



Behavioral Intention Constituent Analysis of QRIS Digital Payment Tools in MSMEs in Pematangsiantar City

Novita Butarbutar
Ernest Grace
Loist Abdi Putra
Christine Loist
Acai Sudirman

Sekolah Tinggi Ilmu Ekonomi Sultan Agung
Pos-el: novita@stiessultanagung.ac.id
ernestgrace@stiessultanagung.ac.id
loistabdi@gmail.com
christineloist.sa@gmail.com
acaivenly@stiesultanagung.ac.id

DOI: 10.32884/ideas.v8i4.1023

Abstract

The main goal of this study is to examine the variables that affect MSMEs in Pematangsiantar City's behavioral intention to utilize the QRIS digital payment instrument. A causal quantitative research strategy was used in this study. 250 SMEs served as the study's sample population. Partial Least Squares is the technique used for data analysis (PLS). The statistical program Smartpls 3.0 is used by the data analysis test tool. The results of this study conclude performance expectancy and social influence have a positive but not significant effect on behavioral intention. This study also concludes that effort expectancy, hedonic motivation, trust, lifestyle compatibility, and habit positively and significantly affect behavioral intention. The managerial implications of this research mention that habit and trust are the main factors for MSME actors to adopt payment systems with QRIS. This of course can be used as a recommendation for QRIS providers to improve the performance of several QRIS platforms in the form of increasing security features, so that this will foster a sense of comfort and high trust from users to use and recommend QRIS to others.

Keywords

QRIS, behavioral intention, digital payments, MSMEs

Abstrak

Penelitian ini pada dasarnya memiliki tujuan utama untuk menganalisis konstituen yang mempengaruhi behavioral intention penggunaan alat pembayaran digital QRIS pada UMKM di Kota Pematangsiantar. Penelitian ini menggunakan desain penelitian kuantitatif kausalitas. Jumlah sampel yang digunakan dalam penelitian ini adalah sebanyak 250 pelaku UMKM. Metode analisis data yang digunakan adalah Partial Least Square (PLS). Alat uji analisis data menggunakan perangkat lunak statistik Smartpls 3.0. Hasil penelitian ini menyimpulkan performance expectancy dan social influence berpengaruh positif namun tidak signifikan terhadap behavioral intention. Penelitian ini juga menyimpulkan effort expectancy, hedonic motivation, trust, lifestyle compatibility, dan habit berpengaruh positif dan signifikan terhadap behavioral intention. Implikasi manajerial penelitian ini menyebutkan habit dan trust merupakan faktor utama pelaku UMKM untuk mengadopsi penggunaan sistem pembayaran dengan QRIS. Hal ini tentunya dapat dijadikan rekomendasi bagi provider QRIS supaya meningkatkan kinerja dari beberapa platform QRIS berupa peningkatan fitur keamanan, sehingga hal ini akan menumbuhkan rasa nyaman dan juga kepercayaan yang tinggi dari pengguna untuk menggunakan serta merekomendasikan QRIS kepada orang lain.

Kata Kunci

QRIS, behavioral intention, pembayaran digital, UMKM

Introduction

Systems, was developed by Bank Indonesia and the Indonesian Payment System Association (ASPI) (Mayanti, 2020). Every PJSP (Provider of the QR-based Payment System) is required to adopt QRIS in accordance with BI's PADG No. 21/18/2019 about the implementation of international QRIS standards for

payments. Some of the issues customers have while trying to scan QR codes are inextricably linked to the presence of the Quick Response (QR) Code. This occurs as a result of the various terms and conditions of each QR supplier for digital wallets. Given this scenario, having a system that can integrate different payment channels nationally without requiring repetitive scanning is essential (Saputri, 2020). Bank Indonesia sets a standard for payment QR codes to achieve an integrated system for facilitating digital payment transactions in Indonesia called QRIS (Quick Response Indonesia Standard). One of the advantages of using QRIS through a digital wallet lies in its convenience, practicality, and safety (Saputri 2020); (Mayanti 2020). A person's behavioral intention to accept new technology is studied using (Fitria & Winata, 2020) as a foundation. Additionally, this behavioral intention demonstrates how ardently a person works to commit to a behavior, according to (Abraho et al., 2016). Customers who are more inclined to accept new technology are also more likely to promote it to others (Lancelot Miltgen et al., 2013). Consumers who are more inclined to accept a new technology are more likely to do so and to tell others about it (Venkatesh et al., 2003). The capacity to establish enduring future usage patterns reflects users' actual usage frequency (Venkatesh et al., 2003). As long as the individual can behave willingly, usage behavior is expressed through the capacity to anticipate suitable conduct (Abraho et al., 2016). Users will develop stronger use habits and continue to utilize a technological service often if they perceive it to have tremendous advantages (Lancelot Miltgen et al., 2013).

