

The Effect of Using the Livin' by Mandiri Application on Customer Satisfaction and Loyalty Using the Utaut Model

Anita Rismaharni Syaputri, Khairani Ratnasari Siregar

Telkom University, Indonesia

Email: rismaharnianita@gmail.com, ranisiregar@telkomuniversity.ac.id

ABSTRACT

The rapid development of digital technology in Indonesia, including the banking sector, is reflected in internet penetration reaching 79.5% of the total population by 2024. Digital transformation driven by the government has also significantly boosted the growth of the digital economy, with a value of US\$82 billion in 2023 and projected to increase to US\$109 billion in 2025 (BPS, 2024; Dhanesworo, 2024). The banking sector continues to innovate through digital services, one of which is the Livin' by Mandiri application. The adoption of technology by the younger generation is a factor in the success of this application, where millennials and Gen Z account for 77% of total users. This study aims to evaluate the effect of using the livin' by mandiri application on customer satisfaction and loyalty using the UTAUT model. The method used in this study is a quantitative approach. Data was collected through an online survey involving 203 respondents who are active users of the Livin by Mandiri application. The analysis technique uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the relationship between variables and measure the level of influence of each variable in the research model. The results of this study indicate that the actual usage variable has a positive and significant effect on customer satisfaction, which shows the large contribution of the intensity of application use to the level of user satisfaction. In addition, actual usage also has a positive and significant effect on attitudinal loyalty, which indicates that the experience of using the application can form a loyal attitude of customers towards the Livin' by Mandiri application. Thus, the more frequently and effectively the application is used, the higher the customer satisfaction and loyal attitude formed.

Keywords : Attitudinal loyalty, Customer Satisfaction, M-banking, UTAUT, Personal Innovativeness

INTRODUCTION

The digital banking sector is one of the factors driving the growth of Indonesia's digital economy (Meidyasari, 2024). Bank Indonesia noted that in April 2024, the value of digital banking transactions reached Rp 5,340.92 trillion, growing by 19.08% year-on-year (yoy) (Sandy, 2024). Transactions using *QRIS* were also recorded to have grown rapidly, reaching IDR 56.92 trillion or 87% (yoy), with users dominated by *Micro, Small and Medium Enterprises (MSMEs)* (Yashilva, 2024). The increase recorded in the banking sector also has an impact on increasing financial inclusion in Indonesia, as people can now access banking services more easily anywhere and anytime (Yashilva, 2024). Indonesia's financial inclusion rate is currently recorded at 88%, with a desired target of 90% (Elena & Rini, 2024).

The ranking of digital banks operating fully online in Indonesia based on data from the first quarter of 2024 lists *SeaBank*, *Bank Jago*, and *Bank Neo Commerce (BNC)* as the three digital banks with the largest assets in 2023. *SeaBank* has total assets of IDR 31.09 trillion, followed by *Bank Jago* with IDR 21.29 trillion, and *BNC* with IDR 18.16

trillion (Burhan, 2024). One of the main products of digital banking is mobile banking applications that can be used by customers via smartphones (Yonatan, 2024).

The government, through the Financial Services Authority (*OJK*), regulates mobile banking services with various regulations. *POJK* Number 12/*POJK*.03/2018 regulates digital banking services to improve service quality to customers. *POJK* Number 21 of 2023 strengthens the regulation in accordance with changes in digital economic behavior. *SEOJK* Number 24/*SEOJK*.03/2023 provides guidelines for banks to assess digital maturity, including mobile banking service capabilities. Mobile banking, the most popular digital financial service in Indonesia, reflects the public's adaptation to modern banking technology.

Changing consumer preferences in Indonesia show a significant increase in the use of mobile banking services. According to a Populix survey, 64% of respondents have banking and financial service applications on their mobile phones, with 91% of them using mobile banking (Laras & Rini, 2024). This trend is based on the practicality, time efficiency, and ease of use offered by mobile banking applications. Features integrated with e-commerce platforms and e-wallets further enhance the appeal of mobile banking (Scuderia, 2024). Data shows that 89% of respondents use mobile banking to top up other financial applications, such as e-commerce and e-wallet, and 82% for e-commerce purchases (Laras & Rini, 2024).

