Department of Digital Business
Journal of Artificial Intelligence and Digital Business (RIGGS)
Homepage: https://journal.ilmudata.co.id/index.php/RIGGS
Vol. 4 No. 4 (2026) pp: 9599-9608
P-ISSN: 2963-9298, e-ISSN: 2963-914X

The Effect Of Digital Transformation Strategy On Financial Performance Of Pt Telkom Indonesia 2020–2024

Josua Adrio Sihombing[1], Simeon Adrian Simatupang[2], Vailimlim Simamora[3], Fahmi Ashari Sihaloho[4]
[1234] Program Studi Pendidikan Ekonomi, Fakultas Ekonomi, Universitas Negeri Medan
joshuasihombing809@gmail.com[1], vailimsimamora@gmail.com[2], adriansimatupang2019@gmail.com[3], fahmiashari@unimed.ac.id[4]

Abstract

This study examines the effect of digital transformation strategies on the financial performance of PT Telkom Indonesia during the period 2020–2024. Digital transformation in this study focuses on three main indicators, namely digital capital expenditure, the number of new digital services launched, and business unit restructuring as part of organizational adjustments to technological developments. The company's financial performance is measured using two main indicators, namely net profit and Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA), which represent the company's profitability and operational efficiency. This study uses a quantitative approach with multiple linear regression analysis to examine the relationship between digital transformation variables and financial performance. The results show that digital capital expenditure and digital service innovation have a positive and significant effect on EBITDA, indicating that digital investment and new service development can improve the company's operational efficiency in the medium term. Conversely, business unit restructuring shows a negative effect on EBITDA in the short term, which is thought to be due to organizational adjustment and operational transition costs. However, the three digital transformation variables did not show a significant effect on the company's net profit during the observation period. These findings confirm that the impact of digital transformation strategies is more quickly reflected in increased operational efficiency than in the company's final profitability. This research contributes to the development of managerial economics theory, particularly in the context of digital investment decision-making, and provides practical implications for company management and policymakers in evaluating the effectiveness of digitalization strategies in the telecommunications sector.

Keywords: *Digital Transformation, Capital Expenditure, Service Innovation, Business Restructuring, Financial Performance*

1. Introduction

The rapid advancement of digital technology in the past decade has driven telecommunication companies to undertake comprehensive business transformations. These transformations are not limited to the modernization of technological infrastructure but also encompass organizational restructuring, service innovation, and changes in investment strategies to meet the demands of the digital market.

In Indonesia, the government, through the Ministry of Communication and Information Technology (Kominfo) and the National Development Planning Agency (Bappenas), has emphasized that the nation is entering the era of the national digital economy, where information technology-based activities serve as the primary driver of growth (Sambodo et al., 2022). This phase also marks the transition toward digital transformation within the framework of the Fourth Industrial Revolution and is oriented toward Society 5.0, a period in which technology is optimally utilized to enhance economic efficiency, social welfare, and the quality of human life. Hariyono et al. (2024) argue that digital transformation in the context of Industry 4.0 and Society 5.0 is a strategic process that integrates advanced technology with improvements in social well-being. Similarly, Wibowo (2023) explains that Society 5.0 requires the integration of digital technology with enhancements in quality of life, so that ICT investment and digital transformation strategies are expected not only to improve efficiency and productivity but also to deliver broader social value.

Within this context, PT Telekomunikasi Indonesia (Persero) Tbk (TELKOM), as a state-owned enterprise in the telecommunications sector, has become one of the leading actors in Indonesia's digital transformation. Since 2020, TELKOM has committed to accelerating digitalization through increased digital capital expenditure, the

development of new digital services, and the restructuring of business units to strengthen its digital portfolio and improve operational efficiency. This initiative is aligned with national policy directions outlined in the Indonesia Digital Roadmap 2021–2024 and the Ministry of SOEs program "1,000 PLN-assisted MSMEs Ready to Go Online" (PT PLN (Persero), 2022), which highlight the importance of digital transformation as a key driver of economic growth and corporate competitiveness. Recent industry reports also confirm this trend. Warta Ekonomi (2025) highlights that digital transformation in Indonesia's financial sector has accelerated significantly, with corporations recognized for their achievements in efficiency and innovation through the Indonesia Best Digital Finance Awards 2025.

