

The Influence of Digital Transformation on Organizational Performance in Tokopedia Startup in Indonesia

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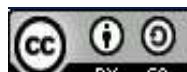
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ABSTRACT

Global business dynamics in the digital era require fundamental organizational transformation to stay competitive and sustain performance. Organizational performance—measured by operational efficiency, innovation capability, and customer satisfaction—is a critical success indicator, especially for technology-driven startups. The Indonesian e-commerce sector has grown significantly, propelled by higher internet penetration, altered consumer behavior, and digital innovations from various platforms. This study examines the influence of digital transformation on organizational performance in Tokopedia startups in Indonesia, focusing on technological adoption's effects on operational efficiency, customer experience, and business outcomes. Tokopedia, known for its marketplace model, supports MSMEs and offers diverse services facilitating sellers and buyers. Using qualitative methods with in-depth interviews of MSME actors, employees, and customers, this research defines variables and indicators, employing open-ended questions to capture respondent perspectives. Interview data analyzed with NVivo software reveal that digital transformation improves performance, notably in ordering efficiency and payment speed. However, resource constraints and data security challenges remain barriers needing attention. The study recommends that other tech startups invest in infrastructure and training to maximize digital transformation benefits. This approach highlights how digital technology adoption can significantly impact organizational success in Indonesia's fast-growing e-commerce environment.

KEYWORDS *Digital Transformation, E-Commerce, Organizational Performance, Startup, Tokopedia*



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INTRODUCTION

Organizational performance in the digital age has become a paramount concern for businesses worldwide, particularly as global markets undergo rapid technological transformation. According to McKinsey & Company (2021), organizations that successfully implement digital transformation initiatives demonstrate 20–30% higher performance outcomes compared to their traditional counterparts, including improved operational efficiency, enhanced customer satisfaction, and accelerated innovation capabilities. The World Economic Forum (2020) further emphasizes that digital transformation has fundamentally reshaped organizational performance metrics, requiring companies to adapt their business models, operational processes, and strategic orientations to remain competitive. Deloitte's Global Digital Transformation Survey (2022) reveals that 87% of organizations recognize digital transformation as a critical driver of competitive advantage and sustainable performance, yet only 44% have successfully implemented comprehensive digital strategies

that deliver measurable performance improvements. These global trends underscore the urgent need for organizations, particularly technology startups in emerging markets, to understand and leverage digital transformation as a strategic imperative for enhancing *organizational performance* (Díaz et al., 2024; Hokmabadi et al., 2024; Oyeyemi et al., 2024).

Digital transformation has become a very relevant and crucial topic for companies, especially startups in Indonesia (Anatan & Nur, 2023; Kurniawati et al., 2021; Laksmana et al., 2023; Prakosos et al., 2025). In the ever-evolving digital era, companies are required to adapt quickly to technological changes and market needs. According to Westerman et al. (2014), digital transformation is a process in which companies utilize digital technology to significantly improve their business performance and reach. Digital transformation represents more than mere technology adoption; it constitutes a fundamental restructuring of organizational processes, business models, and value creation mechanisms through strategic integration of digital capabilities (Frank et al., 2019; Ivančić et al., 2019; Witschel et al., 2019). As an independent variable influencing *organizational performance*, digital transformation encompasses multiple dimensions including technological infrastructure development, digital skill enhancement, data-driven decision-making processes, and customer-centric digital service delivery. The relationship between digital transformation and *organizational performance* has been extensively documented in academic literature, with scholars emphasizing that effective digital transformation initiatives directly contribute to enhanced operational efficiency, improved innovation capacity, and superior customer experience outcomes.

In the context of e-commerce, Tokopedia, as one of the largest platforms in Indonesia, has implemented various digital strategies to improve operational efficiency. Nowadays, people prefer to shop online on ecommerce platforms. In addition, Shahpasandi et al. (2020) in Indirawati et al. (2023) suggest that consumers are more likely to fulfill consumer motives in the online shopping experience, which further influences their attitudes towards shopping behavior. Haryanti (2021) shows that digital capabilities play an important role in improving competitive advantage and company performance. The implementation of technologies such as cloud computing and big data analytics is key in optimizing business processes. However, despite the many benefits offered, the challenges are no less significant. According to Tualeka et al. (2021), many startups face limited resources and data security issues when implementing digital transformation. The data leak incident that occurred on Tokopedia in 2020 is an important reminder of the need for better security management.

