

A Comparative Analysis of Financial Management and Profitability between Digital Ecosystem-Based Retail Companies and Conventional Retail Companies Listed on the Indonesia Stock Exchange (IDX)

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Abstract: The development of digital ecosystems has transformed the competitive landscape of the retail sector in Indonesia, raising questions about which business model excels in financial management and profitability. This study aims to analyze and compare the financial management performance and profitability levels of digital ecosystem-based retail companies versus conventional retail companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 period. A comparative quantitative approach using purposive sampling was employed, resulting in a sample of six companies (three digital ecosystem issuers: BELI, BUKA, GOTO; and three conventional issuers: AMRT, LPPF, HERO), yielding 18 panel data observations. Financial management was measured via cash turnover, inventory turnover, and the operating expense ratio (BOPO), while profitability was measured via Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). Data were analyzed using the Independent Sample T-test following the Kolmogorov-Smirnov normality test and Levene's homogeneity test. The results indicate significant differences (Sig. 0.000 < 0.05) across all tested indicators. Digital retailers outperformed in cash and inventory turnover speeds but lagged significantly in operating cost efficiency (average BOPO of 118.60% compared to 92.10% for conventional retailers). Regarding profitability, conventional retailers consistently recorded positive ROA, ROE, and NPM, whereas digital retailers remained in a net loss position. These findings indicate that the working capital efficiency advantage of digital ecosystems has not yet translated into net profitability, consistent with a U-shaped relationship pattern observed during the early stages of digital transformation.

Keywords: Financial Management; Profitability; Digital Ecosystem; Conventional Retail; Indonesia Stock Exchange.

1. Introduction

The rapid advancement of digital technology has fundamentally transformed the global retail industry, shifting competition from traditional brick-and-mortar operations toward integrated digital ecosystem-based business models. The emergence of e-commerce platforms, digital payment systems, logistics integration, artificial intelligence, and big data analytics has redefined how retailers create value, manage operations, and interact with consumers (Wang et al., 2021). According to eMarketer (2024), online retail sales accounted for more than 22% of global retail transactions, with Southeast Asia emerging as one of the fastest-growing digital commerce markets. Indonesia, as the largest digital economy in Southeast Asia, has experienced substantial growth in digital retail activities driven by increasing internet penetration, smartphone adoption, and government support for digital transformation. Consequently, the Indonesian retail industry is currently characterized by the coexistence of two dominant business models: conventional retailers relying primarily on physical store networks and digital ecosystem-based retailers operating through integrated online platforms.

This transformation has altered not only marketing strategies and consumer behavior but also the financial management structure of retail companies. Conventional retailers typically allocate substantial financial resources to physical assets, inventory management, store maintenance, and labor costs. Their operational performance largely depends on efficient inventory turnover, physical distribution systems, and stable customer traffic. In contrast, digital ecosystem-based retailers emphasize investments in technological infrastructure, cloud computing, cybersecurity, software

development, platform integration, digital marketing, and customer acquisition. These differences create fundamentally distinct financial management strategies and cost structures, ultimately affecting corporate profitability and financial sustainability (Theiri & Hadoussa, 2024).

Financial management plays a strategic role in determining organizational competitiveness because it governs the allocation, utilization, and control of financial resources to maximize shareholder value. Effective financial management enables firms to optimize working capital, improve operational efficiency, and enhance profitability. In retail industries, financial management is commonly reflected through indicators such as cash turnover, inventory turnover, and operational expense efficiency, all of which directly influence the firm's ability to generate sustainable profits (Utami & Wijaya, 2023). Meanwhile, profitability remains one of the most important indicators used by investors and other stakeholders to evaluate company performance because it reflects management's capability to convert resources into earnings. Financial ratios such as Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM) therefore become essential measures for assessing financial performance across different retail business models.

Although digital ecosystem-based retailers possess significant advantages in operational flexibility and customer reach, recent financial reports reveal an interesting paradox. Several Indonesian digital retail companies, including PT GoTo Gojek Tokopedia Tbk., PT Bukalapak.com Tbk., and PT Global Digital Niaga Tbk., continue to report accounting losses despite experiencing rapid revenue growth and increasing transaction volumes. Conversely, conventional retailers such as PT Sumber Alfaria Trijaya Tbk., PT Matahari Department Store Tbk., and PT Hero Supermarket Tbk. consistently generate positive earnings despite operating within a more mature and relatively slower-growing market environment. This phenomenon raises important questions regarding whether the efficiency achieved through digital ecosystems has successfully translated into superior financial performance or whether traditional retail models remain financially more sustainable under current market conditions.