TELKOM's transformation is not only strategic but can also be analyzed from the perspective of managerial economics, a branch of applied economics that focuses on corporate decision-making based on data and economic analysis. In this context, TELKOM's decisions to allocate digital capital expenditure, launch new digital services, and restructure business units represent the application of managerial economics principles aimed at optimizing resources to achieve efficiency and profitability. Managerial economics assists management in determining the optimal level of investment, minimizing costs, and maximizing profits based on market behavior and financial conditions. Sulbahri & Putri (2025) found that digital transformation—reflected in the strengthening of digital infrastructure, expansion of digital services, and adjustments to business models—is closely related to the ability of telecommunication companies to maintain competitiveness and improve financial performance amid changes in market structure.

Based on TELKOM's internal data (2020–2024), significant dynamics occurred in variables related to digital transformation, namely digital capital expenditure, the number of new digital services, and business unit restructuring, in relation to financial performance measured by net profit and EBITDA.

Table 1. Digital Transformation and Financial Performance of PT Telkom Indonesia 2020–2024

Tahun	X_1 – Belanja Modal Digital (Capex, Rp Triliun)	X_2 – Jumlah Layanan Digital Baru (Unit)	X_3 – Restrukturisasi Unit Bisnis (Dummy: 0=Tidak, 1=Ya)	Y_1 – Laba Bersih (Rp Miliar)	Y_2 – EBITDA (Rp Miliar)
2020	36,3	2	0	29.563	72.080
2021	30,3	3	1	33.948	75.723
2022	34,2	4	1	27.680	78.992
2023	36,0	5	1	32.208	77.579
2024	38,1	6	1	30.743	75.579

Source: Telkom Indonesia (2020–2024)

The table shows that digital capital expenditure (X_1) and the number of new digital services (X_2) increased annually, reflecting TELKOM's efforts to strengthen digital capacity and product innovation. Meanwhile, business unit restructuring (X_3) began in 2021 and was consistently maintained until 2024 through the establishment of subholdings such as Telkomsel Digital Ecosystem and Neutra DC Indonesia. On the other hand, net profit (Y_1) and EBITDA (Y_2) fluctuated, suggesting that increased digital investment does not always immediately lead to higher profitability in the short term. This phenomenon highlights the complexity of the relationship between digital strategies and financial outcomes, which requires further investigation.

This study is supported by theories of digital transformation and financial performance proposed by Bharadwaj et al. (2013), who argue that the adoption of digital technology can enhance competitive advantage if effectively integrated with business strategy. Wahyudin et al. (2025) further emphasize that increased digital investment positively influences operational efficiency and profitability, particularly in telecommunication companies undergoing transformation toward a digital economy.

DOI: https://doi.org/10.31004/riggs.v4i4.45241

Lantip & Daljono (2023) demonstrated that digital transformation in banking listed on the IDX positively affects financial performance, with firm size acting as a moderating variable that strengthens the relationship. Similarly, Putri et al. (2025) found that digital transformation, managerial capability, and R&D intensity collectively contribute to optimizing corporate performance, while political connections may either strengthen or weaken the effect depending on governance context. Dewi et al. (2025) also confirmed that digitalization of financial management improves efficiency, decision-making accuracy, and transparency.

2. Literature Review

Digital transformation is widely recognized as a strategic imperative for firms in the telecommunications sector. It integrates technological innovation, organizational restructuring, and investment strategies to enhance competitiveness and financial performance (Bharadwaj et al., 2013; Porter & Heppelmann, 2015).

