



Department of Digital Business

Journal of Artificial Intelligence and Digital Business (RIGGS)

Homepage: <https://journal.ilmudata.co.id/index.php/RIGGS>

Vol. 4 No. 2 (2025) pp: 6449-6454

P-ISSN: 2963-9298, e-ISSN: 2963-914X

Analysis of the Influence of Digital Transformation on the Financial Performance of Retail Companies in Indonesia

Sefrimel Angriani Zn, Sintia Nursafitri, Tia Permata Juwita, Ellen D. Oktanti Irianto

1 Business Education, Faculty of Economics and Business, State University of Jakarta

2 D4 Digital Marketing, Faculty of Economics and Business, State University of Jakarta

3. Business Education, Faculty of Economics and Business, State University of Jakarta

4. Management, Faculty of Economics and Business, Mulawarman University

sefrimelangrianizn95@gmail.com, Sintia.nursafitri@unj.ac.id, tiapermatajuwita@unj.ac.id, ellend@feb.unmul.ac.id

Abstract

Digital transformation has become a key factor in the evolution of the retail industry in Indonesia, especially with the increasing adoption of technology in various business operations. This study aims to analyze the impact of digital transformation on the financial performance of retail companies in Indonesia. Using a quantitative approach, this research examines secondary data from annual reports and financial statements of 16 retail companies listed on the Indonesia Stock Exchange (BEI) for the period 2021-2023. Digital transformation is measured based on the ratio of digital intangible assets to total intangible assets, while financial performance is measured using Return on Assets (ROA). The results of a simple regression analysis indicate that digital transformation has a significant negative impact on ROA, with each increase in digital transformation associated with a decrease in ROA by 1.381. These findings suggest that poorly managed digital transformation implementation can hinder a company's financial performance. According to the Resource-Based View (RBV) theory, companies with sufficient resources and capabilities can optimize the benefits of digital transformation, while those with limited resources may experience a decline in financial performance. This study provides insights for industry players on the importance of an effective digital strategy in enhancing competitiveness and operational efficiency. Therefore, retail companies need to conduct thorough planning, strengthen internal capabilities, and regularly evaluate the implementation of digital transformation to minimize its negative impact on profitability.

Keywords: Digital transformation, financial performance, retail industry, Return on Assets (ROA)

1. Background

Digital transformation has become a global phenomenon that affects various industrial sectors, including the retail sector in Indonesia. Developments in information and communication technology have changed the way consumers interact with retailers, prompting companies to adopt digital technologies to improve operational efficiency and customer experience. This transformation includes the integration of technology into various aspects of the retail business, such as marketing, inventory management, and customer service.

The COVID-19 pandemic has accelerated the adoption of digital technology across all business sectors, including the retail industry in Indonesia. These changes fundamentally change the way retail companies operate, interact with consumers, suppliers, and other stakeholders. In addition, digital transformation also encourages innovation in business models and value creation for companies (Matarazzo et al., 2021). Digital transformation includes the use of digital technology to develop new business models aimed at improving the operational efficiency and profitability of retail companies (Gómez-Trujillo & González-Pérez, 2022). This transformation has an impact on business processes, operational activities, and organizational capabilities (Li et al., 2018).

Analysis of the Influence of Digital Transformation on the Financial Performance of Retail Companies in Indonesia

Specifically, digital transformation is defined as profound and rapid changes in business operations, processes, competencies, and models in order to strategically capitalize on the opportunities offered by digital technologies (Abdulquadri et al., 2021). Key goals of digital transformation in the retail sector include improved customer experience, operational flexibility, and cost efficiency (Junge, 2019).

Studies on digital transformation from the perspective of business strategy, technology, human resources, and marketing have identified one main phase: digitalization, which is the process of converting analog information into a digital format so that it can be stored, processed, and transmitted by computer systems (Hilali & Manouar, 2019). In the retail industry, digitalization is changing the traditional patterns of interaction between consumers and businesses, particularly with the increasing use of e-commerce and digital payment systems. Digitalization allows customers to interact with retail companies through a variety of digital media channels, removing geographical and operational barriers (Verhoef et al., 2021). However, most research on digital transformation still focuses on large companies and digital startups, while studies examining its impact on traditional retail companies are still limited (Ghezzi & Cavallo, 2020).