If users think new technology will make their lives easier and more useful, they seem to be more likely to accept and use it (Alalwan et al., 2016). When it comes to digital wallets, social effect may be defined as the encouragement or influence of external factors that prompts someone to use a digital wallet. According to Ming et al. (2016), social effect is characterized as a person's perception of the subjective culture of the reference group and the influence of others on the adoption of a new system; (Halim, Efendi, et al., 2020). customer assistance services, the user's degree of trust in the accessibility of the service unit provided by the service provider may be used to represent facility condition (Madan & Yadav, 2016). According to the study, the willingness to keep utilizing mobile reservations for hotels is significantly influenced by the hedonic value (Ozturk et al., 2016). The development of hedonistic reward components also adds to the appeal of mobile banking (Boonsiritomachai & Pitchayadejanant, 2017). Compatibility is the extent to which people see an invention as compatible and useable despite constraints imposed by space and time (Mohammadi, 2015). Research (Chen, 2013) provided a thorough analysis to pinpoint the crucial elements that promote and obstruct the uptake of mobile banking services. A person's level of automatic performance of an action as a result of prior learning is depicted by the term "habit." The term "behavioral slackness" refers to the idea that maintaining a system requires making a compromise with habitual elements (Amoroso & Lim, 2017). The ability of habit characteristics to predict use behavior is constrained. According to Venkatesh et al. (2012), habit development in information technology is a manifestation of learnable behavior that links habits with intention or sustainable behavior; (Sudirman et al., 2021).

The emergence of the idea to build an integrated payment system is fundamental to supporting government efficiency in the use of cash, encouraging the acceleration of digital financial inclusion and safe and comfortable use of digital money so that it is expected to encourage people's purchasing power. The main problem of this study explains that the implementation of QRIS takes a long time, especially in small cities. This is because Indonesia's digital financial literacy level is still very low. So, massive socialization and education are needed at all levels of society (Saputri 2020). On another occasion, policymakers hope there will be easy access and certainty regarding the security of privacy and user data to avoid cybercrime while using digital payment transaction services. The next problem, the implementation of QRIS, is also still constrained by uneven connectivity. Until now, the network infrastructure is still concentrated in Java. Meanwhile, there are still many areas outside Java that have not been supported by adequate infrastructure. The next problem, infrastructure related to security risks, also needs to be watched out so that there will be no digital crime that QRIS users will experience. Following the problems mentioned, of course, this will impact the behavior of using QRIS by consumers, especially for users of the MSME sector. So therefore, it is necessary to know the general description of the behavior of MSME actors in adopting QRIS. This study analyzes the dominant factors of MSMEs adopting QRIS as a digital payment instrument in financial transactions.

Method

This study employs a causal quantitative method with a literature and field research strategy. The convenience sampling approach was utilized in this study since it is the quickest way possible given the time limits, and anyone who just happens to run into the researcher can be used as a sample provided they are deemed eligible as a data source. The number of samples may be calculated to be between 5 and 10 times the number of indicators utilized in a single construct, according to (Ghozali, 2014). The number of samples produced by multiplying 28 by 9 yields 252, which is then rounded up to 250 MSME entrepreneurs research samples because this study employs 28 indicators from the existing constructions. Using the Partial Least Square Structural Equation Model (PLS-SEM) technique, estimates and hypotheses of the study model are tested. The two types of statistical tests that were run were on the outer and inner models, respectively. Construct Reliability, Average Variance Extracted (AVE), and Discriminant Validity are the three sorts of tests that may be used to test the outer model, whereas Path Value, R-Square, and Hypothesis Testing are the three types of tests that can be used to evaluate the inner model. Based on the theoretical explanation and the results of the empirical studies that have been described previously, therefore, this study has hypotheses, among others:

