


## The Impact of Digital Transformation on Firm Value: A Study of Publicly Listed Companies on the Indonesia Stock Exchange

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Article Info	ABSTRACT
<b>Keywords:</b> Digital Transformation, Firm Value, Return on Assets, Price to Book Value, Firm Size	This study investigates the impact of digital transformation on firm value among publicly listed companies on the Indonesia Stock Exchange (IDX), with a comparative focus on the banking and consumer goods sectors. Using secondary data from 2018 to 2022, the study employs multiple linear regression for the banking sector and panel data regression with the Fixed Effect Model for the consumer goods sector. The results reveal that digital transformation has a significant positive effect on financial performance (ROA) in the banking sector, while its impact on market value (PBV) in the consumer goods sector is not statistically significant. Firm size acts as a moderating variable that enhances the relationship between digital transformation and firm value, particularly in the banking sector. These findings underscore the importance of digital maturity, organizational readiness, and strategic alignment in leveraging technology for value creation. The study contributes to the literature by highlighting sectoral differences in the effectiveness of digital transformation.
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### INTRODUCTION

Digital transformation is increasingly recognized as a transformative force in reshaping global business structures. It revolutionizes not only operational procedures and business strategies but also how firms generate value in a competitive marketplace. In the Indonesian context, the rapid acceleration of internet penetration and the proliferation of mobile-based financial services have provided fertile ground for firms to implement digital innovations. According to data from Bank Indonesia (2022), more than 65% of banking transactions are now processed through digital channels, indicating a fundamental shift toward a technology-driven economy and highlighting the growing reliance on digital infrastructure.

Despite this digital momentum, its impact on firm value has not been uniformly experienced across all industries. The banking sector, for instance, has successfully leveraged digital transformation to enhance operational efficiency and improve financial performance, as evident in the integration of digital platforms and customer-centric technologies. However, the same cannot be said for the consumer goods sector, where investments in digital

marketing, enterprise systems, and online platforms have yet to consistently translate into higher market valuation or stronger financial indicators (Susanti & Lestari, 2022). These inconsistencies raise concerns about the actual economic returns of digital investments, especially in sectors still maturing digitally.

The discrepancy across sectors prompts a deeper inquiry into whether digital transformation inherently creates value or functions merely as a baseline operational requirement. The Resource-Based View (RBV), as introduced by Barney (1991) and Wernerfelt (1984), offers a theoretical lens to interpret this issue. RBV posits that firms can attain competitive advantage through unique, rare, and non-substitutable resources—of which digital infrastructure, software systems, and data capabilities may form a critical part. Hence, successful digitalization should theoretically result in superior firm performance if these assets are effectively mobilized.

Further theoretical justification is provided by Signaling Theory (Spence, 1973), which posits that digital transformation acts as a strategic signal to the market. Investors often interpret digital initiatives as indicators of a firm's innovation capacity, future readiness, and resilience in volatile business environments. Especially within heavily regulated sectors like banking, such signals can significantly influence investor confidence and market valuation, underscoring the importance of digital visibility in a firm's strategic communications.

Another theoretical perspective underpinning this study is the Dynamic Capabilities Theory (Teece, 1997), which highlights the importance of an organization's capacity to adapt, integrate, and renew internal competencies in response to external change. In this context, digital transformation requires not only investment in technology but also agile leadership and adaptive organizational culture. Firms that fail to align digital strategy with organizational learning may struggle to derive sustainable benefits from their digital initiatives.

Complementing this, the Technology Organization Environment (TOE) Framework proposed by Tornatzky and Fleischer (1990) emphasizes that digital adoption is not solely dependent on technological capability. Organizational readiness and the broader environmental context also play pivotal roles in determining the success of digital strategies. Additionally, Service-Dominant Logic (Vargo & Lusch, 2004) enriches this framework by asserting that value creation in the digital era is inherently collaborative. Value is co-created through continuous interaction between firms, customers, and ecosystem partners via digital platforms.

Empirical findings further reinforce these theoretical constructs. Research by Maharani and Daljono (2023) reveals that firm size acts as a moderating variable in the relationship between digital transformation and firm performance. Larger firms, endowed with more resources, tend to manage digital implementation more effectively, leading to better financial outcomes. Meanwhile, Van de Wetering et al. (2021) stress the importance of internal digital capabilities, while Westerman et al. (2011) empirically demonstrate that firms categorized as digital leaders consistently outperform their peers across various performance metrics.