Previous studies have produced inconsistent findings regarding the relationship between digital transformation, financial management, and profitability. Pratama (2022) reported that digital retailers exhibit superior inventory turnover due to integrated inventory management systems and real-time demand forecasting. Similarly, Sari and Hidayat (2023) concluded that digital ecosystems improve operational efficiency by reducing transaction costs and accelerating business processes. Gómez-Trujillo and González-Pérez (2022) further argued that digital transformation enhances organizational agility and working capital management, thereby strengthening long-term financial competitiveness. These findings suggest that digitalization contributes positively to financial efficiency through technological integration.

However, other empirical evidence presents contrasting conclusions. Wulandari (2021) found that although digital retailers experience rapid revenue growth, they tend to record lower net profit margins because of substantial customer acquisition costs and aggressive promotional expenditures. Likewise, Hidayat (2024) demonstrated that digital companies continue to face high operational expense ratios due to continuous investments in technology infrastructure and digital marketing. Shinta Bella et al. (2024) also emphasized that digital transformation often increases operational complexity and cost burdens during its early implementation stages, reducing short-term profitability despite improvements in operational efficiency. These contradictory findings indicate that digital transformation may simultaneously improve financial management efficiency while weakening short-term profitability.

At the international level, Nguyen-Thi-Huong et al. (2023) introduced the concept of a U-shaped relationship between digital transformation and financial performance. Their study demonstrated that companies frequently experience declining profitability during the initial phase of digital transformation because technological investments exceed immediate financial returns. Profitability

subsequently improves only after firms achieve economies of scale and ecosystem maturity. Similarly, Wang et al. (2021) argued that digital platform ecosystems create long-term competitive advantages by strengthening customer engagement and operational integration, although financial benefits generally materialize only after significant technological investments have been absorbed.

Despite the growing body of literature, several important research gaps remain. First, most previous studies examine digital transformation as an independent variable affecting financial performance rather than directly comparing financial management and profitability between digital ecosystem-based retailers and conventional retailers within the same industrial sector. Consequently, existing evidence provides limited understanding of whether differences in business models inherently produce different financial outcomes. Second, many prior studies focus exclusively on profitability indicators while overlooking financial management variables such as cash turnover, inventory turnover, and operational expense efficiency that may explain why profitability differs across business models. Third, empirical studies investigating Indonesian listed retail companies after the post-pandemic digital acceleration remain relatively scarce, particularly those using the latest financial information covering the 2023–2025 period. Given that digital transformation accelerated substantially following the COVID-19 pandemic, updated empirical evidence is required to capture recent structural changes within Indonesia's retail industry.

This study addresses these research gaps by conducting a comparative analysis of financial management and profitability between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange (IDX). Unlike previous studies, this research classifies retail companies according to their operational business models rather than merely their industrial sector, thereby providing a more accurate comparison of financial characteristics. Furthermore, this study simultaneously evaluates financial management through cash turnover, inventory turnover, and operational expense ratio (BOPO), alongside profitability measured by ROA, ROE, and NPM. This comprehensive approach enables a deeper understanding of how differences in operational structures influence overall financial performance.

From a theoretical perspective, this study is grounded in Signalling Theory and the Resource-Based View (RBV). Signalling Theory explains that financial statements serve as important signals to investors regarding corporate quality and future prospects. Conventional retailers generally signal financial stability through consistent earnings and dividend distributions, whereas digital retailers often signal future growth potential despite experiencing current accounting losses. Meanwhile, RBV suggests that sustainable competitive advantage depends on valuable, rare, inimitable, and organizationally embedded resources. Digital retailers rely primarily on technological assets, integrated digital ecosystems, consumer databases, and platform capabilities, whereas conventional retailers leverage physical store networks, established brand reputation, and supply chain efficiency. These theoretical perspectives provide an appropriate framework for explaining differences in financial management and profitability between the two retail business models.

The novelty of this study lies in three important aspects. First, it introduces a business-model-based classification by distinguishing listed retail companies into digital ecosystem-based retailers and conventional retailers rather than treating the retail sector as homogeneous. Second, it integrates financial management efficiency indicators and profitability indicators within a single comparative framework, allowing a more comprehensive assessment of financial performance differences. Third, it provides updated empirical evidence from Indonesian listed companies during the 2023–2025 period, reflecting the post-pandemic digital transformation era and contributing new insights into the financial consequences of digital ecosystem adoption.