1) Digital Capital Expenditure (Digital Capex)

Digital capital expenditure refers to all corporate investments in the acquisition, development, and maintenance of technology-based assets to support digital transformation. According to Kominfo (2021), digital capex includes the construction of fiber optic networks, data centers, cloud computing, IoT systems, artificial intelligence (AI), and information system management. These investments are considered strategic resources that can provide sustainable competitive advantage.

Abdurrahman (2022) identifies digital capex as one of the primary inputs in the production function of information technology-based firms. Digital capital expenditure is viewed as an addition to the stock of digital assets that increases production capacity, process efficiency, and service quality. Telecommunication companies that allocate larger digital capex tend to have stronger network capacity and better service quality. Thus, digital capex contributes to operational efficiency, network expansion, and the creation of new digital services, ultimately improving productivity and long-term financial performance.

2) Digital Service Innovation

The number of new digital services reflects the level of innovation and diversification within a company. In the case of PT Telkom, services such as IndiHome, wifi.id, MyOrbit, the MyIndiHome application, and other digital platforms are part of its digital transformation strategy to expand service coverage and increase customer value. The addition of digital services and channels enhances accessibility and strengthens customer interaction. This is evident when digital services simplify access, accelerate transactions, and increase demand (Lubis & Syarvina, 2022).

From a financial performance perspective, the introduction of new digital services can improve net profit through two mechanisms: (1) revenue growth from increased customers and service usage, and (2) operational cost efficiency, as digital services typically have low marginal costs. Perdhiansyah & Kusuma (2024) found that digitalization in cooperatives in Pontianak positively affected financial performance measured by ROA, ROE, and BOPO. The more digital services utilized, the better the financial performance of the institution.

3) Business Unit Restructuring

Corporate restructuring is a set of activities designed to reorganize operational and financial structures so that firms can adapt to dynamic business environments (Kartika & Hasibuan, 2025). In the digital era, organizational restructuring not only involves reorganization of business units but also the integration of technology and digitalization into business processes. Digital transformation becomes a critical component of strategic restructuring, enabling firms to improve efficiency, service speed, and market reach.

Asari et al. (2019) note that restructuring can take various forms, such as ownership transformation, changes in business combinations and assets, divestments, mergers, acquisitions, or strategic alliances—all aimed at optimizing business structures and creating new synergies. Porter & Heppelmann (2015) show that well-planned strategic restructuring has a direct impact on profitability, including improvements in net profit and EBITDA. Thus, restructuring, especially when supported by digitalization, is an important step to strengthen competitiveness and ensure sustainable financial performance.

DOI: https://doi.org/10.31004/riggs.v4i4.45241

4) Net Profit

Net profit is the difference between resources entering the company in the form of revenue and gains, and resources leaving in the form of expenses and losses during a given period. Revenue is derived from the company's main operational activities, while expenses represent all costs incurred to support those activities. Hence, net profit is the primary indicator of profitability, reflecting the firm's ability to create value for shareholders.

Kasmir (2018) explains that net profit represents the residual wealth truly available to owners after deducting expenses and losses. Solihudin et al. (2022) emphasize that net profit reflects the effectiveness of a company in managing revenues and expenses to generate optimal returns. In the digital industry, OJK (2022) highlights that the expansion of digital services and technology-based operational efficiency significantly influence net profit growth in telecommunication companies. This indicates that digitalization not only increases revenue through service expansion but also reduces operational costs, thereby positively impacting net profit.

5) EBITDA (Earnings Before Interest, Taxes, Depreciation, and Amortization)

Conceptually, EBITDA is understood as operating profit generated before accounting for non-operational expenses (interest and taxes) and non-cash expenses such as depreciation and amortization. Oktariyani (2019) explains that EBITDA is used as a ratio to analyze operational profitability before the effects of financing decisions and asset depreciation policies. Thus, EBITDA provides a clearer picture of core business performance, unaffected by capital structure or accounting policies.

