THE DRIVING FACTORS FOR USING QR CODES AND DIGITAL WALLETS IN BLITAR

Oleh
Onni Meirezaldi[1*], Safaruddin Hisyam Tualeka[2]
[1,2]Business Administration Science Program, Universitas Brawijaya, Malang
e-mail: [1*]meirezaldi@ub.ac.id

Abstrak

This study examines the significance of perceived ease of use and usefulness in driving the intention to use cashless transactions through QR codes and digital wallets in Blitar, a small city in East Java Province, with most informal workers lacking access to traditional banking services. Thru 220 respondents completing 22 research questionnaires, the findings indicate that perceived ease of use and usefulness have positive and significant effects on the intention to use cashless transactions. However, the direct effect of perceived ease of use did not show statistical significance. These insights offer valuable guidance for stakeholders aiming to create a user-friendly technological landscape. Emphasizing the importance of perceived usefulness in motivating cashless transaction adoption, especially in communities with limited banking access, stakeholders can design strategies to enhance usability and effectively communicate the benefits. Further examination is necessary to fully understand the influence of perceived ease of use in this context. These findings contribute to ongoing digital transformation and financial inclusion efforts, particularly in underserved communities like Blitar.

Kata Kunci: Digital transactions, Perceived usefulness, Perceived ease-of-use, intention to use, Actual to use

INTRODUCTION

The COVID-19 pandemic has had far-reaching effects on societies worldwide, reshaping how we live, work, and interact [1]. One of the noticeable changes brought about by the pandemic is the rapid acceleration of digital adoption across various sectors and industries [2]. As well as the demographic spread, supporting cities and even some regions in Indonesia have witnessed a significant shift in transaction patterns and behaviors as they adapt to this new habit, called digital transformation.

Digital transformation encompasses adopting and integrating digital technologies and solutions to streamline processes, enhance customer experiences, and achieve better social outcomes [3]. For instance, the pandemic accelerated the adoption of digitalization in small cities, where face-to-face interactions and traditional business methods were more familiar before the outbreak. Changes happen when a pandemic attacks, forcing entrepreneurs to use digital as a method for business due to lockdowns and restricted access to meet with customers face-to-face. Even the payment method for transactions changed, utilizing technology to settle using non-cash payments or digital transactions [2].

This new method of payment also has been supported by the government. Since 2014, Bank Indonesia has started a campaign to intensify non-cash transactions. Unfortunately, until just before the covid break, the spread still felt stifled. Many companies limit transactions, limited to banks that have cooperation. It was easy to find cashier desks with more than four EDCs in some places. If a customer has an unlisted card, the cashier will undoubtedly direct them to transact in cash. One of the most notable transformations is the widespread use of QR codes and digital wallets, which enable

fast, convenient, contactless transactions and are not limited to bank account types [4]. Through street vendors, big retailers use QR codes and digital wallets for their business.

Moreover, aside from pandemic breaks, the proliferation of online marketplaces has changed how businesses operate, influenced digital transformations, and shifted people to digital payments, no exception for small city residents or country areas. Consumers are willing to make an online shop, with home delivery becoming the preferred mode of receiving goods [5]. This shift in behavior has provided convenience, prompted small businesses to innovate and explore new ways of engaging with their customers, and can help businesses survive the pandemic [6].

Another supporting factor, besides the growth of online marketplace and the government rules, is the high smartphone usage. It can help people adopt cashless transactions easier [7]. The availability of infrastructure support in various urban areas throughout the country also enables this [8], but not without problems. Some challenges, such as digital literacy gaps, still need to be overcome [9]. Not every region can fully adopt or even be aware of the technology. To address this challenge, initiatives to provide digital skills training, education, and digital security awareness are needed [10]. Nevertheless, before implementing digital training and education, information about how much the utilization of technology, especially in cashless payments, is required to solve the problems accurately. Therefore, this study aims to get information about the utilization rate of cashless transactions among Generation in Blitar, the second smallest city in East Java province, Indonesia.

THEORETICAL FRAMEWORK

The Technology Acceptance Model (TAM) is an overall theoretical framework elucidates how users adopt and employ new technologies. Even three decades since its inception, TAM's relevancy persists, primarily due to its capacity to encapsulate critical determinants that influence user behaviors.