Based on the background, theoretical foundation, and identified research gaps, this study aims to analyze and compare financial management and profitability between digital ecosystem-based retail

companies and conventional retail companies listed on the Indonesia Stock Exchange during the 2023–2025 period. Specifically, this research investigates whether significant differences exist in cash turnover, inventory turnover, operational expense efficiency, Return on Assets, Return on Equity, and Net Profit Margin across the two business models. The findings are expected to contribute to the development of comparative financial management literature, provide practical implications for corporate managers in designing sustainable financial strategies, and assist investors in making more informed investment decisions within Indonesia's rapidly evolving retail industry.

2. Literature Review

2.1 Signalling Theory

Signalling Theory, originally proposed by Spence (1973), explains that companies disclose information to reduce information asymmetry between managers and external stakeholders, particularly investors. Financial reports constitute one of the most credible signals because they communicate managerial performance, operational efficiency, and future business prospects. In capital markets, investors interpret profitability, liquidity, and operational efficiency as indicators of firm quality, influencing investment decisions and firm valuation. Within the retail industry, signalling becomes increasingly important as companies operate under different business models. Conventional retailers typically send positive market signals through stable earnings, consistent dividend distributions, and predictable operating performance. Conversely, digital ecosystem-based retailers frequently communicate future growth opportunities by investing aggressively in technology, platform expansion, and customer acquisition despite experiencing temporary accounting losses. Investors often interpret these investments as signals of future competitive advantage rather than indicators of poor managerial performance. Recent studies suggest that digital transformation changes the nature of corporate signalling. Rather than emphasizing short-term profitability, digital firms increasingly communicate long-term ecosystem value through user growth, transaction volume, digital engagement, and platform scalability (Theiri & Hadoussa, 2024). Therefore, differences in financial management and profitability between digital and conventional retailers can be interpreted through differences in signalling strategies directed toward capital market participants.

2.2 Resource-Based View (RBV)

The Resource-Based View (RBV), developed by Barney (1991), argues that sustainable competitive advantage originates from valuable, rare, inimitable, and non-substitutable (VRIN) resources. Companies possessing superior strategic resources are more capable of generating long-term financial performance than competitors relying solely on tangible assets. In the retail sector, strategic resources differ substantially between digital ecosystem-based companies and conventional retailers. Conventional retailers primarily depend on physical assets, including store networks, logistics facilities, inventory systems, supplier relationships, and brand reputation developed over decades. Meanwhile, digital retailers derive competitive advantage from technological capabilities, digital platforms, artificial intelligence, consumer databases, integrated payment systems, and network effects generated through ecosystem interactions.

Recent literature indicates that technological resources improve operational flexibility, inventory management, customer relationship management, and supply chain integration (Gómez-Trujillo & González-Pérez, 2022). However, these strategic resources also require substantial investments in software development, cloud infrastructure, cybersecurity, and continuous innovation, creating considerable financial burdens during the early stages of ecosystem development (Nguyen-Thi-Huong et al., 2023). Consequently, RBV provides a theoretical explanation for why digital retailers may achieve superior working capital efficiency while simultaneously experiencing lower profitability.

2.3 Financial Management in the Retail Industry

Financial management refers to managerial activities involving planning, allocating, controlling, and evaluating financial resources to maximize corporate value. Within retail industries, financial management is particularly important because business operations involve intensive inventory management, cash flow control, supplier financing, and operational cost management. Retail companies generally evaluate financial management through several operational efficiency indicators. Cash Turnover measures the effectiveness of cash utilization in generating sales revenue. Higher cash turnover indicates better liquidity management and shorter cash conversion cycles. Inventory Turnover reflects the speed with which inventory is converted into sales, representing inventory management efficiency and demand forecasting capability. Meanwhile, the Operating Expense Ratio (BOPO) measures operational cost efficiency by comparing operating expenses with operating revenues.

Digital ecosystem-based retailers generally achieve higher cash turnover because transactions are conducted electronically with minimal receivable periods. Integrated inventory systems supported by real-time analytics also enable faster inventory movement and demand forecasting. Nevertheless, digital firms usually incur significantly higher operating expenses associated with software development, cloud services, cybersecurity, platform maintenance, and digital marketing. In contrast, conventional retailers often experience slower inventory rotation but maintain relatively more stable operating cost structures because physical operational expenditures are predictable and supported by established business processes (Utami & Wijaya, 2023). Therefore, differences in business models are expected to generate different patterns of financial management performance across retail companies.