In Indonesia, the shift in consumer behavior towards online shopping has prompted retailers to adapt by providing e-commerce platforms and other digital services. For example, Bukalapak has grown from a marketplace platform to an all-commerce platform that serves both online and offline markets, with around 130 million users and 16.8 million MSME partners. In addition, traditional retailers are also encouraged to leverage technology to monitor stock in real-time, reorder before items run out, and improve the customer experience through relevant product recommendations.

The Indonesian government, through the Ministry of Trade, is also encouraging the transformation of modern retail in the digital era. Changes in consumer behavior patterns in buying retail products are a challenge as well as an opportunity for retail sector business actors to survive in running their businesses. However, digital transformation also brings new challenges in managing financial risks. Technological advances provide many opportunities to improve efficiency and customer experience, but they also open the door to a variety of more complex types of risk. Companies must be able to identify, analyze, and mitigate these risks to remain competitive and maintain operational sustainability (Faza et al., 2024).

Retail companies in Indonesia are experiencing various challenges in the digital transformation process. Factors such as market volatility, economic uncertainty, technological complexity, and changes in consumer behavior are the main challenges in implementing digital transformation. These changes not only impact operational efficiency, but also on the financial performance of retail companies. Digital transformation can be understood as restructuring business processes that enable operational automation, improved customer experience, and more effective data management (Gómez-Trujillo & González-Pérez, 2022). Therefore, retail companies need to consider various aspects such as optimization of operational processes, integration of technology with business models, as well as data management and decentralization of information to ensure business sustainability in the digital era (Junge, 2019).

Research shows that digital transformation has a significant influence on a company's financial performance, especially in the retail industry (Samsuri et al., 2021). However, the COVID-19 pandemic has brought great challenges to the sector, causing many retail companies to experience a decline in revenue to bankruptcy due to restrictions on economic activities and changes in consumption patterns (Alam et al., 2021). Some retail companies that have not adopted digital technology well are having difficulty maintaining their business (Rahmawati et al., 2020). On the other hand, digital transformation provides an opportunity for retail companies to survive and even improve their financial performance through effective digital strategies. The use of e-commerce, digital payment systems, and customer data analysis is the main key in improving business efficiency and the competitiveness of companies in an increasingly competitive market (Setiowati et al., 2015).

In the context of retail companies in Indonesia, the adoption of digital solutions such as omnichannel retailing, e-commerce, and fintech has helped companies improve operational effectiveness and expand market reach. Ueasangkomsate (2015) emphasizing that by focusing on digitalization, retail companies can improve their business performance by being more adaptive to market changes. Therefore, a planned and integrated digital transformation strategy is a crucial factor in ensuring the growth and sustainability of retail companies in Indonesia in the long term.

Digital transformation has become a major factor in the transformation of the retail industry in Indonesia, especially with the increasing adoption of digital technology in various aspects of business operations. Changing consumption patterns, driven by technological developments and the COVID-19 pandemic, are forcing retail companies to adapt to digital business models to maintain sustainability and improve operational efficiency.

While digital transformation offers a wide range of opportunities, such as improved customer experience and cost efficiency, companies also face challenges, including market volatility, technological complexity, and changing consumer preferences. Previous studies have shown that companies that are able to adopt digital

technology well tend to have better financial performance compared to those that are still lagging behind in digitalization.

Therefore, this study aims to analyze in depth how digital transformation affects the financial performance of retail companies in Indonesia. The results of this research are expected to provide insight for industry players in developing effective digital strategies and help in business decision-making in the digital era.

Against this background, it is important to analyze the influence of digital transformation on the financial performance of retail companies in Indonesia. A deep understanding of the impact of digital transformation can assist retailers in designing effective strategies to improve financial performance and competitiveness in an increasingly competitive market.