Hypothesis 1: Performance expectancy affect behavioral intention

Hypothesis 2: Effort expectancy affect behavioral intention

Hypothesis 3: Social influence affects behavioral intention

Hypothesis 4: Hedonic motivation affect behavioral intention

Hypothesis 5: Trust affects behavioral intention

Hypothesis 6: Lifestyle compatibility affects behavioral intention

Hypothesis 7: Habit affects behavioral intention

Results and Discussion

Results

Table 1

Descriptions of Research Respondents

Category	Details	Amount	Percentage (%)
Gender	Men	102	40.8
	Woman	148	59.2
Age (years)	20-29	45	18
	30-39	65	26
	40-49	93	37.2
	50-59	47	18.8
	High School	195	78
Level of education	Bachelor	45	18
	Masters	10	4
	Culinary	103	41.2
Type of business	Fashion	37	14.8
	Automotive	11	4.4
	Agribusiness	9	3.6
	Internet Technology Business	36	14.4
	Beauty And Beauty Products Business	24	9.6
	Other Types of Business	30	12

Source: Processed Data (2022)

Outer Model Measurement

Table 2

Outer Model Measurement Results

Construct/item	Code	Outler Loadings	Cronbach s alpha	CR	AVE
Performance Expectancy			0.928	0.974	0.817
Simple	PE1	0.835			
Understandable	PE2	0.977			

Trouble-free	PE3	0.897			
Easy to Use	PE4	0.902			
Effort Expectancy			0.879	0.916	0.733
Increases my chances of achieving things	EX1	0.870			
Useful in my daily	EX2	0.887			
Increases my productivity	EX3	0.857			
It helps me accomplish things quicker	EX4	0.808			
Social Influence			0.823	0.896	0.744
Referred by My Family	SI1	0.888			
Referred by My Friend	SI2	0.930			
Referred by people in society	SI3	0.760			
Hedonic Motivation			0.953	0.970	0.914
Fun or pleasure derived	HM1	0.968			
Perceived enjoyment	HM2	0.944			
Hedonic motivation consumer context	HM3	0.956			
Trust			0.896	0.924	0.711
Protection	TR1	0.931			
Safety	TR2	0.930			
Trustworthy	TR3	0.821			
Keep Its Promises	TR4	0.782			
Openness	TR5	0.734			
Lifestyle Compatibility			0.816	0.891	0.732
Compatible with my other banking accounts	LC1	0.897			
Adopting mobile banking fits well with the way	LC2	0.799			
Adopting mobile banking to conduct banking transactions fits	LC3	0.867			
Habit			0.996	0.997	0.992
Previous Behavior	HT1	0.996			
Behavior Becomes Automatic	HT2	0.997			
Using mobile Internet has become natural	HT3	0.995			
Behavioral Intention			0.834	0.896	0.743
Willingness to Use	BI1	0.796			
Favorite Opinion	BI2	0.895			
Intention to Use	BI3	0.891			

Source: Processed Data (2022)

The value of each loading factor on the indicators of the variables of performance expectancy, effort expectancy, social influence, hedonic motivation, trust, lifestyle compatibility, habit, and behavioral intention was found to be above 0.7 and above 0.5 for the average variance extracted (AVE) values in the validity test shown in Table 2 above. All research variables had excellent reliability levels, as shown by the fact that the Cronbach's alpha and composite reliability values for each variable were both over 0.7. These encouraging findings suggest that the condition of the relationship between the variables was similarly encouraging, enabling the execution of further experiments.

Hypotheses Test

Using a significance test, the relationship between exogenous and endogenous components was also discovered in order to validate the hypothesis. The significant criteria may be determined using the p-value. The exogenous variable has a substantial effect on the endogenous variable if the p-value between the exogenous and endogenous variables is less than 0.05 with a significance threshold of 5%. The exogenous variable has no discernible influence on the emergence of endogenous variables if the value is larger than 0.05.

Table 3

Hypothesis Test Results

Hypothesis	Coefficient	t-count	P-Value	Conclusion
Performance Expectancy>>Behavioral Intention (H1)	0.032	0.821	0.412	Rejected
Effort Expectancy>>Behavioral Intention (H2)	0.084	2,081	0.038	Accepted



Social Influence>>>Behavioral Intention (H3)	0.005	0.139	0.889	Rejected
Hedonic Motivation>>>Behavioral Intention (H4)	0.065	2.036	0.042	Accepted
Trust>>>Behavioral Intention (H5)	0.172	3.571	0.000	Accepted
Lifestyle Compatibility>>>Behavioral Intention (H6)	0.194	3.857	0.000	Accepted
Habit>>>Behavioral Intention (H7)	0.589	13.176	0.000	Accepted

Source: Processed Data (2022)

