

EFFECT OF ISLAMIC FINANCIAL LITERACY, TRUST IN THE INTEREST IN USING DIGITAL WALLETS

Hastuti Olivia ¹

Widia Astuty ²

Astrid Aulia Farizki ³

¹ Universitas Muhammadiyah Sumatera Utara

Email: hastutiolivia@umsu.ac.id

² Universitas Muhammadiyah Sumatera Utara

Email: widiaastuty@umsu.ac.id

³ Universitas Muhammadiyah Sumatera Utara

Email: Astridaulia1411@gmail.com

Article history

Received date : 11-6-2023

Revised date : 12-6-2023

Accepted date : 25-7-2023

Published date : 15-8-2023

To cite this document:

Olivia, H., Astuty, W., & Farizki, A. A. (2023). Effect of islamic financial literacy, trust in the interest in using digital wallets. *Journal of Islamic, Social, Economics and Development (JISED)*, 8 (55), 409 – 418.

Abstract: *The lack of Islamic financial literacy in generation Z in sharia transactions means that there are still many generation Z using non-sharia digital wallet applications. This study aims to see how the role of generations plays a role in transactions in accordance with sharia and to see the effect of Islamic financial literacy, trust in the interest in using digital wallet applications in generation Z. There were 160 respondents to this study who were 4th semester students of the Department of Islamic Accounting who had received courses sharia accounting. This study used a quantitative method with the SmartPLS 3.0 test tool. The results of this study are that Islamic financial literacy has no effect on interest and trust has an effect on students' interest in using digital wallet applications. The lack of Islamic financial literacy means that many generations of Z still use non-sharia digital wallet applications.*

Keywords: *Islamic Financial Literacy, Trust, Interest*

Introduction

The development of information technology facilitates access and brings changes in people's lives. This development brings great benefits to the business world (Siregar & Nasution, 2020). Technology can make payments easier by using a digital wallet (Atriani et al., 2020). The use of digital wallets has affected user interest in service (Puteri & Wijayangka, 2020). so that it can outperform other payment methods such as cash, in recent years people prefer to make transactions using digital wallets, instead of using bank accounts, corporate digital wallets will play an important role in the new digital world so that transactions using bank transfers (Tsai et al., 2023). Interest is a person's situation before taking action, and interest will occur if a person receives a stimulus from a product he sees, then an urge or desire arises to use it (Atriani et al., 2020). Public interest in using the digital wallet application can be seen over the last five years, it was found that 71% used the GoPay application as a transaction method. In the last three months, people have been more interested in using the Gopay application 71% , OVO 70%. The last position in the top three digital wallet uses is filled by DANA. As many as 61% of respondents had used DANA but were not included in the big three usage categories in the last three months. The ShopeePay application has been used by 51% of respondents in the last 3 months. In the research that has been done above, there is a lot of trust in the gopay, ovo, funds, shopeePay applications due to security (Wirawan et al., 2023), protection, convenience and comfort, free monthly limits and their relevance for everyday use (Putri, 2022).

Trust is public awareness of using a digital wallet application which is very large even though the negative impact in the form of the risk of data leakage does not discourage people's interest in using digital wallets (Muthi & Indrarini, 2023). According to the well-known consumer survey institution Populix, Indonesia is a good market for digital financial services, because most of the population still doesn't have a bank account, so it's a good market share for digital wallets. Here are some digital wallet applications that are used by people in Indonesia