2. Research Methods

This study uses a quantitative approach to analyze the influence of digital transformation on the financial performance of retail companies in Indonesia. The data used is in the form of secondary data obtained from the annual reports and financial statements of 16 retail companies listed on the Indonesia Stock Exchange (IDX) during the 2021-2023 period. The independent variable in this study is digital transformation, which is measured through the *digital transformation* by using the ratio *digital intangible asset* dibanding *total intangible asset* (Lantip & Daljono, 2023). Meanwhile, the dependent variable is the company's financial performance, which is measured using the Return on Assets (ROA) financial ratio.

Data analysis was conducted using simple regression with the help of SPSS software to test the relationship between digital transformation and the financial performance of retail companies. Classical assumption tests, such as normality and autocorrelation tests, are also performed to ensure the normal distribution of data. The results of this analysis are expected to provide an overview of the extent to which digital transformation contributes to improving the financial performance of retail companies in Indonesia.

3. Results and Discussion

Digital transformation has become a key factor in the development of the retail industry in Indonesia, especially in the face of changing consumer behavior and business challenges in the modern era. Digitalization in the retail sector includes various aspects, such as the use of e-commerce, digital payment systems, and technology optimization in business operations. This study aims to analyze the extent to which digital transformation affects the financial performance of retail companies, especially in terms of profitability and operational efficiency.

The results of this study are presented based on secondary data analysis from 16 retail companies listed on the Indonesia Stock Exchange (IDX) during the 2021-2023 period. Using simple regression analysis through SPSS software, this study examines the relationship between digital transformation and financial performance, as measured through the Return on Assets (ROA) financial ratio. The results of the study are expected to provide insight into the effectiveness of digital technology adoption in increasing the competitiveness and profitability of retail companies in Indonesia.

Table 1 Descriptive Statistical Results

| Descriptive Statistics | | | | | |
|------------------------|------|---------------------|--------------------|-------------------|--------------------|
| | N | Minimum | Maximum | Mean | Hours of deviation |
| Transformasi | 80 | .0233494059084288 | 1.0000000000000000 | .723979460861794 | .344076041684549 |
| LENGTH | 80 | -9.4982141065500670 | .2828283580699827 | -.526882993692360 | 1.82684281001107 |
| Valid (listwise) | N 80 | | | | |

Table 1 presents the descriptive statistical results for the variables used in the study. The data consisted of 80 samples that were analyzed listwise. The Transform variable has a minimum value of 0.0233 and a maximum of 1.0000, with a mean value of 0.7239 and a standard deviation of 0.3441. Meanwhile, the ROA variable showed a minimum value of -9.4982 and a maximum of 0.2828, with an average of -0.5269 and a standard deviation of 1.8268. These mean values and standard deviations describe the distribution of data as well as the degree of variation of each variable in the study.

Table 2 Normality Test Results

| One-Sample Kolmogorov-Smirnov Test | | |
|--|--------------------|-------------------------|
| | | Unstandardized Residual |
| N | | 80 |
| Normal Parameters ^{a,b} | Mean | .0000000 |
| | Hours of deviation | 1.76393991 |
| Most Extreme Differences | Absolute | .323 |
| | Positive | .250 |
| | Negative | -.323 |
| Test Statistic | | .323 |
| Asymp. Sig. (2-tailed) | | .070c |
| a. Test distribution is Normal. | | |
| b. Calculated from data. | | |
| c. Lilliefors Significance Correction. | | |

Table 2 shows the results of the normality test using the One-Sample Kolmogorov-Smirnov Test method. Tests were carried out on non-standardized residual data from 80 samples. The normal distribution parameter shows an average value of 0.0000 and a standard deviation of 1.7639. The value of the largest extreme difference consists of an absolute value of 0.323, a positive of 0.250, and a negative value of -0.323. The test statistical value obtained was 0.323 with an asymptomatic significance level (Asymp. Sig. 2-tailed) of 0.070. Using the Lilliefors significance correction, these results show that the residual is normally distributed at a significance level of 5%, since the p-value (0.070) is greater than 0.05.