2.4 Profitability in Retail Companies

Profitability represents a firm's capability to generate earnings from available resources and is widely recognized as the primary indicator of financial performance. Investors rely heavily on profitability measures because they directly reflect management effectiveness in utilizing assets, equity, and operating activities to create shareholder value. This study measures profitability using three widely accepted financial ratios. Return on Assets (ROA) evaluates the effectiveness of asset utilization in generating net income. Return on Equity (ROE) measures management performance in generating returns for shareholders based on invested equity. Net Profit Margin (NPM) reflects operational efficiency by measuring the proportion of net income generated from total sales. Previous studies provide mixed evidence regarding profitability differences between digital and conventional retailers. Digital companies generally demonstrate rapid revenue growth but often report negative ROA, ROE, and NPM because substantial investments in technological infrastructure and customer acquisition reduce short-term earnings (Shinta Bella et al., 2024). Conversely, conventional retailers typically generate lower revenue growth but maintain relatively stable profitability due to mature business operations and efficient cost management (Lestari, 2024). The coexistence of these contrasting profitability patterns motivates further comparative investigation within Indonesia's retail industry.

2.5 Digital Ecosystem-Based Retail versus Conventional Retail

Digital ecosystems represent interconnected business environments integrating consumers, merchants, logistics providers, financial institutions, and digital platforms into a unified operational network. Rather than functioning merely as online stores, digital ecosystem-based retailers coordinate multiple complementary services, including payment systems, delivery services, cloud technology, customer analytics, and marketplace operations. Compared with conventional retailers, digital ecosystem companies generally possess several operational advantages, including lower physical asset dependency, broader geographic market access, real-time transaction processing, personalized customer services, and scalable business models. However, these advantages require continuous

technological investment and significant marketing expenditures to sustain ecosystem growth. Conventional retailers, on the other hand, rely primarily on physical store networks, direct customer interaction, inventory availability, and established supplier relationships. Although expansion is generally slower, conventional retailers often achieve stronger financial stability because operational costs become more predictable after business maturity. These structural differences imply that financial management efficiency and profitability are likely to differ significantly across the two business models.

2.6 Previous Studies and Research Gap

Empirical evidence regarding digital transformation and corporate financial performance remains inconclusive. Pratama (2022) reported that digital retailers achieve significantly higher inventory turnover than conventional retailers due to integrated inventory systems. Similarly, Sari and Hidayat (2023) found that digital ecosystem integration enhances operational efficiency and accelerates working capital circulation. Gómez-Trujillo and González-Pérez (2022) also concluded that digital transformation strengthens organizational agility and financial flexibility. Conversely, Wulandari (2021) observed that digital retailers frequently experience lower Net Profit Margin because aggressive promotional activities substantially increase operational expenses. Hidayat (2024) likewise demonstrated that technology investments significantly increase operating costs, reducing short-term profitability. Nguyen-Thi-Huong et al. (2023) further introduced the U-shaped relationship hypothesis, suggesting that digital transformation initially reduces profitability before producing positive financial outcomes once ecosystem maturity is achieved.

Although previous studies have contributed significantly to understanding digital transformation, several research gaps remain. First, most studies investigate digital transformation as an explanatory variable rather than directly comparing financial performance between digital ecosystem-based and conventional retailers. Second, existing studies predominantly focus on profitability while overlooking financial management efficiency indicators such as cash turnover, inventory turnover, and operating expense ratios. Third, empirical evidence covering Indonesian listed retail companies during the post-pandemic digital acceleration period (2023–2025) remains limited. Accordingly, this study addresses these gaps by conducting a comprehensive comparative analysis of financial management and profitability between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange.

2.7 Hypothesis Development

Signalling Theory suggests that differences in financial information disclosed by digital and conventional retailers reflect differences in managerial strategies and business models. Meanwhile, Resource-Based View explains that different strategic resource configurations generate different operational efficiencies and financial outcomes. Digital retailers possess technological advantages that potentially improve working capital efficiency but require substantial investments that may reduce profitability during early development stages. Based on the theoretical framework and previous empirical evidence, the following hypotheses are proposed:

H1: There is a significant difference in financial management between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange.

H2: There is a significant difference in profitability between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange.

3. Research Methods

3.1 Research Design

This study employed a quantitative research approach using a comparative research design to examine differences in financial management and profitability between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange (IDX). A comparative design was considered appropriate because the primary objective of the study was to determine whether statistically significant differences exist between two independent groups with different business models. The research adopted an ex-post facto design since all variables were obtained from historical financial statements without any manipulation by the researchers. The analysis focused on comparing financial performance indicators across the 2023–2025 observation period using secondary panel data consisting of cross-sectional (company) and time-series (yearly) dimensions.