Upon exposure to a novel technology, the model propounds that users base their decisions about its usage on several crucial factors [11]. Prominent among these factors are Perceived Usefulness (PU) and Perceived Ease-of-use (PEOU). Davis [12] described PU as 'the extent to which a person believes that employing a specific system would augment their job performance.' In other words, PU pertains to the individual's perception of the technology as beneficial for their intended purpose. PEOU, according to Davis [12], is 'the extent to which a person believes that using a specific system would be devoid of effort.' Therefore, when technology is perceived as applicable, it fosters a positive attitude in the users, making them more inclined to adopt it.

Further, the 'intention to buy' is a cardinal construct in Davis's TAM, symbolizing the extent to which a user intends to procure a specific technology product or service soon. TAM postulates that perceived usefulness and ease of use positively impact this buying intention [13]. Moreover, the practical application of TAM lies in its ability to provide a foundational basis for designing, developing, and evaluating novel technologies to bolster user acceptance and satisfaction [14]. By discerning the factors that sway a user's intention to employ technology, developers and researchers can devise features and interventions that augment the technology's perceived usefulness and ease of use.

RESEARCH METHOD

This study employs a quantitative research design using path analysis. It includes two independent variables: perceived usefulness and ease of use. It also incorporates an intervening variable, intention to use, and a dependent variable, actual use. The researchers distributed a questionnaire containing 13 items to 235 participants.

The methodology for this study entails a survey approach, where data is collated from respondents via a structured questionnaire. The questionnaire design draws from the Technology Acceptance Model (TAM) constructs, encompassing elements such as social influences, perceived usefulness, perceived ease of use, intention to use, and actual use.

The researchers collected data through an online survey executed via Google Forms. The survey distribution was selective, targeting only respondents who satisfied the study's inclusion criteria. Upon collection, they subjected the data to analysis using Smart-PLS.

RESULT

An exhaustive evaluation of the direct effect hypothesis occurred through bootstrapping via SmartPLS. This process estimated sampling distributions and confidence intervals. The research involved an examination of path coefficients in ascertaining the significance of direct effects. The criteria for significance were determined by the t-statistic test value, which needed to surpass 1.96, and the p-value, which had to remain less than 0.05. These thresholds aimed to evaluate the statistical significance of the relationships.

The research also incorporated the consideration of original sample values to comprehend the relationships fully. The determination of the direction of these relationships, either positive or negative, transpired through the examination of the signs of the path coefficients. Positive coefficients denoted a positive relationship, while negative coefficients signified a negative relationship between the variables.

Table 1. Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
X1.PEOU -> Y.ITU	1,232	1,235	0,067	18,465	0,000
X1.PEOU -> Z.ATU	-0,082	-0,074	0,164	0,498	0,619
X2.PU -> Y.ITU	-0,281	-0,284	0,068	4,147	0,000
X2.PU -> Z.ATU	0,342	0,342	0,072	4,740	0,000
Y.ITU -> Z.ATU	0,712	0,705	0,115	6,178	0,000

Table 1 offers critical insights into the significance of direct effects. A meticulous examination of the data reveals that the path coefficient values for four out of five direct effects surpass the set minimum requirements for p-values and t-statistics. Of these relationships, the one between Perceived Ease-of-Use and Actual Use holds the potential for heightened significance.

The rapid evolution of information technology, coupled with the global pandemic outbreak, has precipitated a significant transformation in transaction methods. The utilization of digital wallets and QR codes for transactions has escalated, subsequently cultivating a new habit amongst Indonesian citizens.

This study reveals the perceived usefulness amongst consumers. Users acknowledge that the convenience of cashless transactions has increased their intention to use this method, leading to its direct implementation in transactions. This assertion finds support in several studies [15-17], most notably in research conducted by Yuni, which confirms the knowledge and belief in the utility of this model, even in areas outside major cities. The study predicts that individuals intending to employ cashless transactions will soon adopt this method.