Bank Mandiri responded to this change by strengthening digital banking services through the *Livin' by Mandiri* App. This application is designed to meet customer needs by prioritizing convenience and speed in transactions (Bank Mandiri, 2024). One of the latest innovations is the update of a more personalized appearance and the addition of the *Livin'point* feature in the Loyalty menu. This feature allows customers to collect points through transactions, such as debit and credit card usage, financial transactions at *Livin' by Mandiri* (including *QRIS*), virtual account payments, and top-ups (Sari, 2024). The *Quick Pick* feature provides easy access to favorite menus, while online account opening without the need to visit a branch adds to the app's appeal. Another feature offered is the investment feature, which allows users to start investing with small capital—a favorite among millennials and Gen Z (Fitranansya, 2024).

Customer loyalty is one of the parameters of a company's success, especially in maintaining long-term relationships with customers. In the context of digital services such as *Livin' by Mandiri*, customer loyalty is crucial to maintain the sustainability of service usage amidst fierce competition in the banking sector. A Statistika survey (2023) shows that up to 75% of mobile banking customers in Indonesia prefer apps that provide a positive and consistent customer experience. In contrast, a Katadata Insight Center survey noted that 20% of customers in Indonesia switch to other apps due to complaints, such as difficult access, stalled transactions, and slow service response.

According to a report by McKinsey & Company (2023), a significant factor influencing customer loyalty in the digital sector lies not only in the app itself, but also in the loyalty program offered by the company. This is all the more relevant given that banking trends in Indonesia show a 30% increase in mobile banking users by 2022, accompanied by customer expectations for more personalized and efficient services. *Livin' by Mandiri* has recorded significant growth, with the number of users reaching more than 27 million in August 2024, an increase of 33% year-on-year, with a total transaction value of Rp2,589 trillion and transaction volume of 2.4 billion (Sari, 2024). The majority of users, 77%, come from the millennial generation and Gen Z, indicating a high level of technology adoption among the younger generation (Suheriadi,

2024).

The significant user growth of the *Livin' by Mandiri* app did not eliminate the challenges faced in ensuring user satisfaction and loyalty (Ariyandi, 2024). On October 1, 2024, the *Livin' by Mandiri* app experienced a glitch that left many users with login difficulties, slow applications, and failed transactions (Haezer, 2024). These complaints were widely discussed on social media, making “*Livin' by Mandiri*” trending on platform X with more than 1,000 tweets (Sari, 2024). The disruption occurred after an update to the app's appearance, which allegedly triggered a bug or the system was unprepared for the increase in users. *Bank Mandiri*'s response through its official @mandiricare account was deemed inadequate by some customers, emphasizing the importance of mobile banking service stability to maintain user satisfaction and prevent loyalty decline (Haezer, 2024).

User complaints about the *Livin' by Mandiri* app were also found in reviews on the Google Play Store as well as the Apps Store, which highlighted issues with system glitches, including problems logging in, slow apps, and failed transactions. Most users complained about lagging or long loading issues, taking up to 15 minutes just to access basic features. Other frequent complaints include login issues and transaction disruptions, especially when money transfers often fail with confusing error messages, such as incorrect time settings, even though the user's device has been set up automatically.

The complaints from the two platforms highlight the same thing regarding the *Livin by Mandiri* application. The rating obtained by the *Livin by Mandiri* application on the Google Play Store is 3.9 out of 5 and 3.1 out of 5 on the Apps Store. The ratings and complaints obtained by *Livin by Mandiri* will have an impact on user satisfaction, which in turn will also affect user loyalty.

User loyalty is a key element that determines the continuity and growth of services in the face of challenges. The attitude of user loyalty reflects the company's success in providing satisfying services. Customer loyalty is also key to maintaining competitiveness in the increasingly competitive digital banking market. It is important to remember that the cost of retaining existing customers is much lower than attracting new customers.

