant predictors of the intention to use the application. Additionally, the study demonstrates that the perception of benefits and technology acceptance of the PLN Mobile application influence the formation of an attitude toward using the application. When individuals perceive the PLN Mobile application to offer benefits and to be user-friendly, it fosters a positive attitude toward its use, which ultimately enhances the intention to use it. Moreover, the findings underscore the pivotal role of social influences in motivating individuals to utilize the PLN Mobile application.

The study's findings confirm that technology acceptance, perceived benefits, and social influence significantly affect the intention to use the PLN Mobile application, with user attitude serving as a key mediator. This research strengthens the integration of the Theory of Planned Behavior (TPB) and Technology Acceptance Model (TAM) as an effective theoretical framework for understanding technology adoption, while providing empirical contributions to the literature on technology usage interest and behavior.

Recommendations

Future investigations may consider examining additional variables that could potentially affect the intention to utilize, such as those encompassed within the UTAUT framework. Furthermore, the present inquiry utilized a cross-sectional design, thereby constraining the capacity to establish conclusive insights regarding causal relationships. To acquire a more thorough comprehension of causality, subsequent research endeavors in this domain could strive to assess the model formulated in this study through the application of a longitudinal research approach. The current research concentrated on the PLN Mobile

application. It would be advantageous for future inquiries to investigate alternative sectors.

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REFERENCES

- Agustian Wardana, A., Purwo Saputro, E., Wahyuddin, M., & Idris Abas, N. (2022). The Effect of Convenience, Perceived Ease of Use, and Perceived Usefulness on Intention to Use E-Wallet (Empirical Study on Generation Z in Surakarta). *Advances in Economics, Business and Management Research*, 218(Icoeb), 386–395.
- Aji, H. M. (2020). The effects of subjective norm and knowledge about riba on intention to use e-money in Indonesia. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-10-2019-0203>
- Ajzen, I. (1991). *The Theory of Planned Behavior*. Organizational behavior and human decision processes 5.
- Amijaya, D. T., Sulhaini, S., & Herman, L. E. (2021). Influence of Trust, Subjective Norm, and Perceived Usefulness on the Intention of Using Contraceptives with Education Level as Moderation Variables. *International Journal of Multicultural and Multireligious Understanding*, 8(8), 125. <https://doi.org/10.18415/ijmmu.v8i8.2848>
- Ariffin, S. K., Abd Rahman, M. F. R., Muhammad, A. M., & Zhang, Q. (2021). Understanding the consumer's intention to use the e-wallet services. *Spanish Journal of Marketing - ESIC*, 25(3), 446–461. <https://doi.org/10.1108/SJME-07-2021-0138>