Table 3 Autocorrelation Test Results

| Model Summary ^b | | | | | |
|---|-------|----------|-------------------|----------------------------|---------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .260a | .168 | .156 | 1.775211202834477 | 1.954 |
| a. Predictors: (Constant), Transformase | | | | | |
| b. Dependent Variable: ROA | | | | | |

Table 3 presents the results of the autocorrelation test by looking at the Durbin-Watson value. The regression model used has an R value of 0.260, which shows that the relationship between independent variables (Transformation) and dependent variables (ROA) is quite weak. An R-Square value of 0.168 indicates that independent variables can explain 16.8% of the variation in dependent variables, while the rest is influenced by other factors outside the model. The slightly lower value of the Adjusted R Square, which is 0.156, indicates that after adjusting for the number of variables in the model, the contribution remains relatively small. The standard error of the estimate is 1.7752, indicating the degree of prediction deviation from the actual data. Meanwhile, the Durbin-Watson value of 1.954 is in the range close to 2, indicating that there is no significant autocorrelation in this regression model.

Table 4 Simple Regression Results

| Coefficients ^a | | | | | |
|----------------------------|--------------|-----------------------------|------------|---------------------------|--------|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t |
| | | B | Std. Error | Beta | |
| 1 | (Constant) | .473 | .465 | | 1.018 |
| | Transformasi | -1.381 | .580 | -.260 | -2.380 |
| a. Dependent Variable: ROA | | | | | |

Table 4 presents the results of a simple regression analysis between the Transformation variable as an independent variable and ROA as a dependent variable. The constant coefficient of 0.473 indicates that if the Transform value is zero, then the ROA prediction value is 0.473. Meanwhile, the regression coefficient for the Transform variable is -1.381, which means that every single unit increase in the Transform will decrease the ROA by 1.381, assuming the other variables remain constant. The t-calculated value for the Transform variable is -2.380 with a significance value of 0.020, which is smaller than 0.05. This shows that Transformation has a significant influence on ROA at a 95% confidence level.

Table 5 Determination Coefficient Results

| Model Summary ^b | | | | |
|---|-------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .260a | .168 | .156 | 1.775211202834477 |
| a. Predictors: (Constant), Transformase | | | | |
| b. Dependent Variable: ROA | | | | |

Table 5 presents the results of the determination coefficient (R Square) which illustrates the extent to which independent variables (Transformations) can explain variations in dependent variables (ROAs). An R-Square value of 0.168 indicates that 16.8% of the variation in ROA can be explained by Transformation, while the remaining 83.2% is influenced by other variables not included in the model. Meanwhile, the Adjusted R Square value of 0.156 indicates a slightly smaller result after adjusting for the number of variables in the model, indicating that the addition of variables in the model can improve the accuracy of the predictions. The Standard Error of the Estimate value of 1.7752 reflects the degree of deviation between the values predicted by the model and the actual values of the data. Overall, the relatively low R-Square value suggests that this simple regression model has a limited ability to explain ROA variations.

4. Conclusion

The results show that digital transformation has a significant negative influence on ROA, with any increase in digital transformation associated with a decrease. These findings indicate that the implementation of digital transformation that is not properly managed can hamper a company's financial performance. However, the results of previous research show that the impact of digital transformation on financial performance can vary depending on the company's internal readiness. The Resource-Based View (RBV) theory explains that companies with adequate resources and capabilities can optimize the benefits of digital transformation, while companies with limited resources may experience a decline in financial performance. Therefore, the readiness of the organization in facing technological changes is a key factor in determining the success of digital transformation. Companies need to design digital transformation strategies with the readiness of resources, infrastructure, and organizational culture in mind to minimize negative impacts on financial performance. In addition, strengthening internal capabilities, both in terms of technology and employee skills, is an important step so that companies can adapt to changes and optimize the benefits of digital transformation. Digital transformation should also be evaluated regularly to ensure that the implementation runs in accordance with business objectives and does not hinder the company's financial performance. For companies with limited resources, digital transformation should be carried out gradually to reduce the risk of operational disruption and negative impacts on profitability. In addition, companies can work with strategic partners or technology providers to get support in the implementation of digital transformation more effectively. With the right approach, companies can optimize digital transformation to improve operational efficiency and competitiveness without sacrificing financial performance in the short term.