Previous studies have explored customer satisfaction and loyalty in digital banking applications, but many of them focus on general factors such as ease of use and system performance, without considering the specific impact of loyalty programs and app features. Sari (2024) discussed the growth of digital banking in Indonesia and highlighted the role of mobile banking in enhancing financial inclusion. However, it did not fully address the influence of personalized features and loyalty programs in building long-term customer loyalty, especially when facing service interruptions. Ariyandi (2024) examined the glitches and issues in the *Livin' by Mandiri* app and their direct impact on user complaints, but it lacked an in-depth analysis using established models like the UTAUT (*Unified Theory of Acceptance and Use of Technology*) Model to evaluate the specific factors influencing customer satisfaction and loyalty.

Based on the description of the phenomenon that has been stated, this study aims to analyze the factors that influence customer satisfaction and loyalty in using the *Livin' by Mandiri* application. The focus of this research is to understand how the use of the application, through the UTAUT (*Unified Theory of Acceptance and Use of Technology*) Model approach, can increase customer satisfaction and build customer loyalty to support *Bank Mandiri*'s sustainability in competing in the digital banking industry. The main objective of this research is to analyze the factors that influence customer

satisfaction and loyalty in using the *Livin' by Mandiri* mobile application through the UTAUT Model. The benefits of this research include providing valuable insights for *Bank Mandiri* and other digital banking services in Indonesia on how to enhance user experience, increase customer retention, and improve service reliability.

RESEARCH METHOD

The research method used in this study is a quantitative method. The quantitative method is a scientific method used in research by utilizing data in the form of numbers and statistical analysis that is concrete, objective, measurable, and logical (Maubigushita & Siregar, 2018). This study uses a causal approach in accordance with the objectives to be achieved, as explained by Abdullah (2015) and Indrawati (2015). This research applies the *cross-sectional* method in accordance with the time of implementation. The population used in this study comprises 27.6 million people using the *Livin' by Mandiri* mobile banking application. In this study, the sample was selected using a non-probability sampling method with a *purposive sampling* technique. This technique is carried out by considering certain information relevant to the research, where the sample is selected from a population that meets specific criteria, namely users of *Livin' by Mandiri* in Indonesia. The calculation of the number of samples in this study is shown in the figure below, using *G-Power* software version 3.1.

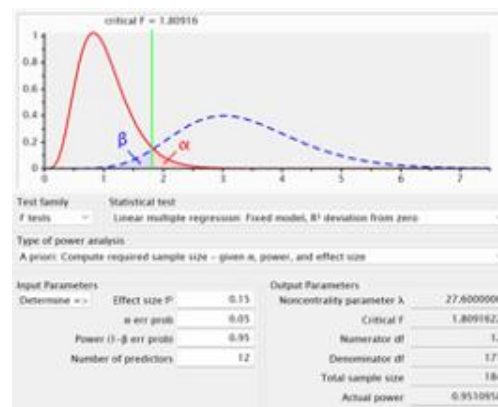


Figure 1. Calculation of Minimum Sample Size

Source: G-Power software version 3.1

The graph above, showing the sample calculation results using the *G-Power* version 3.1 software, indicates that the minimum number of samples required in this study is 184 respondents. These results were obtained by calculating *G-Power* using the *F-test* with an effect size of 0.15, a significance level (α) of 0.05, and a power of 0.95. The sample criteria used are as follows:

1. *Livin' by Mandiri* users active since October 2024
2. Have made transactions on *Livin' by Mandiri* at least three times
3. Willing to be a respondent in this study.

The data sources in this study are primary and secondary data. One way to collect primary data is through questionnaires. In this method, respondents fill out a series of questions or statements, which are then returned to the researcher upon completion. This

research uses primary data that will be collected using a questionnaire. The questionnaire will be distributed online on the Instagram social media platform with the help of *Google Form* to respondents, with a minimum target of 184 respondents. The respondents selected are those who have made transactions at least three times since October 2024. The data analysis technique used in this research is *SEM. Structural Equation Modeling (SEM)* is a statistical method that brings together factor analysis, regression, and path analysis to evaluate the relationship between latent and manifest variables.