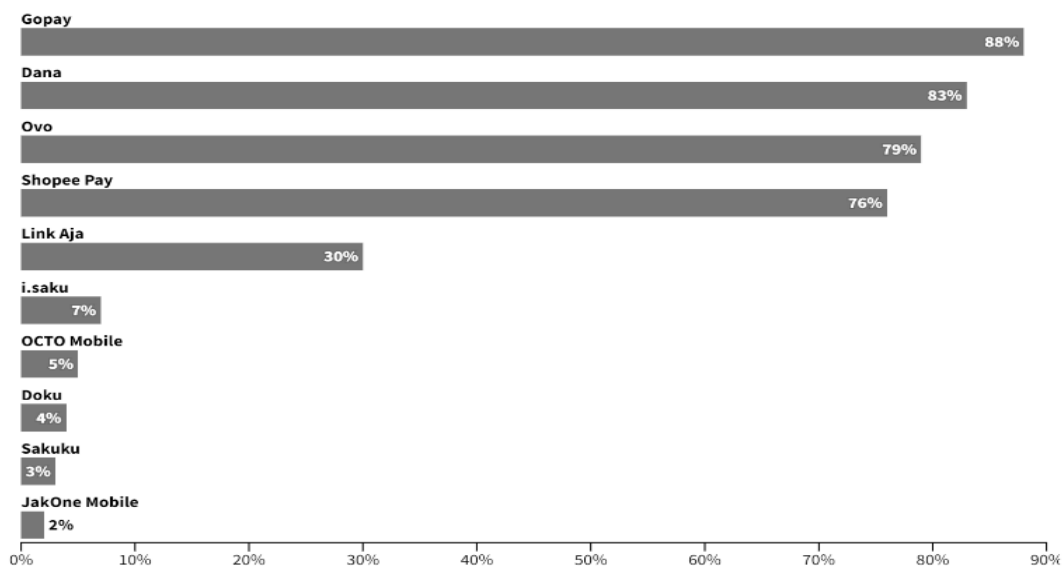


Figure 1: The most frequently used digital wallet

In the picture above it can be seen that the application that is widely used by the community is the gopay application as much as 88%. The means of payment have shifted according to the needs of the community to simplify their affairs and continue to grow, with digital wallets increasingly becoming the most preferred payment method for Indonesian digital society, compared to cash payment methods and bank transfers. both ATM cards, debit, credit, ATM transfers are starting to shift to electronic payment systems (Angelica & Soebiantoro, 2022).

Digital wallets or electronic wallets are electronic services for storing payment instrument data, including payments using cards or electronic money (Aviyanti, 2022). which can accommodate funds for making various types of payments with online-based payment facilities in the form of applications on smartphones. which allows its users to make non-cash transactions (Niaga, 2020).

The main driving factors that enable digital wallet brands to succeed in leading the market are safer to use and ensure consumer balances are protected, easy and convenient to use in transactions, free monthly usage limits and can be used to pay for daily needs to the fullest (Yolandha, 2022). Digital wallets have become a necessity for some people (Surya & Pradesyah, 2022), with the convenience they offer, making some people use digital wallets. Some of the facilities offered make it easier for users to make purchases of goods or services (Sari & Hayati, 2021), pay various types of bills, transfer funds to fellow users (Daulay et al., 2020). The convenience of digital wallets can be accessed via mobile or desktop devices by downloading applications or accessing them through websites (Isnaini et al., 2021). Sharia digital wallets are also widely used because some people understand religion (Bakri et al., 2023).

An Islamic digital wallet is a digital wallet service developed in accordance with Islamic sharia principles or in accordance with Islamic teachings Prohibition of additional/interest is prohibited because it includes usury, speculation and maisir or gambling is also prohibited in Islam (Khairunisa, 2019). An Islamic digital wallet offers features and services that are in accordance with Islamic principles (Bakri et al., 2023).

However, it is important to ensure that the sharia digital wallet used is certified by a relevant and trusted body such as the Indonesian Ulema Council (MUI) in Indonesia or the International Islamic Financial Market (IIFM) at the international level. This ensures that (Malihah et al., 2021), digital wallet services comply with Islamic Sharia requirements and are safe to use (Fradesa et al., 2022). According to the MUI Fatwa regarding Sharia digital wallets No: 116/DSN-MUI/IX/2017, that there are rules of legal relations between parties involved in Sharia digital wallet transactions and have principles that must be obeyed in accordance with Islamic teachings when conducting electronic money transactions. An understanding of sharia rules is very important, for this reason people must understand sharia financial literacy because it will have an impact on people's behavior in carrying out sharia transactions. Likewise, the behavior of generation Z who wants convenience can have an impact on violations of sharia norms (Aulia, 2020).

Several fintech companies in Indonesia are trying to understand the anxiety of some people who are afraid of going against Islamic teachings, so they have launched Islamic digital wallet services such as DANA Syariah, OVO Syariah and GoPay Syariah, link aja syariah. This service meets Sharia requirements and applies Islamic Sharia principles to all transactions made by users (Setiani et al., 2020).