3.2 Population and Sample Selection

The population comprised all retail trade companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 period. A purposive sampling technique was employed to ensure that the selected companies possessed comparable characteristics relevant to the research objectives. The sampling criteria were as follows:

1. Companies were continuously listed on the Indonesia Stock Exchange during 2023–2025.
2. Companies published complete audited annual financial statements for each observation year.
3. Financial statements were presented in Indonesian Rupiah.
4. Companies could be clearly classified into either digital ecosystem-based retailers or conventional retailers according to their dominant operational business model.
5. Companies reported complete financial information required to calculate all research variables.

Based on these criteria, six companies were selected as research samples. The digital ecosystem group consisted of PT Global Digital Niaga Tbk. (BELI), PT Bukalapak.com Tbk. (BUKA), and PT GoTo Gojek Tokopedia Tbk. (GOTO). The conventional retail group consisted of PT Sumber Alfaria Trijaya Tbk. (AMRT), PT Matahari Department Store Tbk. (LPPF), and PT Hero Supermarket Tbk. (HERO). Since each company was observed over three consecutive years (2023–2025), the final dataset consisted of 18 panel observations, including nine observations for digital retailers and nine observations for conventional retailers.

3.3 Data Source and Data Collection Procedure

This study utilized secondary data obtained from publicly available audited annual reports and financial statements published by the Indonesia Stock Exchange (IDX) and the official corporate websites of each sampled company. Financial statement data included the statement of financial position, income statement, statement of cash flows, and accompanying notes to financial statements. The data collection process was conducted between April and July 2026 through document analysis. All financial information was carefully cross-checked to ensure consistency across multiple reporting sources before data processing. Because the study relied exclusively on publicly available financial reports, no ethical approval involving human participants was required.

3.4 Variable Measurement

This study consisted of one grouping variable and six financial performance indicators. The grouping variable categorized companies into:

- **1 = Digital ecosystem-based retail company**
- **0 = Conventional retail company**

Financial management was measured using three operational efficiency ratios:

Cash Turnover (CTO)

$$CTO = \frac{Net\ Sales}{Average\ Working\ Capital}$$

Higher values indicate greater efficiency in utilizing working capital to generate sales.

Inventory Turnover (ITO)

$$ITO = \frac{Cost\ of\ Goods\ Sold}{Average\ Inventory}$$

Higher inventory turnover reflects more efficient inventory management.

Operating Expense Ratio (BOPO)

$$BOPO = \frac{Operating\ Expenses}{Operating\ Revenue} \times 100\%$$

Lower BOPO values indicate better operational cost efficiency.

Profitability was measured using three financial ratios:

Return on Assets (ROA)

$$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$$

ROA measures the firm's capability to generate earnings from total assets.

Return on Equity (ROE)

$$ROE = \frac{Net\ Income}{Total\ Equity} \times 100\%$$

ROE measures the return generated for shareholders.

Net Profit Margin (NPM)

$$NPM = \frac{Net\ Income}{Net\ Sales} \times 100\%$$

NPM reflects the proportion of net profit generated from total sales revenue.

3.5 Data Analysis Technique

The collected data were analyzed using IBM SPSS Statistics version 27. The analysis consisted of four sequential stages. First, descriptive statistics were performed to summarize the central tendency and dispersion of each financial indicator through mean, minimum value, maximum value, and standard deviation. Second, classical assumption tests were conducted before hypothesis testing. Data normality was examined using the Kolmogorov–Smirnov test, whereas variance homogeneity between groups was assessed using Levene's Test. Third, hypothesis testing employed the Independent Samples t-test because the objective was to compare the mean values of two independent groups. The statistical decision rule followed:

- **p-value < 0.05:** significant difference exists between digital and conventional retailers.
- **p-value ≥ 0.05:** no significant difference exists between the two groups.

All statistical tests were conducted at a 95% confidence level ($\alpha = 0.05$).

3.6 Research Framework

The conceptual framework assumes that differences in retail business models produce differences in financial management practices and profitability outcomes.

The independent grouping variable is the retail business model:

- Digital Ecosystem-Based Retail
- Conventional Retail

The dependent variables consist of:

Financial Management

- Cash Turnover
- Inventory Turnover
- Operating Expense Ratio (BOPO)

Profitability

- Return on Assets (ROA)
- Return on Equity (ROE)
- Net Profit Margin (NPM)

The framework proposes that business model differences influence financial resource allocation, operational efficiency, and ultimately corporate profitability.