Furthermore, Septiandy et al. (2024) emphasized that digital transformation involves not only the adoption of technology but also fundamental changes in organizational culture. A culture that supports innovation and adaptation is a key factor in the success of digital transformation. By implementing core values such as "Focus on Consumer" and "Growth Mindset," Tokopedia has succeeded in creating a productive work environment. Even today, it is supported by the development of AI that is quite massive. Fintech. Zou et al. (2023) in Cahyani et al. (2024) highlight how AI technology has changed the way financial transactions are carried out by emphasizing that AI has helped reduce transaction costs, improve user experience, and provide efficiency in financial services. This certainly affects transactions in ecommerce as well. The implementation of digital transformation at Tokopedia also has a positive impact on customer experience. According to research by Lukito & Ruslim (2024), the use of technologies such as artificial intelligence (AI) has improved the quality of services

and accelerated the response to customer needs. This shows that digital transformation can strengthen customer loyalty and drive business growth.

However, not all companies are able to carry out digital transformation well. A study by Syavitra and Ardianto (2023) shows that resistance to change among employees is a common obstacle. Therefore, it is important for management to provide adequate support and training to facilitate the adaptation process. Not only in companies, but digital facilities are also inadequate on campus. In the research of Saputra and Sudiana (2023), access to digital platforms, the availability of digital devices, the quality of digital access, and even digital mastery among lecturers, students, and administrative staff are still diverse. There are individuals and institutions that are already established and digitally rich, but it is undeniable that there are still those who remain in a state of *digital poverty*. In this case, the role of the government is also very important. According to Jakaria (2022), regulatory and policy support that supports digital transformation will accelerate the digitalization process in the startup sector. Policies that encourage investment in technology and infrastructure development will greatly contribute to the growth of the digital economy in Indonesia.

The development of the technology startup industry in Indonesia shows very rapid growth. According to data from Statista, the number of e-commerce users in Indonesia is projected to continue to increase, creating a huge opportunity for startups to innovate and grow. However, to take advantage of these opportunities, companies must be ready to face the challenges that exist. In this study, we will analyze how Tokopedia implements digital transformation and identify the factors that affect its success and the challenges it faces. By focusing on *organizational performance*, this research is expected to provide useful insights for other startups in facing the digital era. Overall, this study aims to answer the key question: How does digital transformation affect *organizational performance* in Tokopedia startups in Indonesia? By exploring various related aspects, it is hoped that the results of this research can contribute to the development of science and business practices in the current digital era. Through a quantitative approach based on empirical data, this study will explore the impact of digital transformation on operational efficiency, product innovation, and customer satisfaction. Thus, this study will not only provide a comprehensive overview of Tokopedia but also provide relevant recommendations for other startups in Indonesia.

RESEARCH METHOD

This research used a qualitative approach with a descriptive method to explore the experiences and views of business actors and Tokopedia customers. The sample included active Tokopedia users with at least one year of experience on the platform, both sellers and buyers, ensuring that participants could provide informed assessments of changes and innovations via digital transformation. Participants were also selected based on their transaction activity and use of various digital features on Tokopedia to ensure relevant insights into the platform's effectiveness. Data collection involved in-depth interviews with four informants (2 business actors and 2 customers), observations of operational dynamics and technology applications, and documentation studies providing additional context. The research process included pre-field preparation to define focus areas, followed by field data collection and interactive data analysis using NVivo to identify key themes. To ensure data validity and reliability, triangulation combined multiple data sources and collection techniques to enhance research

credibility. This methodology supported an in-depth understanding of how digital transformation affected organizational performance in Tokopedia, capturing practical experiences and perceptions relevant to the digital era challenges and innovations.

RESULT AND DISCUSSION

In the increasingly growing digital era, the implementation of digital transformation is crucial for technology startups in Indonesia. This process involves not only the adoption of new technologies, but also changes in the way organizations operate and interact with customers. Many startups are starting to leverage various digital tools and platforms to increase efficiency, expand market reach, and provide a better experience to users. All the results of interviews with the Seller and Buyer were analyzed using Nvivo software with the following results:



Figure 1. Coding Nvivo 1

Figure 1 reflects a number of important keywords that describe the main themes related to the user experience on the Tokopedia platform. The word "Tokopedia" emerged as the main focus, showing that this analysis is closely related to e-commerce and user interaction on the platform. This indicates that many respondents have significant experience with the services offered by Tokopedia. In addition, the word "I" indicates the existence of a personal narrative, which reflects how individuals convey their experiences. This is important because it provides a subjective perspective that can help understand how users interact with the platform. The connecting word "and" serves to show the connection between the various ideas and aspects expressed, creating a bridge between different user experiences.