Several studies have discussed a lot about digital wallets, including research conducted (Zollner et al., 2019) which says that even though it has risks, customers still use mobile payments through digital wallets. Likewise research conducted by (Naik & Jenkins, 2020) the existence of a digital wallet makes it easier to pay via cellular. Research conducted to see how much people want to use digital wallets when sending and receiving payments is definitely considered a milestone in the era of the cashless economy because the use of smartphones together with

easy and available Internet access has reached its peak and continues to increase both in urban and rural areas, acceptance of this method electronic payments or E Wallet (Menon & Ramakrishnan, 2019).

Generation Z is the most users of digital wallet applications because of their convenience (Rosli et al., 2023). Several studies have been conducted looking at the development of digital wallets (Seputri & Yafiz, 2022). which say that financial literacy has a negative and insignificant effect on the decision of generation Z to use QRIS, so it can be seen that generation Z does not see whether digital wallets are in accordance with sharia guidelines, even though Many have researched the use of digital wallets with Islamic financial literacy that customers trust. Trust plays an important role for generation Z, whether they have to use a digital wallet application that makes it easy or abandon the digital wallet application. The researcher is interested in the interest of generation Z, is it affected by the danger of usury when using a digital wallet application, so the researcher adds an indicator of knowledge of the dangers of usury to the variable of Islamic financial titration in generation Z.

Technological developments must also be followed by knowledge of the prohibitions in muamalah. This research was conducted to see the role of generation Z in technological development and still follow the rules set by Islamic teachings.

Research Methods

This research is a quantitative research where the data is in the form of numbers and the data is processed using the SmartPLS 3.0 application. This research was conducted on Z generation respondents in the fourth semester of the Islamic Economics and Business Faculty of Islamic Accounting Study Program who had already received Islamic accounting courses. The population in this study were 245 respondents. Of the 245 respondents, only 160 filled out the Google form, so the researchers only used 160 respondents as the research sample. The variables in this study were measured using a Likert scale with a score for each statement, namely, (score 1) Strongly disagree, (score 2) Disagree, (Score 3) Agree, and (Score 4) Strongly Agree.

In research using the SmartPLS application, researchers must conduct a feasibility test of the question items first before testing the validity and reliability (Hair et al., 2013). After the new feasibility test, the researcher conducted the next test, namely the hypothesis test.

Results and Discussion

This study uses SmartPLS 3.0 software which requires outerloading above 0.7, so that if the respondent's question is less than 0.7, the question must be removed or removed from the question, and the data will be processed again without the question that has been issued (Hair et al., 2013). As shown in table 1 in data processing using SmartPLS below.

Table 1: Outer Loading

Variable	Trust	LKS	Interest
X1_1		0,918	
X1_2		0,914	
X1_3		0,858	
X1_4		0,921	
X1_5		0,881	
X1_6		0,616	

X1_7		0,558
X1_8		0,626
X1_9		0,568
X1_10		0,611
X1_11		0,738
X2_1	0,884	
X2_2	0,909	
X2_3	0,935	
X2_4	0,930	
Y_1		0,911
Y_2		0,909
Y_3		0,951
Y_4		0,944
Y_5		0,889

Source: Data processed in 2023

Based on the table above, it was found that several questions were below 0.7, so these questions had to be removed. So the questions in X1_6 have an outer loading result of 0.616, X1_7 has a result of 0.558, X1_8 has a result of 0.626, X1_9 has a result of 0.568 and X1_10 has a result of 0.611. Questions that have been issued will be processed *again* (Wiyono, 2020, hal. 433).

After repeating data processing on the question items for each variable, good validity and reliability are obtained. As in table 2 below, it is known that each of the Cronbach's alpha, Composite Reliability, Average Variance Extracted (AVE) results is in accordance with predetermined conditions

Table. 2: Cronbach's alpha, Composite Reliability, Average Variance Extracted (AVE)

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
X1	0,900	0,930	0,770
X2	0,953	0,964	0,845
Y	0,927	0,948	0,821

Source: Data processed in 2023

Table 2 shows the results for each variable in cronbach's alpha, Composite Reliability, Average Variance Extracted (AVE) that meet the criteria. The recommended Cronbach's alpha is above 0.7 in each variable results obtained above 0.7 so that Cronbach's alpha meets the criteria (Sholihin & Ratmono, 2013, hal. 67). The results obtained for each variable on Composite Reliability above 0.7 or composite reliability > 0.7, which means that it meets the reliability requirements based on Cronbach's alpha and meets the criteria (Hair et al., 2013, hal. 57).