- Ariffin, S. K., & Lim, K. T. (2020). Investigating Factors Affecting Intention to Use Mobile Payment Among Young Professionals in Malaysia. *Advances in Economics, Business and Management Research, Series Volume Number 141*, 141, 6–11. <https://doi.org/10.2991/aebmr.k.200514.002>
- Bauwens, R., Muylaert, J., Clarysse, E., Audenaert, M., & Decramer, A. (2020). Teachers' acceptance and use of digital learning environments after hours: Implications for work-life balance and the role of integration preference. *Computers in Human Behavior*, 112, 106479. <https://doi.org/10.1016/j.chb.2020.106479>
- Buabeng-andoh, C. (2018). Predicting students' intention to adopt mobile learning technology acceptance model. *Journal of Research in Innovative Teaching & Learning*. <https://doi.org/10.1108/JRIT-03-2017-0004>
- Charles, B. A. (2018). Predicting students' intention to adopt mobile learning. *Journal of Research in Innovative Teaching & Learning*, 11(2), 178–191. <https://doi.org/10.1108/jrit-03-2017-0004>
- Chen, L., & Aklikokou, A. K. (2020). Determinants of E-government Adoption: Testing the Mediating Effects of Perceived Usefulness and Perceived Ease of Use. *International Journal of Public Administration*, 43(10), 850–865. <https://doi.org/10.1080/01900692.2019.1660989>
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *Management Information Systems Research Center*, 13(3), 319–340.
- Dixit, R. V. (2018). Intentions to Use Social Networking Sites (SNS) Using Technology Acceptance Model (TAM): An Empirical Study. *Paradigm*, 39. <https://doi.org/10.1177/0971890718758201>
- Eksail, F. A. A., & Afari, E. (2020). Factors affecting trainee teachers' intention to use technology: A structural equation modeling approach. *Education and Information Technologies*, 25(4), 2681–2697. <https://doi.org/10.1007/s10639-019-10086-2>
- Gupta, R., & Ranjan, S. (2021). Consumer's Perceived Trust and Subjective Norms as Antecedents of Mobile Wallets Adoption and Continuance Intention : A Technology Acceptance Approach. *May*. <https://doi.org/10.1007/978-3-030-64987-6>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Rstedt, M. S. (2014). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In SAGE Publications, Inc., <https://doi.org/10.1016/j.lrp.2013.01.002>
- Hair, J. F., Sarstedt, M., & Ringle, C. M. (2019). A Primer on Partial Least Squares Structural Equation Modeling. *Handbook of Market Research*, 1–40. <https://doi.org/10.1007/978-3-319-05542-8>
- Kim, E. J., Kim, J. J., & Han, S. H. (2021). Understanding student acceptance of online learning systems in higher education: Application of social psychology theories with consideration of user innovativeness. *Sustainability*, 13(2), 1–14. <https://doi.org/10.3390/su13020896>
- Li, R., Sinniah, G. K., & Li, X. (2022). The Factors Influencing Resident's Intentions on E-Bike Sharing Usage in China. *Sustainability*.
- Natarajan, T., Balasubramanian, S. A., & Kasilingam, D. L. (2018). The moderating role of device type and age of users on the intention to use mobile shopping applications. *Technology in Society*, 53, 79–90. <https://doi.org/10.1016/j.techsoc.2018.01.003>
- Naufal, M., Widyastuti, H., Sembiring, I. R., & Andrianto, M. S. (2024). Buying Intention on Electric Cars in Jabodetabek Using Combined TAM and TPB (C-TAM-TPB). *Jurnal Aplikasi Bisnis Dan Manajemen*, 10(1), 173–185. <https://doi.org/10.17358/jabm.10.1.173>
- Pan, X. (2020). Technology Acceptance, Technological Self-Efficacy, and Attitude Toward Technology-Based Self-Directed Learning: Learning Motivation as a Mediator. *Frontiers in Psychology*, 11(October). <https://doi.org/10.3389/fpsyg.2020.564294>
- Rafique, H., Almagrabi, A. O., Shamim, A., Anwar, F., & Bashir, A. K. (2020). Investigating the Acceptance of Mobile Library Applications with an Extended Technology Acceptance Model (TAM). *Computers and Education*, 145. <https://doi.org/10.1016/j.compedu.2019.103732>
- Rahmawati, R. N., & Narsa, I. M. (2019). Intention to Use e-Learning: Aplikasi Technology Acceptance Model (TAM). *Owner*, 3(2), 260. <https://doi.org/10.33395/owner.v3i2.151>
- Sarstedt, M., Hair Jr, J. F., Nitzl, C., Ringle, C. M., & Howard, M. C. (2020). Beyond a tandem analysis of SEM and PROCESS: Use of PLS-SEM for mediation analyses! *International Journal of Market Research*, 62(3), 288–299.
- Sun, S., Law, R., & Schuckert, M. (2020). Mediating

- effects of attitude, subjective norms and perceived behavioural control for mobile payment-based hotel reservations. *International Journal of Hospitality Management*, 84(October 2018), 102331. <https://doi.org/10.1016/j.ijhm.2019.102331>
- Ursavaş, Ö. F., Yalçın, Y., & Bakır, E. (2019). The effect of subjective norms on preservice and in-service teachers' behavioural intentions to use technology: A multigroup multimodel study. *British Journal of Educational Technology*, 50(5), 2501–2519. <https://doi.org/10.1111/bjet.12834>
- Waris, I., Ali, R., Nayyar, A., Baz, M., Liu, R., & Hameed, I. (2022). An Empirical Evaluation of Customers' Adoption of Drone Food Delivery Services: An Extended Technology Acceptance Model. *Sustainability (Switzerland)*, 14(5), 1–18. <https://doi.org/10.3390/su14052922>
- Weng, F., Yang, R. J., Ho, H. J., & Su, H. M. (2018). A tam-based study of the attitude towards use intention of multimedia among school teachers. *Applied System Innovation*, 1(3), 1–9. <https://doi.org/10.3390/asi1030036>
- Yan, M., Filieri, R., Raguseo, E., & Gorton, M. (2021). Mobile apps for healthy living: Factors influencing continuance intention for health apps. *Technological Forecasting and Social Change*, 166(February), 120644. <https://doi.org/10.1016/j.techfore.2021.120644>
- Zheng, J., & Li, S. (2020). What drives students' intention to use tablet computers: An extended technology acceptance model. *International Journal of Educational Research*, 102(November 2019), 101612. <https://doi.org/10.1016/j.ijer.2020.101612>