Discussion

The results of the research, which was developed through the first hypothesis, showed that performance expectancy had a positive and insignificant effect on behavioral intention. These results prove that MSME actors feel that the performance of the payment system with QRIS has not been enough to help them carry out payment activities to consumers (Ayesha et al., 2021). In the payment sector, QRIS was developed to support the efficiency of sales and purchase transactions, encourage the progress of Micro, Small and Medium Enterprises (MSMEs), and accelerate economic activities. The purpose of promoting QRIS is, among others, anticipating new fragmentation in the payment system industry and also expanding acceptance of national non-cash payments more efficiently as stated by Bank Indonesia in its socialization. The use of QRIS has an excellent character, namely universal, easy, profitable, and direct. For consumers, paying for transactions using QRIS is very practical, and the many benefits received. Consumers simply scan the QRIS provided by the merchant or display the QR code on their smartphone using a mobile banking application or digital wallet such as OVO, then authenticate the payment (Irwansyah et al., 2021).

The results of the study, which were developed through the second hypothesis, showed that effort expectancy had a positive and significant effect on behavioral intention. These results prove that the benefits of QRIS merchant service providers are very helpful for MSME actors in managing financial transactions. Financial transactions through the payment process with QRIS can be monitored easily, so that SMEs are very helpful as well as consumers don't have to bother making payments with cash (Murdiyanto et al., 2022). QRIS evidences this, merchants not only get transactions from service providers but can also come from various other service providers because they are integrated. Benefits can serve as a benchmark for the number and variety of applications used, so the implications of these conditions give rise to many user preferences in trying similar E-Wallet applications (Sinaga et al., 2021). From the user side, the advantages of using QRIS include instant transaction processing, no need for a different QR Code for each Payment System Service Provider (PJSP). In addition, payment security is guaranteed because each PJSP must obtain a permit from Bank Indonesia as the supervisor of the payment system operator. Payments using QRIS have been supported by at least thirty-eight PJSPs, both conventional banks, Islamic banks, BPD, and non-bank PJSPs. In addition, the use of QRIS is also beneficial for PJSP because it increases the potential for expansion and increase in sales traffic, reduces management costs, avoids the use of counterfeit money, structured recorded payments, ease of payments, and compliance with government programs. On the other hand, submitting the existence of QRIS makes it easier for business actors to get QR codes for payments. Because, business owners do not need to bother to register with a number of payment system service providers. Just one QRIS, merchants can accept payments from various payment system service providers (Basoeky et al., 2021).

The research results developed through the third hypothesis show that social influence has a positive but insignificant effect on behavioral intention. The results of this study prove that social factors that are not optimal for the surrounding environment prevent MSME actors from using QRIS on an ongoing basis. On the other hand, some obstacles to the payment system using the QR Code still need to be addressed (Ginatra et al., 2020). With the ease of payment offered by QRIS merchants, not a few of the closest people, such as family, relatives and co-workers, refer this means of payment to other people. In addition, not all merchants use the QR Code system. Moreover, penetration of the non-cash payment system is currently still concentrated in big cities, so there is still a need to expand the penetration of non-cash payments to improve the economic level of the community and facilitate payment transactions (Purba et al., 2020). Digital payments, especially with QRIS, are certainly a faster way than cash payments. You don't have to wait for the cashier to give change or be

constrained by other things. In addition, digital payments are also more hygienic. This factor broadly in the social sphere influences someone to use QRIS. From the merchant's side, some complaint about the slow amount of funds that enter them after the successful transaction. Sabotage of QR Code user accounts leads to cyber crime (either revealing the user's identity) (Halim et al., 2022).

The results of the research developed through the fourth hypothesis show that hedonic motivation has a positive and significant effect on behavioral intention. These results prove that using a payment system with QRIS is believed to meet the emotional needs of individuals primarily intended for pleasure and comfort (Saputri, 2020). It must be admitted, that the presence of automatic QRIS makes the transaction process easier and more practical. MSME actors or customers only need one QR Code to serve various digital payment applications (Baptista & Oliveira, 2015). Hedonism is a view of life which assumes that pleasure and material enjoyment are the main goals of life. For adherents of this ideology, having fun, revelry, and pleasure is the main goal of life, whether it is pleasing to others or not. Because they think that this life is only once, so they feel like they want to enjoy life to the fullest. In the environment of adherents of this understanding, life is lived freely to fulfill unlimited desires. In addition, financial transactions from the business activities of MSME actors can be recorded automatically. That way, MSME actors can track and analyze incoming financial flows more easily, so this motivates MSME actors to use the QRIS payment system regularly. Another interesting thing is that QRIS can be used to conduct online business transactions (Halim, Sibarani, et al., 2021). The only way is to scan the QR code, then enter the nominal payment and complete the transaction as long as there is an internet connection (Venkatesh et al., 2003).