Based on these theoretical and empirical insights, it becomes evident that sectoral differences, organizational readiness, and firm size critically influence the effectiveness of digital transformation. Consequently, this study aims to examine the impact of digital

transformation on firm value, using Return on Assets (ROA) and Price to Book Value (PBV) as proxies, among companies listed on the Indonesia Stock Exchange (IDX). By conducting a comparative analysis between the banking and consumer goods sectors, and by incorporating firm size as a moderating variable, this study endeavors to provide a nuanced understanding of how digital transformation contributes to firm value in the Indonesian corporate landscape.

## METHODS

This study employs a quantitative research approach to examine the impact of digital transformation on firm value among companies listed on the Indonesia Stock Exchange (IDX). Focusing specifically on the banking and consumer goods sectors, the study seeks to capture the sectoral differences in digital maturity and their implications for financial and market performance. These two sectors were purposefully selected due to their distinct characteristics and levels of responsiveness to digital innovation, with banking typically exhibiting a higher degree of digital integration compared to consumer goods firms.

The data used in this research are secondary in nature, obtained through documentation of audited financial statements and annual reports published on the official IDX website and individual company websites. The period of observation spans five years, from 2018 to 2022, allowing the study to investigate longitudinal patterns in digital adoption and its financial effects. A total of 97 companies were analyzed, consisting of 43 conventional banks and 54 consumer goods firms. The selection of these companies followed a purposive sampling method, ensuring that only firms with complete and relevant disclosures on intangible assets and financial performance were included in the final sample.

To operationalize the study variables, digital transformation is measured using the ratio of software value to total intangible assets, reflecting the extent of digital investment embedded within a firm's resource structure. Firm value is evaluated through two distinct indicators: Return on Assets (ROA) as a representation of financial performance, and Price to Book Value (PBV) as a proxy for market-based valuation. In addition, firm size is introduced as a moderating variable, measured by the natural logarithm of total assets, to capture the potential influence of scale on the effectiveness of digital strategies.

In terms of analytical procedures, the study applies different statistical methods tailored to the structure of each sector. For the banking sector, multiple linear regression analysis is conducted using SPSS version 27. Prior to regression estimation, the data are subjected to a series of classical assumption tests to ensure model validity and robustness. These include tests for normality using the Kolmogorov–Smirnov method, multicollinearity assessed through Variance Inflation Factor (VIF) and tolerance values, heteroscedasticity examined via the Glejser method, and autocorrelation detected using the Durbin-Watson statistic. The reliability and validity of the measurement instruments are also tested, confirming their appropriateness for empirical analysis.

Meanwhile, the analysis for the consumer goods sector utilizes panel data regression. Based on the results of the Chow and Hausman tests, the Fixed Effect Model (FEM) is selected as the most suitable model for this dataset, as it accounts for unobserved heterogeneity

across firms over time. This dual-method approach allows for a comprehensive comparison between sectors and facilitates a deeper understanding of how digital transformation interacts with firm-level characteristics, including organizational scale, to influence financial and market performance. By integrating both cross-sectional and time-series dimensions, this methodological framework offers a robust empirical basis for assessing the differentiated impact of digital transformation on firm value in Indonesia’s evolving digital economy.

## RESULTS AND DISCUSSION

The findings of this study reveal distinct sectoral differences in the impact of digital transformation on firm value among companies listed on the Indonesia Stock Exchange. In the banking sector, results from multiple linear regression analysis indicate that digital transformation has a positive and statistically significant effect on financial performance, specifically Return on Assets (ROA), with a p-value of 0.003 and a regression coefficient of 0.064. This suggests that investments in digital platforms, core banking systems, and customer-facing applications contribute meaningfully to the operational efficiency and profitability of banks. Moreover, firm size also exhibits a significant positive effect on ROA, indicating that larger banks are better positioned to absorb the costs and complexities of digitalization. The inclusion of firm size in the model increases the adjusted R<sup>2</sup> from 0.073 to 0.308, suggesting that it serves as a moderating variable that strengthens the relationship between digital transformation and firm performance.

**Table 1.** Regression Results – Banking Sector

Variable	Regression Coefficient (β)	p-value	Significance
Digital Transformation	0.064	0.003	Significant (p < 0.05)
Firm Size (Log Total Assets)	0.115	0.002	Significant (p < 0.05)
Adjusted R <sup>2</sup> (without Firm Size)	0.073	–	–
Adjusted R <sup>2</sup> (with Firm Size)	0.308	–	–

Note: Dependent variable: Return on Assets (ROA).

Interpretation: Both digital transformation and firm size have a statistically significant positive effect on ROA in the banking sector. Firm size acts as a moderating variable, improving the explanatory power of the model.