RESULT AND DISCUSSION

Analysis Partial Least Square

Data Normality Test

In this study, the data normality test was carried out by looking at the test results of the standard deviation, excess kurtosis, and skewness values using the SmartPLS 4 application which are shown in the following table.

Table 1. Normality Test Results

Variable	Indicator	Excess kurtosis	Skewness
<i>Actual Usage</i>	AU1	1,461	-1,317
	AU2	1,661	-1,216
	AU3	0,613	-0,941
	AU4	0,305	-0,799
	AU5	-0,263	-0,886
	AU6	-0,476	-0,354
	AU7	-0,091	-0,389
	AU8	-0,374	-0,772
	AU9	0,037	-0,544
	AU10	-0,059	-0,804
	AU11	-0,489	-0,599
<i>Satisfaction</i>	SA1	2,388	-1,155
	SA2	-0,608	-0,539
	SA3	0,026	-0,613
	SA4	-0,473	-0,695
<i>Attitudinal Loyalty</i>	AL1	2,123	-1,115
	AL2	1,659	-1,140
	AL3	1,274	-1,152
	AL4	-0,226	-0,557
	AL5	0,206	-0,635

Source: Processed Data (2025)

A data is said to have a normal distribution if the excess kurtosis value is in the range of -3 to +3 and the skewness value is not more than +1 and less than -1. The table above displays the kurtosis value of this research data ranging from -0.929 to 5.441 and the skewness value is between -1.778 to -0.339. The analysis results obtained show that the data used in this study are non-normal data. However, the bootstrapping method in SmartPLS does not require normally distributed data, because SEM-PLS is designed to handle data that is not normally distributed and is suitable for use in small sample sizes.

Outer Model Evaluation

Convergent Validity

Convergent validity is used to ensure the ability of indicators to accurately describe research variables After the process of eliminating invalid data, then the data is tested again.

Table 2. Second Outer Loading Results

Variable	Indicator	Loading	Description
<i>Actual Usage</i>	AU2	0,769	Valid
	AU3	0,75	Valid
	AU4	0,767	Valid
	AU8	0,733	Valid
	AU10	0,741	Valid
	AU11	0,725	Valid
<i>Satisfaction</i>	SA1	0,804	Valid
	SA2	0,884	Valid
	SA3	0,861	Valid
	SA4	0,849	Valid
<i>Attitudinal Loyalty</i>	AL1	0,796	Valid
	AL2	0,825	Valid
	AL4	0,853	Valid
	AL5	0,73	Valid

Source: Processed Data (2025)

After going through the trimming process, the outer loading values are shown in table 2. After trimming, all indicators of the research variables have a value greater than 0.70. So, the research indicators used are declared valid and can be used in research.

After outer loading, convergent validity can also be seen based on the Average Variance Extracted (AVE) value. The AVE value must be more than 0.50 so that the data used can be said to be valid. The results of the AVE value can be seen in the following table.

Table 3. Average Variance Extended (AVE) Results

Variable	AVE
<i>Actual Usage</i>	0,559
<i>Satisfaction</i>	0,722
<i>Attitudinal Loyalty</i>	0,644

Source: Processed Data (2025)

Table 3. shows the results of the AVE value for each construct. Each construct already has a value above 0.50 and is declared valid for use in this study. The AVE value above 0.50 means that on average the construct can explain more than half of the variance of its indicators.

Composite Reliability

Reliability testing in this study was carried out using composite reliability. Composite reliability and Cronbach's alpha are used to assess the internal consistency of each indicator that measures a latent construct. Composite Reliability is considered better than Cronbach's Alpha in the context of Partial Least Squares Structural Equation Modeling (PLS-SEM) because it does not assume that all indicators have the same contribution to latent constructs

(Hair et al., 2022). If the composite reliability is greater than 0.70, the construct is considered reliable.