The results of the research developed through the fifth hypothesis show that trust has a positive and significant effect on behavioral intention. This condition reflects that the existence of more valuable experiences for MSME actors and consumers will also increase trust in digital wallets so that they can accelerate digital transactions, including those using QRIS (Gupta & Arora, 2019). In the context of digital wallets, what is meant by trust is the overall user perception that the service provided by the provider is good and trustworthy (Singh et al., 2020). In terms of buying and selling online, trust is the most important thing, this is because there is no direct contact between the buyer and the seller or between the buyer and the goods being traded. So, therefore, buying and selling online is often also called buying and selling trust (Mondego & Gide, 2018). In electronic payments via smartphones, trust is the most important factor. Consumer trust in electronic transactions is higher in banking than in digital wallets (Wentzel et al., 2013). Making payments with QRIS means that MSMEs and customers must not bother preparing for change. Some of the sales money is directly deposited in the bank and can be viewed at any time. In addition, the negative impact of the risk of cash being lost or stolen can also be reduced (Belanche et al., 2012).

The research results developed through the sixth hypothesis show that lifestyle compatibility positively and significantly affects behavioral intention. This is because QRIS provides convenience, especially for those who like cashless transactions. Customers do not need to carry cash everywhere when making financial transactions with MSME actors. This is because the e-wallet or bank account balance will be automatically deducted if you make a payment using QRIS (Mayanti, 2020). In addition, conformity with lifestyle is a harmony between the values, choices, and beliefs of each individual in his life. In the case of technology adoption, what is meant by LC is the entry of mobile devices and computers into the joints of modern human life. In other words, technology plays a role in helping individuals complete their work (Halim, Sherly, et al., 2020). The world's technological transformation in this era is developing, where globalization has been at the stage of the Industrial Revolution 4.0 or commonly called the era of disruption. Before discussing further about the concept of the Industrial Revolution 4.0, it would be better if we should know what the Industrial Revolution is, namely a massive change in the industrial sector whose impact can extend to a condition or situation in various fields, not only technology, but can also in the social, economic and political fields. Following the instantaneous urban lifestyle, using digital wallets is a driving factor for adopting digital wallets.

The results of the research developed through the seventh hypothesis show habit have a positive and significant effect on behavioral intention. These results prove that the habit factor is one of the triggers for the continuous use of QRIS. Using QRIS, which is felt to provide many benefits, among which the most preferred by customers is promotion, whether it is in the form of discounts or cashback (Sherly et al., 2020). In general,



MSME players like the promos provided by the QRIS payment system due to the large efficiency impact on their financial transactions. QRIS is believed to provide benefits because it can simplify and speed up transactions using the cashless method (Halim, Sherly, et al., 2021). Compared to the method using cash, the QRIS method will be much faster. Another thing that is also relevant to the benefits of QRIS in the current situation is that it is more hygienic because it avoids direct contact. In addition, the merchants implement payments using QRIS, and the chance of being trapped in counterfeit money will be very small. In fact, there is no possibility at all. The reason is that payments are made digitally, and the money that goes to the merchant comes from automatically deducting the buyer's balance (Sundulusi et al., 2022).

Conclusion

The study concluded that performance expectancy had a positive but insignificant effect on behavioral intention. This is because the nominal limit for transactions using QRIS is a maximum of two million rupiahs according to the implementing rules. However, every payment system service provider can make daily and monthly cumulative limits on QRIS transactions made by users. In addition, for every transaction, there is an e-wallet that is integrated with QRIS which still has administrative costs for each transaction activity. In addition, this study also confirms that social influence has a positive but not significant effect on behavioral intention. This proves that the role of social influence has not been able to encourage the behavior of MSME actors to use QRIS regularly. We still cannot use e-wallets in some traditional markets and certain places. Most of the places that accept payments using e-wallets are generally places that sell goods at medium to high prices. On the other hand, several e-wallet applications still do not offer e-wallet disbursement. Given that not all places provide e-wallet payment facilities. Some e-wallet applications still do not offer e-wallet disbursement of funds. Given that not all places provide e-wallet payment facilities. Some e-wallet applications still do not offer e-wallet disbursement of funds. Given that not all places provide e-wallet payment facilities.