Likewise, the results obtained on the Average Variance Extracted (AVE) have met the criteria, namely each variable is above 0.5 according to the required conditions (Hair et al., 2013, hal. 58).

After looking at cronbach's alpha, Composite Reliability, Average Variance Extracted (AVE) then after that the results of r square are 0.778.

Table 3: R Square

Variabel	R Square	R Square Adjusted
Y	0,778	0,770

Source: Data processed in 2023

In table 3 above, it is known that the value of r square is 0.778, which means that the influence of the latent variable between X1 and X2 with its indicator on the latent variable y is 0.778. After seeing all the results of Cronbach's alpha, Composite Reliability, Average Variance Extracted (AVE) then the data is processed again to see the results of the hypothesis of each variable. The results of the hypothesis can be seen in Figure 1 and Table 4, each of which varies from variable X1, X2 to variable Y.

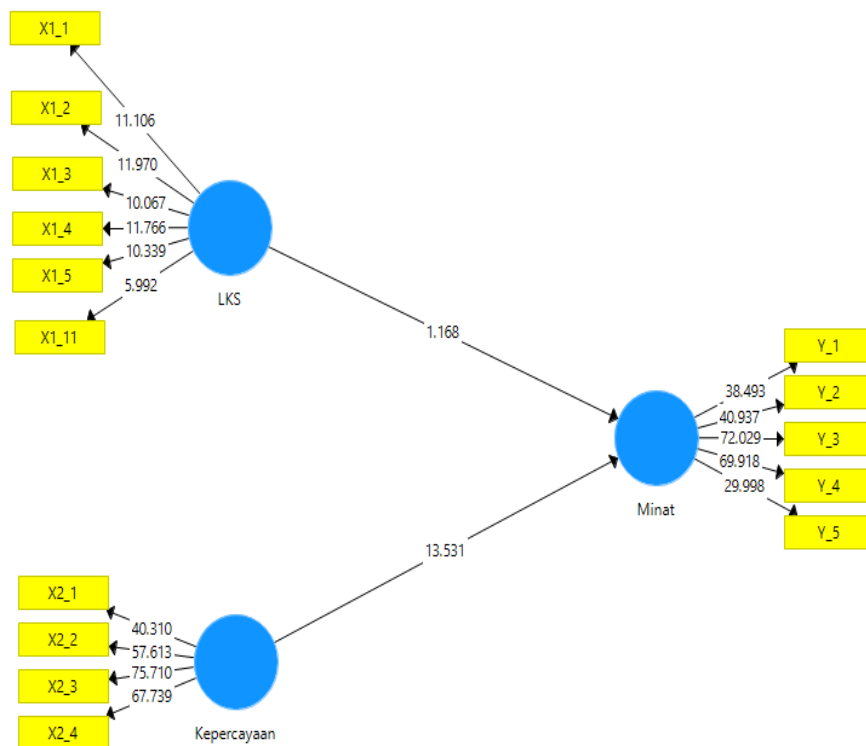


Figure 1: Hypothetical results of data processing

In Figure 1 it can be seen the results of data processing after several questions were issued on the Islamic financial literacy variable which had a value below 0.7, so several questions had to be issued. It is known that the results in the image above meet the criteria. The bootstrapping results, in addition to the image above, can also be seen from the hypothetical results of each variable.

Table 4: Hypothesis Results

Variabel	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
LKS -> Minat	0,058	0,066	0,050	1,168	0,243
Kepercayaan -> Minat	0,782	0,782	0,058	13,531	0,000

Source: Data processed in 2023

Table 4 above shows the results of data processing using bootstrapping between Islamic financial literacy variables with an interest in using online loan applications and trust variables with an interest in using online loan applications.