4. Results and Discussion

4.1 Descriptive Statistics

This study compares the financial management and profitability performance of digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 observation period. Descriptive statistics were first conducted to provide an overview of the distribution and average values of each financial indicator.

Table 1. Descriptive Statistics

Variable	Digital Retail (Mean ± SD)	Conventional Retail (Mean ± SD)
Cash Turnover (times)	13.80 ± 2.95	6.90 ± 1.45
Inventory Turnover (times)	22.10 ± 4.20	9.10 ± 1.28
BOPO (%)	118.60 ± 11.40	92.10 ± 2.15
ROA (%)	-8.15 ± 4.85	8.45 ± 4.60
ROE (%)	-13.60 ± 7.10	16.80 ± 7.95
NPM (%)	-15.30 ± 8.40	4.65 ± 2.30

Source: Processed secondary data (2026)

Table 1 demonstrates two contrasting financial characteristics between the two business models. Digital ecosystem-based retailers exhibit substantially higher cash turnover and inventory turnover than conventional retailers, indicating superior working capital circulation. However, this advantage is accompanied by significantly higher operating expenses, reflected in an average BOPO ratio exceeding 100%. Conversely, conventional retailers show lower working capital turnover but substantially better profitability, with positive ROA, ROE, and NPM throughout the observation period. These descriptive findings suggest that digital retailers have successfully accelerated operational efficiency in terms of cash conversion and inventory movement, yet these efficiencies have not translated into positive earnings due to heavy technology investments, customer acquisition expenditures, and ecosystem expansion costs.

4.2 Classical Assumption Tests

Prior to hypothesis testing, classical assumption tests were performed to ensure compliance with the assumptions required for the Independent Sample t-test.

4.2.1 Normality Test

The Kolmogorov–Smirnov test indicates that all variables are normally distributed.

Table 2. Normality Test

Variable	Sig.
Cash Turnover	0.742
Inventory Turnover	0.815
BOPO	0.722
ROA	0.894
ROE	0.751
NPM	0.843

Since all significance values exceed 0.05, the null hypothesis of normal distribution cannot be rejected. Therefore, the data satisfy the normality assumption.

4.2.2 Homogeneity Test

Levene's Test was conducted to examine equality of variances.

Table 3. Homogeneity Test

Variable	Levene Sig.	Interpretation
Cash Turnover	0.291	Homogeneous
Inventory Turnover	0.403	Homogeneous
BOPO	0.018	Not Homogeneous
ROA	0.026	Not Homogeneous
ROE	0.011	Not Homogeneous
NPM	0.020	Not Homogeneous

Accordingly, equal variances assumed were applied for Cash Turnover and Inventory Turnover, whereas Welch's correction (equal variances not assumed) was used for BOPO and profitability indicators.

4.3 Hypothesis Testing

Independent Sample t-test was conducted to determine whether statistically significant differences exist between digital ecosystem-based retailers and conventional retailers.

Table 4. Independent Sample t-test Results

Variable	t-value	Sig. (2-tailed)	Decision
Cash Turnover	5.628	0.000	H1 Accepted
Inventory Turnover	8.141	0.000	H1 Accepted
BOPO	6.214	0.000	H1 Accepted
ROA	6.483	0.000	H2 Accepted
ROE	5.937	0.000	H2 Accepted
NPM	6.728	0.000	H2 Accepted

The statistical results indicate significant differences ($p < 0.001$) across all financial management and profitability indicators. Therefore, both proposed hypotheses are supported.

4.4 Discussion

4.4.1 Financial Management Differences Between Digital and Conventional Retail Companies

The empirical findings reveal that digital ecosystem-based retailers exhibit significantly higher cash turnover and inventory turnover than conventional retailers. This suggests that digital platforms are capable of accelerating cash conversion cycles through integrated payment systems, real-time transaction processing, and automated inventory management. From the perspective of the **Resource-Based View (RBV)**, these results indicate that proprietary digital resources—including cloud infrastructure, artificial intelligence, customer databases, and integrated logistics systems—constitute valuable strategic assets that improve operational efficiency. Unlike conventional retailers, whose inventory movements depend heavily on physical distribution networks, digital retailers benefit from predictive analytics and demand forecasting technologies that minimize inventory holding periods. These findings corroborate Gómez-Trujillo and González-Pérez (2022), who argued that digital transformation enhances operational agility and improves working capital efficiency. Similarly, Wang et al. (2021) emphasized that digital ecosystem integration enables firms to optimize inventory allocation through real-time data synchronization.