This study also concludes that effort expectancy, hedonic motivation, trust, lifestyle compatibility, and habit positively and significantly affect behavioral intention. The conclusion of the study illustrates that the overall aspect of effort expectancy and hedonic motivation is the main foundation for MSME actors using QRIS, because the payment system provides convenience not only for MSME actors, but also buyers, producers whose products are marketed, and owners of payment applications. Through QRIS transactions, bill payments, user fees, and non-cash purchases of goods without leaving the store, fast and efficient. By using the QRIS payment method, the transaction history can be checked periodically by the business owner because all transactions are processed and recorded automatically. Merchants who have followed payments using QRIS can be said to have followed the trend of non-cash-digital payments. All merchants with QRIS can receive payments from any merchant despite their differences. In buying and Selling activities, business actors in the area use QRIS to support the program toward regional digitization. All stalls, shops, tourist attractions, parking, donations, and the like will use QRIS. Using QRIS provides the potential for sales expansion due to alternative payments other than cash. That way, business owners can monitor, analyze, and determine future business financial strategies. With this research, researchers increasingly believe that payments with QRIS can help MSME business actors to optimize the preparation of their financial reports. In addition, for further research, the researcher wants to apply this research model to other fields of technology acceptance, such as the adoption of online game services, online flight ticket payments, and other payments using QRIS. Furthermore, through this research, researchers can increase the knowledge of researchers to examine more deeply the acceptance of technology with other models such as the social cognitive theory (SCT) model, the Innovation Diffusion Theory (IDT) Model, and the Theory of Planned Behavior (TPB) Model.

Thank You Note

In this instance, the writing team would like to convey their sincere appreciation to the DRPM for the financing budget allocated for the National Competitive Research Scheme for Beginner Lecturer Research in 2022. The entire academic community of the Sultan Agung College of Economics, the editorial team, and the reviewers of Jurnal Ideas: Pendidikan, Sosial, dan Budaya, who always provide helpful feedback to improve this article, are all acknowledged by the writing team for their contributions to the completion of the research and writing of the articles.