Slightly different results occur in the perceived ease of use variable. The results showed that the ease of use convinced users that they intended to use the technology. However, the calculation results that show the relationship between perceived ease of use and actual use of the technology are different. Respondents still will not use cashless transactions soon. Ardiana et al. [15] has also successfully identified this condition, where perceived ease of use in his research shows an insignificant relationship. Compared to Yuni's [17] research in using e-money in non-urban areas, QR codes and digital wallets must first transfer from a bank account. In this case, employees' percentage in Blitar that work in formal work is only up to 23%,

ISSN No. 1978-3787
Open Journal Systems

while the rest are in the informal sector, which generally receives payroll in cash or does not intersect with banks. This condition makes the use of cashless transactions not an ease of use. They will find it more convenient to transact directly in cash rather than coming to the bank for deposit. In addition, the deposit procedures are not very pleasant with long queues and some traditional procedures are still used in some banks, which are time-consuming.

Next, the study examined the indirect effect hypothesis using bootstrapping, specifically focusing on the indirect effects. Alike the requirements for testing the direct effect hypotheses, testing indirect or mediating effects entails assessing the significance of the p-value (less than 0.05) and the magnitude of the t-statistic value (greater than 1.96). The analysis also considers the original sample values to determine whether the relationship is positive or negative.

Moreover, the study compares the results obtained from the direct effect and mediation tests to establish the level of mediation perfection, classifying it as either perfect or partial. The following criteria are considered: (1) if both the direct effect test and mediation test yield the same conclusion, indicating significance, then the level of mediation perfection is deemed as partial; and (2) if the direct effect test does not yield significance, but the mediation test demonstrates significance, the level of mediation perfection is categorized as perfect.

By employing these testing procedures, this study aims to evaluate the indirect effects and assess the extent to which the intervening variable mediates the relationships between the independent and dependent variables. The results obtained from the indirect effects analysis will provide valuable insights into the underlying mechanisms and pathways through which perceived usefulness and perceived ease of use impact the actual use of the technology.

The results in Table 2 show the significant and positive mediating role of intention to purchase on both variables: the effect of perceived ease of use and usefulness on actual use. In the first path, the result can observe the significance by examining the p-value and t-statistic values, 0.000 and 6.401, respectively. In the second path, intention to use also has a significant effect, indicated by the p-value and t-statistic value of 0.000 and 3.948, respectively. The value indicates that the first and second paths are significant and positive. The result shows a unidirectional and meaningful relationship between the variable's perceived ease of use and perceived usefulness with the actual to-use variable and the intention-to-use variable's mediation. Several previous studies [16; 17] have confirmed that the difference or influence between the independent and dependent variables does not occur by chance but has a theoretical or empirical basis.

Table 2. Specific Indirect Effects

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
X1.PEOU -> Y.ITU -> Z.ATU	0,877	0,868	0,137	6,401	0,000
X2.PU -> Y.ITU -> Z.ATU	-0,200	-0,198	0,051	3,948	0,000

This research contributes to understanding the mechanisms underlying perceived usefulness and ease of use that impact purchase behavior. By establishing the mediating role of intention to purchase, this study provides valuable insights into the factors influencing consumers' decision-making process and subsequent actions. The results of this study highlight the importance of considering perceived usefulness and ease of use as influential factors in shaping consumer intentions and subsequent purchase behavior.

DISCUSSION

Several factors influence the adoption of cashless transactions using QR codes and digital wallets, and two key factors are the perceived ease of use and perceived usefulness of the technology. Perceived ease of use refers to an individual's belief that using a specific

system would require minimal effort and be hassle-free. On the other hand, perceived usefulness relates to an individual's belief that using the system would improve their overall performance or fulfill their needs effectively.

Both perceived ease of use and perceived usefulness play crucial role in shaping individuals' intention to use the technology. However, different circumstances could have different outputs. This research and several previous studies [15-18] also show that different environments and situations can affect perceived technology users. At the same time, the intention to use represents a person's willingness to try and adopt the technology in the future. When individuals perceive a system as easy to use and valuable in enhancing their performance or meeting their needs, they are more likely to develop a positive intention toward using it.

However, technology adoption necessitates more than just intention. The actual use of the technology, which refers to its practical implementation and frequency, is equally important. The intention to use ultimately influences how individuals actively engage with and incorporate technology into their daily lives.