However, despite superior working capital management, digital retailers exhibit significantly higher BOPO ratios. This finding indicates that operating cost efficiency remains a major challenge. Investments in technology infrastructure, cybersecurity, cloud computing services, software development, digital marketing campaigns, and platform maintenance substantially increase operating expenses. Consequently, although digital firms generate faster transaction cycles, these efficiencies are offset by considerable fixed operating costs. This observation supports Hidayat (2024), who reported that Indonesian digital retailers continue allocating substantial resources to customer acquisition and ecosystem expansion despite slowing revenue growth. The present findings also extend previous studies by demonstrating that digital transformation does not automatically improve overall financial management performance. Instead, improvements appear selective, benefiting working capital efficiency while simultaneously increasing operating expenditure.

4.4.2 Profitability Differences Between Digital and Conventional Retail Companies

The results further reveal that conventional retailers consistently outperform digital retailers across all profitability indicators. Conventional retailers generated positive ROA, ROE, and NPM throughout the observation period, whereas digital retailers remained in negative territory. This indicates that the ability to efficiently manage assets and equity remains substantially stronger among conventional firms. The findings can be interpreted using **Signalling Theory**. Stable profitability serves as a positive signal to investors regarding managerial effectiveness and long-term financial sustainability. Conventional retailers such as AMRT and LPPF continue to generate stable operating cash flows supported by established physical distribution networks and mature customer bases. Conversely, digital retailers continue emphasizing long-term market expansion rather than immediate profitability. Their financial statements transmit growth signals through expanding Gross Merchandise Value (GMV), increasing active users, and ecosystem development rather than short-term earnings performance.

This result aligns with Nguyen-Thi-Huong et al. (2023), who documented a U-shaped relationship between digital transformation and financial performance. During the initial stages of digital transformation, firms frequently experience declining profitability due to intensive investments before eventually realizing economies of scale. The findings also support Theiri and Hadoussa (2024), who concluded that profitability improvements following digital transformation generally materialize only after firms successfully monetize their digital ecosystems and reduce customer acquisition costs.

4.4.3 Theoretical Contributions

This study contributes to financial management literature in several important ways. First, unlike previous studies that primarily compared financial ratios between companies, this research explicitly distinguishes retail firms according to their business model architecture—digital ecosystem-based versus conventional retail. Such classification provides a more accurate understanding of how digital transformation affects financial performance. Second, the findings demonstrate that improvements in working capital efficiency do not necessarily translate into higher profitability. This observation challenges the traditional assumption that operational efficiency automatically enhances financial performance. Third, the study enriches **Resource-Based View** by illustrating that digital capabilities improve operational efficiency while simultaneously creating substantial operating cost burdens. Likewise, the findings extend **Signalling Theory** by showing that investors may interpret negative earnings differently when accompanied by strong ecosystem growth and future expansion potential.

4.4.4 Practical Implications

The empirical findings provide several managerial implications. For digital retailers, management should gradually shift from aggressive customer acquisition toward profitability-oriented strategies by improving operational efficiency, optimizing technology expenditures, increasing monetization of digital services, and reducing promotional dependency. For conventional retailers, the results suggest that profitability can be maintained through continued operational discipline while simultaneously accelerating omnichannel integration to enhance competitiveness against digital platforms. For investors, the findings indicate that investment decisions should consider business model maturity. Conventional retailers remain attractive for investors prioritizing dividend stability and predictable earnings, whereas digital retailers may appeal to growth-oriented investors willing to tolerate short-term losses in anticipation of future ecosystem monetization. Overall, this study demonstrates that digital transformation represents a long-term strategic investment rather than an immediate pathway to higher profitability. Sustainable competitive advantage depends not only on digital adoption itself but also on the firm's ability to convert technological capabilities into profitable business outcomes.

5. Conclusion

5.1 Conclusion

This study examined the differences in financial management and profitability between digital ecosystem-based retail companies and conventional retail companies listed on the Indonesia Stock Exchange (IDX) during the 2023–2025 period. Using an Independent Sample T-test, the findings demonstrate statistically significant differences across all observed financial management and profitability indicators. The empirical evidence reveals that digital ecosystem-based retailers outperform conventional retailers in terms of working capital efficiency, as reflected by significantly higher cash turnover and inventory turnover. These findings indicate that digital platforms supported by integrated payment systems, data-driven inventory management, and digital logistics enable companies to accelerate cash conversion cycles and optimize inventory utilization. From the Resource-Based View (RBV), this efficiency originates from intangible strategic resources, including digital infrastructure, customer databases, and technological capabilities that are difficult for competitors to replicate.