Reference

- Abrahão, R. de S., Moriguchi, S. N., & Andrade, D. F. (2016). Intention of Adoption of Mobile Payment: An Analysis in The Light of The Unified Theory of Acceptance and Use of Technology (UTAUT). *RAI Revista de Administração e Inovação*, 13(3), 221–230. <https://doi.org/10.1016/j.rai.2016.06.003>
- Alalwan, A. A., Dwivedi, Y. K., & Williams, M. D. (2016). Customers Intention and Adoption of Telebanking in Jordan. *Information Systems Management*, 33(2), 154–178. <https://doi.org/10.1080/10580530.2016.1155950>
- Amoroso, D., & Lim, R. (2017). The Mediating Effects of Habit on Continuance Intention. *International Journal of Information Management*, 37(6), 693–702. <https://doi.org/10.1016/j.ijinfomgt.2017.05.003>
- Ayesha, I., Redjeki, F., Sudirman, A., Leonardo, A., & Aslam, D. F. (2021). Behavior of Female Entrepreneurs in Tempe Small Micro Enterprises in Tasikmalaya Regency, West Java as Proof of Gender Equality Against AEC. *Proceedings of the 2nd Annual Conference on Blended Learning, Educational Technology and Innovation (ACBLETI 2020)*, 560(Acbleti 2020), 124–130.
- Baptista, G., & Oliveira, T. (2015). Understanding Mobile Banking: The Unified Theory of Acceptance and Use of Technology Combined with Cultural Moderators. *Computers in Human Behavior*, 50, 418–430. <https://doi.org/10.1016/j.chb.2015.04.024>
- Basoeky, U., Panggabean, S., Manu, G. A., Wardhana, A., Hoeronis, I., Adnan, Y., Maisarah, & Sudirman, A. (2021). *Pemanfaatan Teknologi Digital: dalam Berbagai Aspek Kehidupan Masyarakat*. Media Sains Indonesia.
- Belanche, D., Casaló, L. V., & Flavián, C. (2012). Integrating Trust and Personal Values into The Technology Acceptance Model: The Case of E-Government Services Adoption. *Cuadernos de Economía y Dirección de La Empresa*, 15(4), 192–204. <https://doi.org/10.1016/j.cede.2012.04.004>
- Boonsiritomachai, W., & Pitchayadejanant, K. (2017). Determinants Affecting Mobile Banking Adoption by Generation Y Based on The Unified Theory of Acceptance and Use of Technology Model Modified by The Technology Acceptance Model Concept. *Kasetsart Journal of Social Sciences*, 1(1), 1–10. <https://doi.org/10.1016/j.kjss.2017.10.005>
- Chen, C. S. (2013). Perceived Risk, Usage Frequency of Mobile Banking Services. *Managing Service Quality*, 23(5), 410–436. <https://doi.org/10.1108/MSQ-10-2012-0137>
- Chin, W. W., Peterson, R. A., & Brown, S. P. (2008). Structural Equation Modeling in Marketing : Some Practical Reminders Structural Equation Modeling in Marketing : Some Practical Reminders. *Journal of Marketing Theory and Practice ISSN:*, 16(4), 287–298. <https://doi.org/10.2753/MTP1069-6679160402>
- Fitria, L., & Winata, A. (2020). The Effect of Electronic Coupon Value to Perceived Usefulness and Perceived Ease-of-Use and its Implication to Behavioral Intention to Use Server-Based Electronic Money. *International Journal of Innovative Science and Research Technology*, 5(1), 147–158.
- Ghozali, I. (2014). *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS)*. Badan Penerbit Universitas Diponegoro.
- Ginantra, N. L. W. S., Simarmata, J., Purba, R. A., Tojiri, M. Y., Duwila, A. A., Siregar, M. N. H., Nainggolan, L. E., Marit, E. L., Sudirman, A., & Siswanti, I. (2020). *Teknologi Finansial Sistem Finansial Berbasis Teknologi di Era Digital*. Yayasan Kita Menulis.
- Gupta, K., & Arora, N. (2019). Investigating Consumer Intention to Accept Mobile Payment Systems Through Unified Theory of Acceptance Model: An Indian Perspective. *South Asian Journal of Business Studies*, 9(1), 88–114. <https://doi.org/10.1108/SAJBS-03-2019-0037>
- Hair, J. F. (2014a). *Multivariate Data Analysis* (7th Editio). Pearson Prentice Hall.
- Hair, J. F. (2014b). *Multivariate Data Analysis 7th Edition*. Pearson Prentice Hall.
- Halim, F., Augustinah, F., Vidyanata, D., & Sudirman, A. (2022). Determinants of Intention to Use the TikTok Application among Generation Z. *Jurnal Ideas: Pendidikan, Sosial dan Budaya*, 8(3), 721–727. <https://doi.org/10.32884/ideas.v8i3.977>
- Halim, F., Efendi, Butarbutar, M., Malau, A. R., & Sudirman, A. (2020). Constituents Driving Interest in Using E-Wallets in Generation Z. *Proceeding on International Conference of Science Management Art Research Technology*, 1(1), 101–116. <https://doi.org/10.31098/ic-smart.v1i1.32>