Therefore, it is vital to understand the impact of perceived ease of use and perceived usefulness on both the intention and actual use of cashless transactions using QR codes and digital wallets. By recognizing how these factors shape users' perceptions and behaviors, organizations can design strategies to enhance the ease of use and effectively communicate the benefits of the technology, thereby increasing the adoption and usage rates of cashless transactions.

The calculation results show that the spread of QR codes and digital wallets can only develop more evenly with policy intervention from the monetary sector. The standard for banking services should prioritize ease and convenience to enhance user interest and engagement. Business owners are business partners who need help so that more vendors provide cashless payment services at their places of business. In addition to benefiting the banking sector, the government can actively utilize cashless transactions to monitor regional income taxes. The more evenly distributed use of electronic transactions will make it easier for the government to study the behavior of residents in doing business, including monitoring local taxation issues as one of the primary sources of government revenue.

CONCLUSION

This research study explores users' perceptions of the usefulness and ease of use of technology, particularly in cashless transactions. The study found key factors that influence users' adoption and utilization of technology. The study revealed that users use technologies that suit their needs, match their preferences, and meet their expectations. In addition, the study revealed several barriers and challenges that users face when using technology, including the strong preference for traditional cash transactions, the existence of a traditional payroll system that makes digital transactions inconvenient, although in general, the preference for using cashless transactions is at the development stage.

By examining users' perspectives and experiences, this study contributes to the existing literature on technology acceptance and adoption. It builds upon the foundational work of scholars [19-21], who have extensively explored these topics. The insights gained from this research can inform practitioners and policymakers in their efforts to design, develop, and promote user-friendly, useful, and relevant technologies. The findings align with the principles put forth by influential figures in the field [22; 23], who advocate for user-centric approaches to technological advancements.

This study recommends future research endeavors and practical implementations in this domain. It underscores the importance of conducting further investigations to delve

deeper into users' perceptions and experiences, focusing on addressing the identified barriers and challenges. Additionally, it highlights the need for ongoing efforts to enhance technology usability and accessibility through comprehensive training programs, awareness campaigns, and the development of compatible systems.

This research study broadens our knowledge of users' views, choices, and difficulties and opens new possibilities for improving technology acceptance and adoption. It highlights the importance of applying user-centric design principles and adapting technology to suit user needs and expectations. The study's results offer valuable insights and guidance to researchers, practitioners, and policymakers who aim to create a smooth and user-friendly technological landscape.

REFERENCES

[1] Sovacool, B. K., Del Rio, D. F., & Griffiths, S. (2020). Contextualizing the Covid-19 pandemic for a carbon-constrained world: Insights for sustainability transitions, energy justice, and research methodology. *Energy Research & Social Science*, *68*(101701). https://doi.org/10.1016/j.erss.2020.101701

[2] Raimo, N., De Turi, I., Ricciardelli, A., & Vitolla, F. (2021). Digitalization in the cultural industry: evidence from Italian museums. *International Journal of Entrepreneurial Behavior & Research*, *28*(8), 1962-1974. https://doi.org/10.1108/IJEBR-01-2021-0082

[3] Warner, K. S., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long range planning*, *52*(3), 326-349. https://doi.org/10.1016/j.lrp.2018.12.001

[4] Azizah, S., Bintoro, B. K., Octavyra, R. D., & Rachmat S, A. (2022). Determining factors of continuance intention to use qr code mobile payment on urban millennials in indonesia empirical study on mobile payment funds. *ADI Journal on Recent Innovation*, *3*(2), 121-138. https://doi.org/10.34306/ajri.v3i2.562

[5] Handayani, P. W., Nurahmawati, R. A., Pinem, A. A., & Azzahro, F. (2020). Switching intention from traditional to online groceries using the moderating effect of gender in Indonesia. *Journal of Food Products Marketing*, *26*(6), 425-439. https://doi.org/10.1080/10454446.2020.1792023

[6] Games, D., & Rendi, R. P. (2019). The effects of knowledge management and risk taking on SME financial performance in creative industries in an emerging market: the mediating effect of innovation outcomes. *Journal of Global Entrepreneurship Research*, *9*(1), 44. https://doi.org/doi.org/10.1186/s40497-019-0167-1

[7] Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The effects of perceived enjoyment and perceived risks on trust formation and intentions to use online payment systems: New perspectives from an Arab country. *Electronic Commerce Research and Applications*, *19*, 33-43. https://doi.org/10.1016/j.elerap.2016.07.001

[8] Makhathini, M. S., Mlambo, V. H., & Mpanza, S. (2020). Infrastructure provision as a catalyst for local economic development in South Africa. *Strategic Review for Southern Africa*, *42*(1), 99-122.