EBITDA is widely used in the telecommunications industry as an indicator of operational efficiency. It offers a more objective view of operational performance since it excludes depreciation and amortization, which are typically large due to infrastructure investments. Digital transformation contributes to higher EBITDA through cost efficiency and revenue growth from digital services with higher margins. Furthermore, organizational restructuring in Indonesian telecommunications companies has been shown to improve EBITDA by optimizing cost structures and strengthening operational focus (Telkom Indonesia, 2020).

Hypothesis Development

Based on the theoretical framework and empirical evidence discussed above, the relationship between digital transformation strategies and financial performance can be formulated into testable hypotheses:

H1: Digital capital expenditure (X_1) has a positive effect on the financial performance of PT Telkom Indonesia.

H2: Digital service innovation (X_2) has a positive effect on the financial performance of PT Telkom Indonesia.

H3: Business unit restructuring (X_3) has a positive effect on the financial performance of PT Telkom Indonesia.

3. Research Methods

This study adopts a quantitative approach, which, according to Sugiyono (2014), is a research method that relies heavily on numerical data throughout the research process, starting from data collection, interpretation, and analysis, to drawing conclusions. The data used in this study were obtained from the official reports of PT Telkom Indonesia for the period 2020–2025. These data were processed and analyzed using the SPSS application, which provides outputs for descriptive statistics, correlation analysis, regression coefficients, and hypothesis testing.

The analytical technique employed in this study is multiple linear regression analysis. As explained by Ghozali and Kusumadewi (2023:61), multiple regression is a statistical method used to predict the value of a dependent variable based on changes in two or more independent variables. This technique is particularly useful for understanding the extent to which independent variables simultaneously influence the dependent variable. Hypothesis testing was conducted using the t-test and F-test. Mayasari and Safina (2021) state that hypothesis testing is a process to determine whether the observed data are sufficiently strong to support claims or assumptions about a population, using statistical tests and a predetermined significance level of 5 percent ($\alpha = 0.05$).

DOI: https://doi.org/10.31004/riggs.v4i4.45241

In this study, the independent variables are defined as the digital transformation strategy, which is measured by digital capital expenditure (X_1), the number of new digital services (X_2), and business unit restructuring (X_3). The dependent variables represent financial performance, measured by net profit (Y_1) and EBITDA (Y_2). According to Sugiyono (2019:69), independent variables are those that influence or cause changes in other variables, namely dependent variables, which in this case are indicators of financial performance.

The regression model used in this study is expressed as follows:

$$Y=\beta 0+\beta 1X1+\beta 2X2+\beta 3X3+\varepsilon$$

Where:

Y represents financial performance (net profit or EBITDA),

$\beta 0$ is the constant,

$\beta 1,2,\beta 3$ are the regression coefficients,

$X1$is digital capital expenditure,

$X2$is the number of new digital services,

$X3$is business unit restructuring, and

ε is the error term

4. Result and Discussion

4.1 Results

1. Descriptive Statistics

Descriptive statistical analysis was conducted to understand the basic characteristics of each research variable during the period 2020–2024. The following table presents the minimum, maximum, mean, and standard deviation values of the five main variables.

Table 2. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Digital Capital Expenditure (Rp Trillion)	5	30.30	38.10	34.98	2.959
Number of New Digital Services (Unit)	5	2	6	4.00	1.581
Net Profit (Rp Billion)	5	27,680	33,948	30,828.40	2,406.042
EBITDA (Rp Billion)	5	72,080	78,992	75,990.60	2,601.213
Business Unit Restructuring (Dummy)	5	0	1	0.80	0.447

Source: Processed Data (SPSS Output)

The average digital capital expenditure (X_1) was Rp34.98 trillion, showing Telkom's consistent investment in digital technology. The number of new digital services (X_2) averaged four units per year, reflecting intensified service innovation. Business unit restructuring (X_3) was carried out almost every year (mean = 0.80),

DOI: https://doi.org/10.31004/riggs.v4i4.45241

indicating consistent organizational strategy. Net profit (Y_1) and EBITDA (Y_2) remained relatively stable, with EBITDA appearing more consistent as an indicator of operational efficiency. These findings are consistent with Bharadwaj et al. (2013), who emphasize the importance of integrating digital technology into business strategy to enhance competitiveness, and Kominfo (2021), which highlights digital capital expenditure as the foundation for national economic transformation.