- Halim, F., Sherly, Grace, E., & Sudirman, A. (2021). *Entrepreneurship and Innovation Small Business*. Media Sains Indonesia.
- Halim, F., Sherly, & Sudirman, A. (2020). Marketing dan Media Sosial. In *e-conversion - Proposal for a Cluster of Excellence*. Media Sains Indonesia.
- Halim, F., Sibarani, H. J., Moktar, B., Sugiati, M., & Sudirman, A. (2021). Reflections on The Interest in Buying Smartphone Products Among Millennials: Consumer Satisfaction as The Mediating Effect. *JurnalMinds: Manajemen Ide Dan Inspirasi*, 8(1), 49–68. <https://doi.org/10.24252/minds.v8i1.20402>
- Irwansyah, R., Syahputra, D., Ningsih, S., Hasan, M., Kristanto, T., Nugroho, L., Marwan, D., Febrianty, Sudirman, A., & Sudarmanto, E. (2021). *Marketing Digital Usaha Mikro*. Widina Bhakti Persada.
- Lancelot Miltgen, C., Popovič, A., & Oliveira, T. (2013). Determinants of End-User Acceptance of Biometrics: Integrating The “Big 3” of Technology Acceptance with Privacy Context. *Decision Support Systems*, 56(1), 103–114. <https://doi.org/10.1016/j.dss.2013.05.010>
- Madan, K., & Yadav, R. (2016). Behavioural Intention to Adopt Mobile Wallet: A Developing Country Perspective. *Journal of Indian Business Research*, 8(3), 227–244. <https://doi.org/10.1108/JIBR-10-2015-0112>
- Mayanti, R. (2020). Faktor-Faktor yang Memengaruhi Penerimaan User terhadap Penerapan Quick Response Indonesia Standard sebagai Teknologi Pembayaran pada Dompot Digital. *Jurnal Ilmiah Ekonomi Bisnis Volume*, 25(2), 123–135.
- Ming, W., Teoh, Y., Chong, S. C., Lin, B., & Chua, J. W. (2016). Factors Affecting Consumers Perception of Electronic Payment: an Empirical Analysis. *Internet Research*, 23(04), 465–485.
- Mohammadi, H. (2015). A Study of Mobile Banking Usage in Iran. *International Journal of Bank Marketing*, 33(6), 733–759.
- Murdiyanto, E., Sugih, I. P., Dhakirah, S., Kurniawan, B. W., Hidayat, R., Aulia, N., Sudirman, A., Nadiah, N., Evasari, A. D., & Arianti, M. (2022). *Teori Marketing (Sebuah Tinjauan Teori dan Praktis)*. Widina Bhakti Persada.
- Ozturk, A. B., Nusair, K., Okumus, F., & Hua, N. (2016). The Role Of Utilitarian and Hedonic Values on Users Continued Usage Intention in A Mobile Hotel Booking Environment. *International Journal of Hospitality Management*, 57, 106–115. <https://doi.org/10.1016/j.ijhm.2016.06.007>
- Purba, R. A., Sudarso, A., Silitonga, H. P., Sisca, Supitriyani, Yusmanizar, Nainggolan, L. E., Sudirman, A., Widyastuti, R. D., & Novita, A. D. (2020). *Aplikasi Teknologi Informasi Teori & Implementasi*. Yayasan Kita Menulis.
- Saputri, O. B. (2020). Preferensi Konsumen dalam Menggunakan Quick Response Code Indonesia Standard (QRIS) sebagai Alat Pembayaran Digital. *Jurnal Kinerja*, 17(2), 237–247.
- Sarwono, J. (2016). *Membuat Skripsi, Tesis dan Disertasi dengan Partial Least Square SEM (PLS - SEM)*. Andi Offset.
- Sherly, Halim, F., & Sudirman, A. (2020). The Role of Social Media in Increasing Market Share of Msme Products in Pematangsiantar City. *Jurnal Manajemen Dan Bisnis*, 9(2), 61–72.
- Sinaga, O. S., Krisna Marpaung, F., Dewi, R. S., & Sudirman, A. (2021). Kontribusi Perceived Usefulness, Perceived Ease of Use dan Perceived Security terhadap Behavioral Intention to Use Aplikasi JAKET. *Insight Management Journal*, 1(3), 86–94. <https://journals.insightpub.org/index.php/imj>
- Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining Factors in The Adoption and Recommendation of Mobile Wallet Services in India: Analysis of the Effect of Innovativeness, Stress to Use and Social Influence. *International Journal of Information Management*, 50(October 2018), 191–205. <https://doi.org/10.1016/j.ijinfomgt.2019.05.022>
- Sudirman, A., Sholihah, D. R., Putra, D. S., Trenggana, A. F. M., Widodo, S. A., HASbi, I., & Martini, E. (2021). *Pemasaran Kontemporer (Sebuah Tinjauan Teori dan Praktis)*. Widina Bhakti Persada.
- Sundulusi, C., Sudirman, A., Ratnawati, Syamsuri, Burhanudin, J., Dewi Andriani & Sherry Adelia, Angga Ranggana Putra, S., Muhammad Nazif, Rahmadani Hidayat, H. N., & Nurcholifah, I. (2022). *Pemasaran Kewirausahaan*. Widina Bhakti Persada.
- Venkatesh, V., Morris, Michael, G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information

Technology: Toward A Unified View. *MIS Quarter*, 27(3), 425–278.
<https://doi.org/10.1016/j.inoche.2016.03.015>

Venkatesh, V., Thong, James, Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *MIS Quarterly*, 36(1), 157–178. <https://doi.org/10.1109/MWSYM.2015.7167037>

Wentzel, J. P., Diatha, K. S., & Yadavalli, V. S. S. (2013). An Application of The Extended Technology Acceptance Model in Understanding Technology-Enabled Financial Service Adoption in South Africa. *Development Southern Africa*, 30(4–5), 659–673. <https://doi.org/10.1080/0376835X.2013.830963>