Table 4. Composite Reliability

Variable	Composite Reliability
<i>Actual Usage</i>	0,884
<i>Satisfaction</i>	0,912
<i>Attitudinal Loyalty</i>	0,878

Source: Processed Data (2025)

Based on table 4. all variables in the model have a composite reliability value above 0.70. The highest value is found in the satisfaction variable (0.912) which indicates that the indicators in the construct are consistent in measuring the same construct. All constructs in this model have very good internal reliability based on the Composite Reliability value.

Inner Model Evaluation

Multicollinearity Test

In PLS-SEM, the multicollinearity test is carried out by looking at the value of the Variance Inflation Factor (VIF). A good VIF value should be below 5. A VIF value between 5-10 is considered to indicate a moderate potential multicollinearity that needs to be watched out for, while a VIF value above 10 indicates a serious multicollinearity problem that can damage the interpretation of the structural model.

Table 5. Collinearity Statistics (VIF)

Variable	Indicator	VIF
<i>Actual Usage</i>	AU2	1,815
	AU3	2,638
	AU4	2,622
	AU8	1,627
	AU10	1,945
	AU11	1,899
<i>Satisfaction</i>	SA1	1,782
	SA2	2,598
	SA3	2,312
	SA4	2,091
<i>Attitudinal Loyalty</i>	AL1	1,623
	AL2	1,762
	AL4	2,333
	AL5	1,811

Source: Processed Data (2025)

Based on Table 5. all variable indicators have a Variance Inflation Factor (VIF) value below the general threshold of 5, so it can be concluded that there is no multicollinearity problem in the model. This shows that each indicator does not experience high correlation with each other in measuring the same variable, so the data is suitable for further analysis.

Determination Test or Analysis of Variance (R²)

R-squared is used to assess the extent to which the model is able to explain the variation in each construct, so as to explain the explanation of the phenomenon. The higher the r-square value, the more effective the model's predictive ability. According to Hair et al. (2022) R^2 of 0.75 or more is categorized as strong (substantial), R^2 around 0.50 is categorized as moderate, and R^2 around 0.25 is considered weak.

Table 6. Coefficient of Determination

	R-square
<i>Actual Usage</i>	0,884
<i>Attitudinal Loyalty</i>	0,548
<i>Satisfaction</i>	0,582

Source: Processed Data (2025)

Based on the table, the coefficient of determination for the AU variable is 0.884, which means that 88.4% of the variation in the actual use of the application can be explained by the independent constructs in the model. The value of 88.4% is classified as strong and indicates that this research model has a high predictive ability for actual usage behavior. Then the attitudinal loyalty variable gets an R^2 value of 0.548, including the moderate category. This means that 54.8% of the variation in attitudinal loyalty can be explained by the constructs that influence it in the model.

Finally, the SA variable with an R^2 value of 0.582 is a moderate category. This means that 58.2% of variations in user satisfaction can be explained by the factors contained in the model. All variables have an R^2 value that has good predictive power in explaining variations in actual use and user satisfaction levels of the Livin' by Mandiri application.

Hypothesis Test (Bootstrapping)

In this study, direct effect testing was carried out with a significance level of 5% using a one-tailed test. The one-way test is declared significant if the t-statistic value is at least 1.65. The hypothesis can be accepted if the beta coefficient is positive and the p-value does not exceed 0.05 (Hair et al., 2022). The t-statistic value is obtained from the t distribution table, where for degrees of freedom greater than 120, the critical t value is 1.65. Details of the results of hypothesis testing can be seen in the table below.

Table 7. Hypothesis Test

Hypothesis	Path	Original Sample	T Statistics	P Values	Description
H1	AU → SA	0,48	7,548	0,000	Accepted
H2	AU → AL	0,212	2,568	0,005	Accepted

Source: Processed Data (2025)

Actual Usage has a positive influence on Livin by Mandiri user Satisfaction

Testing through bootstrapping in SmartPLS 4 proves this hypothesis is accepted. The original sample value of 0.480, t-statistic of 7.548, and p-value of 0.000 confirm that Actual Usage (AU) has a positive and significant effect on Satisfaction (SA). The more

frequently users use Livin' by Mandiri, the higher their satisfaction. This finding supports Bhattacharjee's (2001) expectation-confirmation theory (ECT) which explains that satisfaction arises when the usage experience meets or exceeds expectations.