Reference

- Abdulquadri, A., Mogaji, E., Kieu, T. A., & Nguyen, N. P. (2021). Digital transformation in financial services provision: a Nigerian perspective to the adoption of chatbot. *Journal of Enterprising Communities*, 15(2), 258–281. <https://doi.org/10.1108/JEC-06-2020-0126>
- Alam, M. M., Ala Eldin Awawdeh, & Azim Izzuddin Bin Muhamad. (2021). Using E-Wallet for Business Process Development: Challenges and Prospects in Malaysia. *Business Process Management Journal*, 27(4), 1142–1162. http://sciotea.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI
- Faza, A. H., Margareta, D., Sakinah, E. A., Pangestuti, I. D. N., Wardani, I. P., Hidayat, R., & Rihidima, L. V. C. (2024). Financial Risk Management in Retail Companies in the Digital Era. *Journal of Management and Business Economics*, 2(2), 311–319.
- Ghezzi, A., & Cavallo, A. (2020). Agile Business Model Innovation in Digital Entrepreneurship: Lean Startup Approaches. *Journal of Business Research*, 110(June), 519–537. <https://doi.org/10.1016/j.jbusres.2018.06.013>
- Gomez-Trujillo, A. M., & Gonzalez-Perez, M. A. (2022). Digital transformation as a strategy to reach sustainability. *Smart and Sustainable Built Environment*, 11(4), 1137–1162.
- Hilali, W. El, & Manouar, A. El. (2019). Towards a sustainable world through a SMART digital Customer

- experience Operational process Business model. *Conference on Networking, Information Systems and Security, Rabat, Morocco, March 2019 (NISS 2019)*, 8.
- Junge, A. L. (2019). Digital Transformation Technologies As an Enabler for Sustainable Logistics and Supply Chain Processes – an Exploratory Framework. *Brazilian Journal of Operations and Production Management*, 16(3), 462–472. <https://doi.org/10.14488/BJOPM.2019.v16.n3.a9>
- Lantip, S. M., & Daljono. (2023). The Effect of Digital Transformation on Financial Performance with Company Size as Moderation. *Diponegoro Journal Of Accounting*, 12(4), 1–11. <https://ejournal3.undip.ac.id/index.php/accounting/article/view/41633%0Ahttps://ejournal3.undip.ac.id/index.php/accounting/article/download/41633/30094>
- Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6), 1129–1157. <https://doi.org/10.1111/isj.12153>
- Matarazzo, M., Penco, L., Profumo, G., & Quaglia, R. (2021). Digital transformation and customer value creation in Made in Italy SMEs: A dynamic capabilities perspective. *Journal of Business Research*, 123(February 2020), 642–656. <https://doi.org/10.1016/j.jbusres.2020.10.033>
- Nurjanah, N. (2024). *The Effect of Digital Transformation and Risk Management on Financial Performance during the Covid-19 Pandemic (Empirical Study on Food and Beverage Sub-Sector Manufacturing Companies Listed on the Indonesia Stock Exchange in 2020-2023)*. UIN Syarif Kasim Riau.
- Rahmawati, L., Rahayu, D. D., Nivanty, H., & Lutfiah, W. (2020). Sharia Fintech: Benefits and Problems of Implementation in MSMEs. *Journal of Masharif Al-Syariah: Journal of Sharia Economics and Banking*, 5(1), 75–90.
- Samsuri, Qamaruddin, M. Y., & Risal, M. (2021). Impact of MSME Effectiveness and Governance on MSME Performance (Case Study: Palopo Msme Post Covid 19). *Jurnal Mantik*, 5(6), 867–873. <https://www.jiemar.org/index.php/jiemar/article/view/406/308>
- Setiowati, R., Hartoyo, Daryanto, H. K., & Arifin, B. (2015). The effects of ICT adoption on marketing capabilities and business performance of Indonesian SMEs in the fashion industry. *Journal of Business and Retail Management Research*, 10(1), 100–115.
- Ueasangkomsate, P. (2015). Adoption E-Commerce for Export Market of Small and Medium Enterprises in Thailand. *Procedia - Social and Behavioral Sciences*, 207, 111–120. <https://doi.org/10.1016/j.sbspro.2015.10.158>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122(January), 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>