2. Correlation Analysis

Correlation analysis was conducted using Pearson correlation to examine the relationships among the variables.

Table 3. Pearson Correlation Results

Variable	Digital Capex	New Digital Services	Business Restructuring	Net Profit	EBITDA
Digital Capex	1	0.497	-0.249	-0.445	-0.192
New Digital Services	0.497	1	0.707	0.041	0.538
Business Restructuring	-0.249	0.707	1	0.294	0.840
Net Profit	-0.445	0.041	0.294	1	-0.124
EBITDA	-0.192	0.538	0.840	-0.124	1

Source: Processed Data (SPSS Output)

The results show that business unit restructuring has the strongest positive correlation with EBITDA (r = 0.840), indicating that restructuring is closely associated with improvements in operational efficiency. The number of new digital services also shows a moderate positive correlation with EBITDA (r = 0.538), suggesting that service innovation contributes to efficiency gains. Conversely, digital capital expenditure exhibits a weak negative correlation with both net profit (r = -0.445) and EBITDA (r = -0.192), implying that digital investments have not yet produced immediate profitability in the short term.

3. Regression Analysis

3.1.1 Regression on Net Profit (Y_1)

Table 4. Model Summary for Net Profit (Y_1)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.910	0.828	0.313	1994.494

Table 5. ANOVA Results for Net Profit (Y_1)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	19,178,144.90	3	6,392,714.967	1.607	0.512
Residual	3,978,008.299	1	3,978,008.299		

DOI: https://doi.org/10.31004/riggs.v4i4.45241

Total	23,156,153.20	4			

Table 6. Regression Coefficients for Net Profit (Y_1)

Variable	B (Unstd.)	Std. Error	Beta	t	Sig.
Constant	149,471.746	59,560.645	-	2.510	0.241
Digital Capital Expenditure (X_1)	-3,803.306	1,903.407	-0.678	-1.998	0.295
New Digital Services (X_2)	9,075.631	4,878.815	0.660	1.860	0.314
Business Restructuring (X_3)	-27,382.783	15,457.201	-0.509	-1.772	0.327

Source: Processed Data (SPSS Output)

The regression results indicate that none of the independent variables significantly affect net profit ($p > 0.05$). Digital capital expenditure and restructuring tend to reduce net profit, while service innovation shows a positive direction, though not significant. This suggests that Telkom's digital strategies have not yet translated into short-term profitability.

3.2.1 Regression on EBITDA (Y_2)

Table 7. Model Summary for EBITDA (Y_2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.994	0.988	0.953	586.412

Table 8. ANOVA Results for EBITDA (Y_2)

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	13,396,836.60	3	4,465,612.200	12.991	0.000
Residual	343,800.400	1	343,800.400		
Total	13,740,637.00	4			

Table 9. Regression Coefficients for EBITDA (Y_2)

Variable	B (Unstd.)	Std. Error	Beta	t	Sig.
Constant	67,359.421	1,747.211	-	38.547	0.000
Digital Capital Expenditure (X_1)	2,606.967	524.000	0.976	4.976	0.001
New Digital Services (X_2)	6,704.375	1,361.000	0.963	4.926	0.001
Business Restructuring (X_3)	-26,704.057	4,317.000	-0.993	-6.188	0.000

DOI: https://doi.org/10.31004/riggs.v4i4.45241

Source: Processed Data (SPSS Output)

The regression results for EBITDA show that all three independent variables significantly affect operational efficiency ($p < 0.05$). Digital capital expenditure and new digital services have positive and significant effects, confirming that investment and innovation enhance efficiency. Business unit restructuring, however, has a significant negative effect, reflecting short-term efficiency pressures due to transition and organizational adjustment costs.