In addition, in digital banking services, smooth transactions, system reliability, and features that meet the needs are the main factors that shape user satisfaction. In addition, these findings are also in line with the UTAUT model, where the actual usage variable represents usage behavior that is influenced by performance expectancy, effort expectancy, and facilitating conditions. When the application is used consistently and provides benefits as expected, satisfaction increases. These results are also reinforced by research by Merhi et al. (2020) and Kim et al. (2023) which shows that the more frequently the application is used, the better the assessment of service quality and long-term satisfaction.

Actual Usage has a positive influence on Attitudinal Loyalty of Livin by Mandiri users

Bootstrapping analysis in SmartPLS 4 proves that Actual Usage has a positive and significant effect on Attitudinal Loyalty. The coefficient value of 0.212, t-statistic of 2.568, and p-value of 0.005 indicate that the more frequently users utilize the Livin' by Mandiri app, the stronger their tendency to remain loyal. This finding supports Behavioral Learning Theory, which explains that repeated use builds positive attitudes, trust, and emotional attachment.

Then, this result is also consistent with the UTAUT framework, where the frequency of actual usage is influenced by perceptions of benefits (performance expectancy), ease of use (effort expectancy), and facilitating conditions, which ultimately encourage the formation of loyalty attitudes. When the application successfully meets user expectations on an ongoing basis, it strengthens consumers' emotional commitment and loyalty to the application. The study of Tariq et al. (2024) and Merhi et al. (2020) also support this finding, which confirms that regular interaction with relevant features makes users feel that the application is worth using continuously.

CONCLUSION

The results show that the actual usage of the application (*actual usage*) has a positive and significant effect on customer satisfaction, with a coefficient value of 0.480 ($T = 7.548$; $p = 0.000$), which indicates a large contribution of the intensity of application usage to the level of user satisfaction. In addition, *actual usage* also has a positive and significant effect on attitudinal loyalty, with a coefficient value of 0.212 ($T = 2.568$; $p = 0.005$), indicating that the experience of using the application can form a loyal attitude among customers towards the *Livin' by Mandiri* application. Thus, the more frequently and effectively the application is used, the higher the customer satisfaction and the stronger the loyal attitude formed.