Discussion

The Effect of Islamic Financial Literacy on Interest in Using Online Loan Applications in Generation Z

Generation Z is a generation that likes convenience, so they prefer to use digital wallet money applications rather than using other means of payment. So that application owners are competing to provide bonuses and other conveniences for their respective applications. Based on the initial observations, the researchers conducted interviews with several students at the Faculty of Economics, Islamic Business, State Islamic University of North Sumatra (FEBI UINSU). The observation results obtained that not all fourth semester students of the Islamic accounting study program did not use the digital wallet application and felt they still did not need the application, some students preferred to use cash for their needs.

The research results show that Islamic financial literacy has no effect on the interest of Generation Z in using online loan applications because the t_{count} is smaller than the t_{table} , namely t_{count} 1.168 and t_{table} 1.974 so that it can be said that the hypothesis of literacy in Islamic finance has no effect on interest. Islamic financial literacy is needed by Muslims to avoid usury, maysir and gambling. Lack of literacy makes Muslims pay less attention to the rules of Islamic teachings as well as generation Z who do not understand Islamic teachings. Lack of understanding of Islamic teachings has a negative impact on future generations of actors. Like research conducted by which says financial literacy is very important for Muslims in Indonesia. Likewise with research conducted (Dafiq et al., 2022), generation Z in transactions does not look at whether sharia or not.

In contrast to research conducted by (Virginia & Puspitasari, 2023), which has the results of Islamic financial literacy affecting interest. Likewise with research conducted by (Estiningsih, 2021), which says financial literacy that reflects a person's knowledge and ability to manage finances will be more selective and careful in choosing financial service products. Digital wallet is a financial service product that is currently widely used in various transactions. Digital wallets that are considered safe, provide more benefits for their users, will attract interest or attract people to use digital wallets.

The Effect of Trust on Interest in Using Online Loan Applications in Generation Z

The results of this study indicate that the trust variable influences interest in using digital wallet applications because t_{count} is greater than t_{table} , namely t_{count} 13.531 and t_{table} 1.974, which means that respondents believe in the current application, so FEBI UINSU students in the fourth semester of the study program still use transactions using digital wallet. Even though students have received sharia accounting lessons, students still use the application, this indicates that Generation Z wants convenience in transactions. As several studies have done, belief in interest has a big influence.

Trust has an effect on interest such as research conducted by (Virginia & Puspitasari, 2023). Likewise with research conducted by Asmoro which says that even though there are high or low users of the digital wallet application, consumer trust in the Shopee marketplace will affect

the rise or fall of repurchasing interest. This is in accordance with the theory of trust which says all the knowledge possessed by consumers and all conclusions made by consumers about objects, attributes and benefits, so that it can be said that a person's belief in something can influence interest, so that existing applications must continue to provide convenience and trust in generation Z (Asmoro, 2022).

In contrast to research conducted by (Wardoyo & Andini, 2017), which said trust did not affect consumers, so did research conducted by (Agustina & Dalimunthe, 2020).

Conclusion

The results of this study can be seen that generation Z's Islamic financial literacy is very lacking even though there are already Islamic accounting courses being studied in class, but students still like digital wallet applications that are not sharia. The lack of Islamic economic activists provides literacy to the Muslim community, especially generation Z, about the dangers of usury. Sharia literacy is not the main thing for generation Z to use applications but needs, convenience and trust are factors that are considered by respondents.

Suggestion

This research is expected to add to the knowledge of the younger generation to use applications that are in accordance with sharia, it is hoped that other entrepreneurs can make sharia applications. Sharia economic actors further increase literacy to the Muslim community about the dangers of usury. Islamic digital wallets carry out more promotions and provide facilities that make it easier so that generation Z wants to use the Islamic digital wallet application.

Acknowledgements

Thank you to the Islamic State University for allowing researchers to conduct research at FEBI UINSU. Thanks also to Muhammadiyah University of North Sumatra for allowing the author to conduct this research.