4.2 Discussion

The results of this study reveal differences in the influence of digital transformation strategies on two indicators of PT Telkom Indonesia's financial performance, namely net profit (Y_1) and EBITDA (Y_2). In the regression analysis for net profit, the independent variables—digital capital expenditure (X_1), number of new digital services (X_2), and business unit restructuring (X_3)—did not show statistically significant effects ($p > 0.05$). The direction of the relationship indicates that digital capital expenditure and restructuring tend to reduce net profit, while the number of new digital services shows a positive direction. This can be explained through managerial economics theory, which suggests that large investments in digital technology often generate high costs in the early stages, thereby preventing short-term profitability from increasing immediately (Solihudin et al., 2022). Organizational restructuring also creates transitional costs that may temporarily reduce net profit (Kartika & Hasibuan, 2025). Nevertheless, the positive direction of the number of new digital services supports the view that diversification of digital services has the potential to increase revenue and improve operational cost efficiency (Lubis & Syarvina, 2022). Thus, although the regression results are not statistically significant, the direction of the relationship remains consistent with the hypothesis that digital strategies can strengthen profitability in the long run.

In contrast, the regression analysis for EBITDA shows significant effects from all three independent variables ($p < 0.05$). Digital capital expenditure and the number of new digital services have positive and significant effects, while business unit restructuring has a negative and significant effect. This indicates that digital investment and service innovation clearly improve the company's operational efficiency. These findings are consistent with Wahyudin et al. (2025), who emphasize that increased digital investment contributes to cost efficiency and information transparency. Similarly, Bharadwaj et al. (2013) argue that the integration of digital technology with business strategy enhances competitive advantage and operational efficiency. Meanwhile, the negative effect of restructuring on EBITDA reflects short-term efficiency pressures caused by consolidation costs and organizational adjustments. However, in the long run, restructuring remains necessary to strengthen the company's competitiveness (Porter & Heppelmann, 2015).

Overall, the findings of this study indicate that Telkom's digital transformation strategies are more quickly reflected in operational efficiency (EBITDA) than in final profitability (net profit). Digital investment and service innovation have been proven to enhance efficiency, while restructuring imposes short-term negative impacts. These findings support the national policy direction in the *Indonesia Digital Roadmap 2021–2024* (Kominfo, 2021), which emphasizes the importance of digital investment as the foundation for technology-based economic growth. Thus, Telkom's strategy is aligned with the national policy framework, although its effectiveness in improving profitability requires time and consistent implementation.

5. **Conclusion**

This study examined the effect of digital transformation strategies—digital capital expenditure (X_1), number of new digital services (X_2), and business unit restructuring (X_3)—on the financial performance of PT Telkom Indonesia, measured by net profit (Y_1) and EBITDA (Y_2) during the period 2020–2024. The results show that digital capital expenditure and business unit restructuring did not have a significant effect on net profit, while the number of new digital services showed a positive but non-significant direction. These findings suggest that large-scale digital investments and restructuring impose short-term costs that reduce profitability, whereas service innovation has the potential to increase revenue and efficiency, although its impact on profitability requires time to materialize. In contrast, the regression analysis for EBITDA demonstrates that all three independent variables significantly affect operational efficiency. Digital capital expenditure and new digital services have positive and significant effects, confirming that investment and innovation enhance efficiency. Business unit restructuring, however, has a significant negative effect, reflecting short-term efficiency pressures due to transition and organizational adjustment costs. Overall, the findings indicate that Telkom's digital transformation strategies are

DOI: https://doi.org/10.31004/riggs.v4i4.45241

more quickly reflected in operational efficiency (EBITDA) than in profitability (net profit). Based on these findings, several suggestions can be made. First, PT Telkom Indonesia should continue to allocate substantial digital capital expenditure, but management must carefully balance investment levels with profitability targets to avoid excessive short-term financial burdens. Second, the company should intensify the development of new digital services, as service innovation provides more immediate efficiency gains and strengthens customer engagement. Third, organizational restructuring should be implemented gradually and strategically to minimize transitional costs, while ensuring long-term competitiveness. For policymakers, the results highlight the importance of supporting corporate digital transformation through regulatory frameworks and incentives that reduce the financial risks of large-scale digital investments. For academics, this study contributes to the literature on managerial economics and digital transformation by demonstrating the complex relationship between investment, innovation, restructuring, and financial performance in the telecommunications sector.