REFERENCES

- Ariyandi, F. (2024). Impact of mobile banking service glitches on customer satisfaction: A case study of Livin' by Mandiri app. *Indonesian Journal of Digital Banking*, 11(2), 142-155.
- Sari, T. (2024). Livin' by Mandiri: User experience and growth in Indonesia's digital banking sector. *Journal of Digital Financial Services*, 8(3), 101-114.
- Bhattacharjee, A. (2001). Understanding Information Systems Continuance: An Expectation-Confirmation Model. *MIS Quarterly*, 25(3), 351-370. <https://doi.org/10.2307/3250921>
- Burhan, F. (2024). 7 Bank Digital Terbesar di Indonesia, SeaBank & Bank Jago Memimpin. <https://finansial.bisnis.com/read/20240330/90/1753827/7-bank-digital-terbesar-di-indonesia-seabank-bank-jago-memimpin>
- Elena, M. & Rini, A. (2024). Pemerintah Bidik Tingkat Inklusi Keuangan Indonesia 2024 Naik ke 90%. *Bisnis.com*. <https://ekonomi.bisnis.com/read/20240322/9/1751958/pemerintah-bidik-tingkat-inklusi-keuangan-indonesia-2024-naik-ke-90>
- Fitranansya, Y. (2024). Analyzing the role of loyalty programs in digital banking applications: Case study on Livin' by Mandiri. *Journal of Banking and Finance Technology*, 7(2), 88-99.
- Scuderia, D. (2024). Digital banking and mobile applications: Trends in the financial services industry. *Journal of Financial Technology*, 15(1), 58-70.
- Haezer, E. (2024). Livin Mandiri Error, Pengguna Tak Bisa Login Meski Sudah Masukkan Password yang Benar. *Tribunmataraman.com*. <https://mataraman.tribunnews.com/2024/10/01/livin-mandiri-error-pengguna-tak-bisa-login-meski-sudah-masukkan-password-yang-benar>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (3rd ed.). Thousand Oaks: SAGE Publications.
- Indrawati. (2015). *Metode Penelitian Manajemen dan Bisnis Konvergensi Teknologi Komunikasi dan Informasi*. Bandung : PT Refika Aditama.
- Kim, S. H., Kwon, H.-J., & Kim, H. (2023). Mobile Banking Service Design Attributes for the Sustainability of Internet-Only Banks: A Case Study of KakaoBank. *Sustainability*, 15(8), 6428. <https://doi.org/10.3390/su15086428>
- Laras, A. & Rini, A. (2024). Top 7 Bank Digital di Indonesia Kuartal I/2024: Seabank Teratas, Hibank Melesat. *Bisnis.com*. <https://finansial.bisnis.com/read/20240525/90/1768141/top-7-bank-digital-di-indonesia-kuartal-i2024-seabank-teratas-hibank-melesat>
- Maubigushita, A., & Siregar, K.R. (2018). Impact of Task-Technology Fit & Habitual Use on Individual Performance Using Partial Latest Square Structural Equation Modeling Methods. *Sustainable Collaboration in Business, Technology, Information and Innovation (SCBTII)*.
- Meidyasari, Sofi. (2024). The Impact of Digital Economy in Driving Economic Growth and Development in Indonesia. *INJURITY: Journal of Interdisciplinary Studies*, 3(11), 777-783.
- Merhi, M., Hone, K., Tarhini, A., & Ameen, N. (2020). An empirical examination of the moderating role of age and gender in consumer mobile banking use: a cross-national, quantitative study. *Journal of Enterprise Information Management, ahead-of-print*(ahead-of-print). <https://doi.org/10.1108/JEIM-03-2020-0092>
- Sandy, K. (2024). Transaksi Digital Banking Tembus Rp 5.340,9 Triliun, Naik 19 Persen

- di April 2024. <https://www.idxchannel.com/banking/transaksi-digital-banking-tembus-rp53409-triliun-naik-19-persen-di-april-2024>
- Sari, A. P. (2024). Wajah Baru Livin' by Mandiri, Lebih Personal dan Manjakan Nasabah. Kilas Perbankan. <https://kilasperbankan.kompas.com/bank-mandiri/read/2024/10/08/134840926/wajah-baru-livin-by-mandiri-lebih-personal-dan-manjakan-nasabah>
- Scuderia, A. (2024). *Preferensi Mobile Banking dan E-Wallet di Kalangan Generasi Muda*. GoodStats. <https://goodstats.id/article/preferensi-mobile-banking-dan-e-wallet-di-kalangan-generasi-muda-OrBZG>
- Suheriadi. (2024). 77% Pengguna Livin' Bank Mandiri merupakan Milenial & Gen Z. Fortuneidn.com. <https://www.fortuneidn.com/finance/suheriadi/77-pengguna-livin-bank-mandiri-merupakan-milenial-dan-gen-z>
- Tariq, M., Maryam, S. Z., & Shaheen, W. (2024). Cognitive Factors and actual Usage of Fintech Innovation: Exploring the UTAUT Framework for Digital Banking. *Heliyon*, 10(4), e35582. <https://doi.org/10.1016/j.heliyon.2024.e35582>
- Yashilva, W. (2024). Melihat Perkembangan Layanan Perbankan Digital di Indonesia, Mulai dari Uang Elektronik Hingga QRIS. GoodDtats. <https://goodstats.id/article/perkembangan-layanan-perbankan-digital-di-indonesia-mulai-dari-uang-elektronik-hingga-qr-is-bnqIJ>
- Yonatan, A. (2024). *Mobile Banking Terpopuler di Indonesia 2024*. <https://data.goodstats.id/statistic/mobile-banking-terpopuler-di-indonesia-2024-MdFQB>