Reference

- Agustina, M., & Dalimunthe, Z. (2020). Apakah Social Influence Mempengaruhi Intensi Meminjam melalui Peer to Peer Lending. *Jurnal Manajemen dan Usahawan Indonesia*, 43(2).
- Angelica, L., & Soebiantoro, U. (2022). Analysis Using a Digital Wallet. *Jurnal Manajemen*, 14(2), 232–238. <https://doi.org/10.29264/jmmn.v14i2.11209>
- Asmoro, A. K. (2022). Study of Online Repurchase Interest in Generation Z With Perceived Risk, Trust and Lifestyle as Antecedent Variables. *Jurnal Ekonomi dan Bisnis*, 11(4), 401–408.
- Atriani, A., Permadi, L. A., & Rinuastuti, B. H. (2020). The Effect of Perceived Benefits and Ease of Use on Interest in Using the OVO Digital Wallet. *Jurnal Sosial Ekonomi Dan Humaniora*, 6(1), 54–61.
- Aulia, S. (2020). Patterns of digital consumer behavior in utilizing digital wallet applications. *Jurnal Komunikasi*, 12(2), 311–324.
- Aviyanti, R. (2022). Behavior of Digital Wallet System Users During the Covid-19 Pandemic. *Jurnal Akuntansi dan Pajak*.
- Bakri, M. H., Almansoori, K. K. S. M., & Azlan, N. S. M. (2023). Determinants intention usage of Islamic E-Wallet Among Millennials. *Global Business and Finance Review*, 28(1), 11–32. <https://doi.org/10.17549/gbfr.2023.28.1.11>
- Dafiq, B. I., Hidayati, A. N., & Habib, M. A. F. (2022). The influence of financial literacy,

- digital literacy, digital marketing, brand image and word of mouth on the z generation's interest in Islamic banks. *Fair Value: Jurnal Ilmiah Akuntansi dan Keuangan*, 4(11), 4971–4982. <https://doi.org/10.32670/fairvalue.v4i11.1856>
- Daulay, D. I., Alfiyanna, G., Anggreani, I., Sihotang, R. A., & Simatupang, T. (2020). Determinants of Digital Wallet Use among Consumers in the Greater Jakarta Area. *Indonesian Business Review*, 3(1), 76–102. <https://doi.org/10.21632/ibr.3.1.76-102>
- Estiningsih. (2021). Determinants of Interest in Using a Digital Wallet (Study on OVO Digital Wallet Users). *Jurnal Ilmiah Ekonomi Dan Kewirausahaan*, 18(1), 13–26.
- Fradesa, F., Abadi, S. P., Maani, B., Hardi, E. A., & Sucipto, S. (2022). Fitur Shopee Barokah dan Tokopedia Salam: Inovasi Marketplace Halal Sebagai Upaya Pengembangan Ekonomi Digital Berbasis Syariah. *Jurnal Ilmiah Ekonomi Islam*, 8(3), 2893–2902.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2013). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). In *Sage (II)*. SAGE Publications, Inc.
- Isnaini, M., Marta, R. F., Septiarysa, L., & Atmaja, V. (2021). *Determinants Of Content Characteristics And Its Effect On. 2020, 237–250*. <https://doi.org/10.31445/jskm.2021.3961>
- Khairunisa, P. N. (2019). Etika Bisnis Dalam Islam Terhadap Transaksi Terlarang Riba dan Gharar. *LABATILA: Jurnal Ilmu Ekonomi Islam*, 3(02), 190–203.
- Malihah, L., Ma'mun, M. Y., Al-Mubarak, M. A. R., & Amalia, R. (2021). SWOT Analysis of the Motivation for Using Non-Cash Transactions (Sharia E-Money) by UMKM Actors. *Musarakah: Journal of Sharia Economic (MJSE)*, 1(2), 89–99.
- Menon, M. M., & Ramakrishnan, H. S. (2019). Revolution of E-wallets usage among Indian millennial. *International Journal of Recent Technology and Engineering*, 8(3), 8306–8312. <https://doi.org/10.35940/ijrte.C6601.098319>
- Muthi, F., & Indrarini, R. (2023). The Influence of Literacy, Usability, and Convenience on People's Interest in Using Sharia Digital Wallets. *Jurnal Ekonomi dan Bisnis Islam*, 7(1), 179–196. <https://doi.org/10.30868/ad.v7i01.4050>
- Naik, N., & Jenkins, P. (2020). Self-Sovereign Identity Specifications: Govern Your Identity through Your Digital Wallet using Blockchain Technology. *8th IEEE International Conference on Mobile Cloud Computing, Services, and Engineering, MobileCloud 2020*, 90–95. <https://doi.org/10.1109/MobileCloud48802.2020.00021>
- Niaga, B. C. (2020). *Enjoy 5 Benefits of Using a Digital Wallet*. <https://www.cimbniaga.co.id/id/inspirasi/gayahidup/menikmati-5-manfaat-pakai-domp-digital>
- Puteri, I. R., & Wijayangka, C. (2020). Analysis Of Digital Wallet Technology Acceptance In UMKM In The City Of Bandung. *Journal of Applied Business Administration*, 4(2), 115–123.
- Putri, A. (2022). *Survei: 71% Orang RI Pakai Domp-digital, Mana yang Paling Laris?* detikFinance. <https://finance.detik.com/fintech/d-6433675/survei-71-orang-ri-pakai-domp-digital-mana-yang-paling-laris>
- Rosli, M. S., Saleh, N. S., Md. Ali, A., & Abu Bakar, S. (2023). Factors Determining the Acceptance of E-Wallet among Gen Z from the Lens of the Extended Technology Acceptance Model. *Sustainability (Switzerland)*, 15(7). <https://doi.org/10.3390/su15075752>
- Sari, D. P., & Hayati, I. (2021). *Analisis Perilaku Konsumen Dalam Memutuskan Pembelian Secara Online Pada E-Commerce Shopee Dimasa Pandemi Covid-19*. UMSU.
- Seputri, W., & Yafiz, M. (2022). QRIS sebagai Alat Transaksi Digital Generasi Z: Analisis Faktor. *Adzkiya: Jurnal Hukum dan Ekonomi Syariah*, 10(2), 139. <https://e-journal.metrouniv.ac.id/index.php/adzkiya/article/view/5259>