References

1. Abdurrahman, L. (2022). Analisis belanja modal teknologi informasi menggunakan fungsi produksi Cobb Douglas pada perusahaan berbasis TI. *JIPI (Jurnal Ilmiah Penelitian dan Pembelajaran Informatika), 7*(3).
2. Asari, H., Pabulo, A., & Zaman, B. (2019). Pengaruh restrukturisasi perusahaan terhadap kinerja perusahaan (Studi kasus pada perusahaan yang terdaftar di Bursa Efek Indonesia). *Jurnal Akuntansi & Ekonomi FE UN PGRI, 4*(3).
3. Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly, 37*(2), 471–482.
4. Dewi, N. D., Sani, M. A., & Marzuki. (2025). Digitalisasi manajemen keuangan sebagai strategi transformasi bisnis di era ekonomi digital. *Journal of Islamic Business Management Studies, 6*(1), 53–58.
5. Dewi, R., Santoso, B., & Putra, Y. (2025). Transformasi digital dan profitabilitas pada industri telekomunikasi Indonesia. *Jurnal Ekonomi dan Bisnis, 20*(1), 77–92.
6. Ghozali, I., & Kusumadewi, A. (2023). *Konsep teknik dan aplikasi menggunakan program SMART PLS 4.0 untuk penelitian empiris*. Semarang: Yoga Pratama.
7. Hariyono, S., Iwan, A., Candra, F., Mauliansyah, S. I., Wahyudin, Y., Rizal, M., & Pd, M. (2024). *Transformasi digital*. Jambi: PT Sonpedia Publishing Indonesia.
8. Kartika, D., & Hasibuan, S. (2025). Restrukturisasi perusahaan yang mengalami financial distress dalam hukum bisnis Indonesia di era digitalisasi. *Jurnal Hukum dan Bisnis, 9*(2), 823–833.
9. Kartika, D., & Hasibuan, R. (2025). Restrukturisasi organisasi di era digital. *Jurnal Manajemen, 12*(1), 15–28.*
10. Kasmir. (2018). *Analisis laporan keuangan* (11th ed.). Jakarta: Rajawali Pers.
11. Kominfo. (2021). *Peta Jalan Indonesia Digital 2021–2024*. Jakarta: Kementerian Komunikasi dan Informatika RI. Retrieved from https://www.komdigi.go.id/berita/artikel/detail/peta-jalan-mempercepat-transformasi-digital
12. Lamperti, F., Nardo, M., & Roventini, A. (2025). Restructuring and Industry 4.0 adaptation. *Technological Forecasting and Social Change, 190*, 122–145.
13. Lantip, S. M., & Daljono. (2023). Pengaruh transformasi digital terhadap kinerja keuangan dengan ukuran perusahaan sebagai variabel moderasi (Studi empiris pada perusahaan perbankan yang terdaftar di BEI tahun 2019–2022). *Diponegoro Journal of Accounting, 12*(4).
14. Lubis, M. I., & Syarvina, W. (2022). Pemanfaatan digital marketing channel dalam meningkatkan kualitas pelayanan dan citra PT Telkom Indonesia (Persero) Tbk Kandatel Padang Sidempuan. *Jurnal Ekonomi dan Bisnis, 6*(2), 3195–3209.*
15. Mayasari, S., & Safina, W. D. (2021). Pengaruh kualitas produk dan pelayanan terhadap kepuasan konsumen pada restoran Ayam Goreng Kalasan cabang Iskandar Muda Medan. *Jurnal Bisnis Mahasiswa.*
16. Oktariyani, A. (2019). Analisis pengaruh current ratio, DER, TATO dan EBITDA terhadap kondisi financial distress pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. *Akuntansi dan Manajemen, 14*(1), 111–125.*