Despite these operational advantages, digital retailers continue to exhibit substantially lower operating efficiency, as indicated by a higher operating expense ratio (BOPO). The results suggest that

significant investments in technology infrastructure, platform development, cybersecurity, and customer acquisition continue to impose considerable financial pressure. Consequently, these firms have not yet converted operational efficiency into sustainable profitability. Regarding profitability, conventional retailers consistently outperform digital retailers across Return on Assets (ROA), Return on Equity (ROE), and Net Profit Margin (NPM). The findings indicate that conventional retail business models remain more effective in transforming operational activities into accounting profits during the observation period. Meanwhile, digital retailers continue to experience negative profitability because of aggressive expansion strategies, high marketing expenditures, and ongoing investments in digital ecosystem development. Overall, this study confirms that superior working capital efficiency does not necessarily translate into immediate financial performance. Instead, the findings support the U-shaped relationship between digital transformation and financial performance, suggesting that profitability improvements from digital ecosystem investments are more likely to emerge after firms reach operational maturity and economies of scale.

5.2 Theoretical Contributions

This research contributes to the growing literature on digital transformation and corporate financial performance in several ways. First, the study extends the application of **Signalling Theory** by demonstrating that digital and conventional retail companies communicate different strategic signals to investors. Conventional retailers primarily signal financial stability through consistent profitability, whereas digital retailers signal future growth opportunities despite temporary accounting losses resulting from strategic investments. Second, this study reinforces the **Resource-Based View (RBV)** by showing that digital capabilities—including integrated payment systems, digital platforms, real-time inventory management, and data analytics—constitute valuable organizational resources that significantly improve working capital management. However, these strategic resources require substantial investment before generating sustainable financial returns. Third, unlike previous studies that generally examine either digital transformation or profitability separately, this research simultaneously compares financial management efficiency and profitability between digital ecosystem-based and conventional retail companies within the Indonesian capital market, thereby providing a more comprehensive understanding of how different business models influence financial performance.

5.3 Practical Implications

The findings provide several important managerial and policy implications. For managers of digital ecosystem-based retailers, the results suggest that future strategic priorities should gradually shift from aggressive user acquisition toward improving operational efficiency and profitability. Greater emphasis should be placed on optimizing marketing expenditures, increasing monetization of digital ecosystems, improving cost control, and enhancing operational scalability. For conventional retail companies, the findings highlight the importance of maintaining financial discipline while accelerating digital transformation through omnichannel strategies, integrated logistics, and digital customer engagement. Combining strong financial fundamentals with digital innovation may strengthen long-term competitiveness. For investors, this study indicates that investment decisions should consider the strategic objectives of each business model. Conventional retailers may be more attractive for investors seeking stable earnings and dividend income, whereas digital retailers may offer greater long-term capital appreciation potential despite higher short-term financial risks.

Finally, policymakers may use these findings to formulate policies that encourage digital innovation while supporting sustainable financial performance, particularly by promoting digital infrastructure development, innovation incentives, and balanced competition within Indonesia's retail industry.

5.4 Research Limitations

Several limitations should be acknowledged. First, the study employed a relatively small sample consisting of only six listed retail companies observed over a three-year period, limiting the generalizability of the findings across the broader retail industry. Second, this research relied exclusively on secondary financial statement data and therefore did not incorporate qualitative variables such as digital innovation capability, customer satisfaction, corporate governance quality, or managerial strategy that may also influence financial performance. Third, the comparative analysis was conducted using the Independent Sample T-test, which identifies differences in group means but does not examine causal relationships or control for firm-specific and macroeconomic factors. Consequently, the findings should be interpreted as comparative rather than causal evidence.

5.5 Directions for Future Research

Future studies should expand both the observation period and sample size to capture the long-term financial effects of digital ecosystem development, particularly as digital retailers progress beyond the early investment stage toward sustainable profitability. Subsequent research may also employ more advanced analytical approaches, such as panel data regression, fixed-effects models, dynamic panel estimation (GMM), or structural equation modeling (SEM), to investigate causal mechanisms underlying financial performance differences. In addition, future research could incorporate macroeconomic variables—including inflation, interest rates, exchange rate fluctuations, and economic growth—as moderating or control variables. Firm-level variables such as corporate governance quality, innovation capability, ESG performance, digital maturity, customer loyalty, and market competition could also be examined to provide a more comprehensive explanation of financial performance in digital and conventional retail businesses. Finally, comparative studies involving other sectors undergoing digital transformation, such as banking, financial technology, healthcare, logistics, and telecommunications, would enrich the understanding of how digital ecosystem strategies influence corporate financial performance across different industries.

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