- Setiani, D. D., Nivanty, H., Lutfiah, W., & Rahmawati, L. (2020). Sharia fintech: benefits and problems of application to UMKM. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, 5(1).
- Sholihin, M., & Ratmono, D. (2013). *Analisis SEM-PLS Dengan WarpPLS 3.0 (I)*. ANDI OFFSET.
- Siregar, L. Y., & Nasution, M. I. P. (2020). Developments in Information Technology for Increasing Online Business. *HIRARKI: Jurnal Ilmiah Manajemen Dan Bisnis*, 2(1), 71–75.
- Surya, A., & Pradesyah, R. (2022). The Influence Of Electronic Payments On The Increase Of Income Of Halal Medan East Medan. *Al-Muaddib: Jurnal Ilmu Sosial san Keislaman*, 7(2), 214–217.
- Tsai, W.-T., Yang, D., Fan, Z., Zhang, F., Yu, L., Zhang, H., & Zhang, Y. (2023). A Multi-level Corporate Wallet with Governance. *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 13828 LNCS, 76–84. https://doi.org/10.1007/978-3-031-28124-2_8
- Virginia, S. G., & Puspitasari, E. (2023). Factors Influencing Interest in Users of Digital Wallet-Based Accounting Information Systems. *Journal of Economics and Business*, 7(1), 643–652. <https://doi.org/10.33087/ekonomis.v7i1.878>
- Wardoyo, W., & Andini, I. (2017). Factors Influencing Online Purchasing Decisions at Gunadarma University Students. *Jurnal Manajemen DayaSaing*, 19(1), 12–26. <https://doi.org/10.23917/dayasaing.v19i1.5101>
- Wiryan, D., Suhartono, J., Hiererra, S. E., Ambarwati, S. D. A., & Gui, A. (2023). Factors influencing e-wallet users' perception on payment transaction security: Evaluation on quick response Indonesia standard. *AIP Conference Proceedings*, 2508. <https://doi.org/10.1063/5.0114922>
- Wiyono, G. (2020). *Merancang Penelitian Bisnis Dengan Alat Analisis SPSS 25 & SmartPLS (II)*. UPP STIM YKPN.
- Yolandha, F. (2022). *Research: Gopay, the Most Widely Used Digital Wallet*. <https://www.republika.co.id/berita/rm2cso370/riset-gopay-dompot-digital-yang-paling-banyak-digunakan>
- Zollner, S., Choo, K.-K. R., & Le-Khac, N.-A. (2019). An Automated Live Forensic and Postmortem Analysis Tool for Bitcoin on Windows Systems. *IEEE Access*, 7, 158250–158263. <https://doi.org/10.1109/ACCESS.2019.2948774>