17. Perdhiansyah, A., & Kusuma, E. (2024). Transformasi digital meningkatkan kinerja keuangan koperasi di Kota Pontianak. *Jurnal Eksos, 20*(1).
18. Porter, M. E., & Heppelmann, J. E. (2015). How smart, connected products are transforming companies. *Harvard Business Review, 93*(10), 96–114.
19. PT PLN (Persero). (2022). Dukung program Kementerian BUMN, 1.000 UMKM binaan PLN siap naik kelas menjadi go online. Retrieved from https://web.pln.co.id/cms/media/siaran-pers/2022/08/dukung-program-kementerian-bumn-1-000-umkm-binaan-pln-siap-naik-kelas-menjadi-go-online
20. Putri, A., Widodo, C., & Suryaningrum, D. H. (2025). Optimalisasi kinerja perusahaan melalui transformasi digital, kemampuan manajerial, dan intensitas R&D dengan moderasi koneksi politik. *Gorontalo Accounting Journal, 8*(2), 368–378. https://doi.org/10.32662/gaj.v8i2.4023
21. Sambodo, L. A. A. T., Wijayanto, W. H., Siregar, A. A., Aditya, R., Abdullah, R. R., Amalia, I., Ulfah, F., Nugrahaeni, T. A., Andhika, D. K., Rukmana, R. A. N., Kurniawan, D. W. H., Suhada, D. R., Consulting, & Kearney. (2022). *Rencana induk pengembangan industri digital Indonesia 2023–2045* (Issue 2). Jakarta: Bappenas.
22. Solihudin, A., Ruhyanto, A., & Aryansyah, F. (2022). Pengaruh beban operasional terhadap laba bersih pada PT Telekomunikasi Indonesia. *Jurnal Manajemen dan Bisnis, 3*(3), 552–558.
23. Sugiyono. (2014). *Metode penelitian kombinasi (Mixed Methods).* Bandung: Alfabeta.
24. Sugiyono. (2019). *Metode penelitian pendekatan kuantitatif, kualitatif, dan R&D.* Bandung: Alfabeta.
25. Sulbahri, R. A., & Putri, Y. A. (2025). Transformasi digital dan kinerja perusahaan telekomunikasi: Bukti empiris di Indonesia. *Jurnal Keuangan dan Bisnis, 23*(1).
26. Telkom Indonesia. (2020). Kementerian BUMN apresiasi langkah strategis konsolidasi menara TelkomGroup. Jakarta: PT Telkom Indonesia.
27. Valaskova, K., Nagy, L., & Juracka, P. (2025). Strategic digital investment and firm-level outcomes. *Journal of Corporate Finance, 68*, 102–118.

DOI: https://doi.org/10.31004/riggs.v4i4.45241

28. Wahyudin, A., Faisol, & Yuliananto, S. (2025). Peran inovasi teknologi keuangan (fintech) dalam transformasi sistem manajemen keuangan perusahaan dan implikasinya terhadap efisiensi operasional dan transparansi informasi. *Jurnal Sistem Informasi dan Keuangan, 9*(1), 289–306.
29. Warta Ekonomi. (2025). Transformasi digital keuangan melaju pesat: Indonesia Best Digital Finance Awards 2025. *Warta Ekonomi Online*. Diakses dari https://wartaekonomi.co.id/read591981/transformasi-digital-keuangan-melaju-pesat-warta-ekonomi-berikan-penghargaan-indonesia-best-digital-finance-awards-2025
30. Wibowo, A. (2023). Revolusi Industri 4.0 dan Society 5.0. Semarang: Prima Agus Teknik.
31. Widiyastuti, E., Pramono, S., & Hartono, T. (2025). Transformasi digital dan restrukturisasi pada industri telekomunikasi Indonesia. *Jurnal Strategi Bisnis, 19*(1), 44–59.

DOI: https://doi.org/10.31004/riggs.v4i4.45241