In contrast, the consumer goods sector does not exhibit a statistically significant relationship between digital transformation and firm value, as measured by Price to Book Value (PBV). Panel data analysis using the Fixed Effect Model (FEM) yields a p-value of 0.124 for the digital transformation variable, indicating that the effect is not significant at the conventional level. This finding suggests that despite the implementation of e-commerce platforms, digital marketing strategies, and supply chain technologies, these initiatives have

not been effectively integrated into value creation mechanisms that are recognized by the market. Possible explanations include fragmented digital strategies, lack of organizational readiness, and limited synergy between digital adoption and core business processes.

**Table 2.** Regression Results – Consumer Goods Sector

Variable	Regression Coefficient ( $\beta$ )	p-value	Significance
Digital Transformation	0.029	0.124	Not Significant ( $p > 0.05$ )
R <sup>2</sup> (Fixed Effect Model)	0.512	–	–

The comparative analysis between the banking and consumer goods sectors reveals that digital maturity plays a vital role in determining the success of digital transformation initiatives. In the banking sector, digital adoption is more advanced and strategically integrated within core business operations. The sector's strong emphasis on operational efficiency, regulatory compliance, and data security has enabled it to utilize digital technologies as a means to enhance both internal processes and customer experiences. These factors contribute to measurable improvements in financial performance and align with investor expectations, thereby translating into higher firm value.

On the other hand, the consumer goods sector demonstrates a relatively immature stage of digital transformation. Although many firms have adopted technologies such as e-commerce platforms, digital marketing tools, and supply chain management systems, these initiatives often lack strategic alignment with broader business goals. The digital efforts are frequently fragmented or limited to front-end applications without integration into the overall value chain. As a result, the market does not yet perceive these efforts as enhancing the long-term profitability or competitiveness of firms, leading to an insignificant relationship between digital transformation and firm value.

These sectoral disparities can be explained through the lens of Dynamic Capabilities Theory, which posits that firms must develop the ability to sense, seize, and transform in response to technological changes and market dynamics (Teece, 1997). The banking sector's ability to continuously adapt its digital strategies reflects strong dynamic capabilities, allowing it to reconfigure internal processes and resources to maintain a competitive advantage. In contrast, consumer goods firms may lack the organizational agility, leadership support, or digital culture needed to effectively transform technological investments into tangible market outcomes.

The findings also support the Technology–Organization–Environment (TOE) Framework (Tornatzky & Fleischer, 1990), which emphasizes that successful technology adoption depends on the interplay between technological readiness, organizational structure, and external market conditions. In the case of banking, institutional support and a conducive regulatory environment create favorable conditions for digital innovation. Conversely, in the consumer goods sector, internal resistance, lack of digital competencies, and limited external pressure for change can hinder the full realization of digital transformation's potential.

Furthermore, these results align with the principles of Service-Dominant Logic (S-D Logic) proposed by Vargo and Lusch (2004), which argue that value is co-created through collaborative interactions among firms, customers, and partners. The banking sector has

embraced this paradigm through digital platforms that foster two-way engagement, personalized services, and customer trust. To achieve similar success, consumer goods companies must enhance their focus on customer experience, invest in data-driven personalization, and scale their platforms to support broader ecosystem collaboration. Without these elements, the co-creation of value through digital means may remain limited and fail to influence firm valuation in a meaningful way.

## CONCLUSION

This study concludes that digital transformation exerts a varied impact on firm value, depending significantly on sectoral characteristics and organizational readiness. In the banking sector, digital transformation is positively and significantly associated with financial performance, as reflected in Return on Assets (ROA). The results demonstrate that banks that invest in core digital platforms, client-facing technologies, and integrated systems benefit from enhanced operational efficiency and profitability. Additionally, firm size acts as a moderating factor, reinforcing the effectiveness of digital initiatives. Larger banks, with more resources and advanced infrastructure, are better positioned to absorb technological investments and convert them into financial gains. In contrast, the consumer goods sector does not show a statistically significant link between digital transformation and firm value, as measured by Price to Book Value (PBV). This may be attributed to the fragmented implementation of digital strategies, lack of cohesive alignment with core business functions, and insufficient maturity in leveraging technology for value creation. These findings emphasize that the mere adoption of technology does not automatically translate into improved market valuation. The results support several theoretical frameworks, including the Resource-Based View, Dynamic Capabilities Theory, the TOE Framework, and Service-Dominant Logic. They collectively suggest that successful digital transformation requires not only technological investment but also organizational capability, strategic alignment, and collaborative engagement with external stakeholders. Policymakers and managers should therefore focus on building internal readiness and aligning digital strategies with long-term business goals to realize the full value of digital transformation across different industrial contexts.

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