[9] Pratama, R. A., & Darmawan, E. (2023). Adaptive Policy for Digital Transformation in Indonesia. *KEMUDI: Jurnal Ilmu Pemerintahan*, *7*(02), 190-196.

https://doi.org/doi.org/10.31629/kemudi.v7i02.5622

[10] Rahman, T., Amalia, A., & Aziz, Z. (2021). From Digital Literacy to Digital Intelligence. 4th International Conference on Sustainable Innovation 2020–Social, Humanity, and Education (ICoSIHESS 2020), Yogyakarta, Indonesia. https://doi.org/10.2991/assehr.k.210120.119

[11] Silva, P. (2015). Davis' technology acceptance model (TAM)(1989). In *Information seeking behavior and technology adoption: Theories and trends* (pp. 205-219). https://doi.org/10.4018/978-1-4666-8156-9.ch013

[12] Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340. https://doi.org/10.2307/249008

[13] Keni, K., Tjoe, H., Wilson, N., & Negara, E. S. (2020). The Effect of Perceived Security, Ease of Use and Perceived Usefulness on Intention to Use Towards Mobile Payment Services in Indonesia. The 2nd Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2020), Jakarta, Indonesia. https://doi.org/10.2991/assehr.k.201209.010

[14] Isaac, O., Abdullah, Z., Ramayah, T., & Mutahar, A. M. (2017). Internet usage, user satisfaction, task-technology fit, and performance impact among public sector employees in Yemen. *The International Journal of Information and Learning Technology*, *34*(3), 210-241. https://doi.org/10.1108/IJILT-11-2016-0051

[15] Ardiana, D. P. Y., Pramawati, I. D. A. A. T., Desmayani, N. M. M. R., & Suandana, N. P. W. (2021). Technology Acceptance Model for evaluating the Use of the Indonesian Standard Quick Response Code (QRIS): a case study of MSMEs in Bali. 2021 6th International Conference on New Media Studies (Conmedia), Bali, Indonesia. https://doi.org/10.1109/CONMEDIA53104.2021.9617186

[16] Nurhapsari, R., & Sholihah, E. (2022). Analysis of the factors of intention to use QRIS for MSMEs in Semarang City's traditional market. *Jurnal Ekonomi Modernisasi*, *18*(2), 199-211. https://doi.org/10.21067/jem.v18i2.7291

[17] Nustini, Y., & Adhinagari, A. H. (2020). Penerapan Technology Acceptance Model Pada Penggunaan E-Money Studi Pada Wilayah Non Perkotaan. *Nominal: Barometer Riset Akuntansi dan Manajemen*, *9*(2), 275-289. https://doi.org/10.21067/jem.v18i2.7291

[18] Olivia, M., & Marchyta, N. K. (2022). The influence of perceived ease of use and perceived usefulness on E-wallet continuance intention: intervening role of customer satisfaction. *Jurnal Teknik Industri*, *24*(1), 13-21. https://doi.org/10.9744/jti.24.1.13−22

[19] Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, *35*(8), 982-1003. https://doi.org/10.1287/mnsc.35.8.982

[20] Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, *27*(3), 425-478. https://doi.org/10.2307/30036540

[21] Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. *Computers in Human Behavior*, *26*(4), 760-767. https://doi.org/10.1016/j.chb.2010.01.013

[22] Choudrie, J., Ghinea, G., & Songonuga, V. N. (2013). Silver surfers, e-government and the digital divide: An exploratory

study of UK local authority websites and older citizens. *Interacting with Computers*, *25*(6), 417-442. https://doi.org/10.1093/iwc/iws020

[23] Heeks, R. (2008). ICT4D 2.0: The next phase of applying ICT for international development. *Computer*, *41*(6), 26-33. https://doi.org/10.1109/MC.2008.192