The word "experience" itself hints that this analysis focuses on stories or testimonials from users, which can cover a wide range of aspects, from satisfaction to problems they may face. In the context of e-commerce, the word "payment" indicates attention to the transaction process, including the payment methods and ease offered. Meanwhile, the word "shipping" highlights crucial logistical aspects, including delivery times and service reliability. Overall, the words that appear in the results of Nvivo reflect the great attention to user interaction on Tokopedia, as well as various important aspects of the online shopping experience. This includes challenges and advantage that users are felt in using the platform, providing valuable insights for the future development of services. By analyzing these words, we can better

understand how Tokopedia can improve the user experience and better meet their needs. Digital transformation has become the key to improving organizational performance, especially for startups like Tokopedia in Indonesia. In the context of this research, the application of digital technologies such as cloud computing, big data, and artificial intelligence aims to improve operational efficiency and customer experience. The results of the study show that startups that

Adopting digital transformation is not only able to increase productivity, but also accelerate product and service innovation which is essential in maintaining competitiveness in an increasingly competitive market. However, challenges such as limited funding and resistance to change among employees remain obstacles that must be overcome. Therefore, it is important for Tokopedia and other startups to develop effective change management strategies, including good training and communication, so that digital transformation can run smoothly and have a positive impact on the overall organization's performance.



Figure 2 Results of Nvivo 2

The diagram shown outlines various aspects related to digital transformation in Tokopedia. On the one hand, there are positive aspects such as a secure and efficient payment system, improved customer service, and innovations that continue to be presented to improve the user experience. However, Tokopedia also faces challenges, including the accuracy of demand estimates, human resource development to improve employee skills, and scalability issues in developing infrastructure to support growth. The success factors of digital transformation at Tokopedia include security in maintaining user data and transactions, diversifying services to meet diverse market needs, and ease of use of the interface for users. In addition, there are areas that need improvement, such as quality control and personalization to provide a more customized experience for each user. Overall, this diagram provides a comprehensive overview of the management of digital transformation at Tokopedia, the challenges faced, and the factors that contributed to its success.

Discussion

Analyzing the application of digital transformation to technology startups in Indonesia.

The implementation of digital transformation in technology startups in Indonesia has been the key to increasing competitiveness in an increasingly competitive market. Many startups are adopting technologies such as cloud computing, big data, and artificial intelligence to improve operational efficiency and customer experience. By utilizing this technology, startups can optimize business processes, from inventory management to consumer behavior

analysis. This not only helps in increasing productivity, but also allows companies to be more responsive to changing market needs. However, analyzing the implementation of digital transformation also includes the challenges faced by startups. Many of them are still struggling with limited resources, both financial and human. In addition, resistance to change among employees who may not be familiar with new technologies is also an obstacle.

Previous research has shown that the development of communication, computing, and connectivity technologies has accelerated the growth of digital technologies, which is changing behaviors, structures, practices, values, and beliefs within organizations (Garcez et al., 2022). Technological innovation is considered a key factor in driving economic growth, which is closely linked to economic developments from the past to the present (Yoo & Yi, 2022a). Digital transformation has become an important focus of the Indonesian government in strengthening the national economy, especially in the creative economy sector.

In the rapidly evolving digital era, the use of digital technology has become a must for companies to stay competitive. Digital transformation is no longer just a concept, but a reality that businesses must adopt to remain relevant and effective. In addition, companies must also consider the security and data privacy aspects of the use of digital technologies, which are quickly becoming a top priority for organizations around the world, especially during the COVID-19 pandemic (Butt, 2020).

Indonesia has a great opportunity to increase the use of digital technology in various aspects of life, but the challenges faced are also not few. Digital transformation in Indonesia is one of the government's policies to encourage the public and business people to make optimal use of digital technology. In this context, the development of Society 5.0 or the Industrial Revolution 5.0 has a significant impact. Many governments in various countries have developed information and communication technology (ICT) to take advantage of existing opportunities (Aminah & Saksono, 2021). One of the sectors that is recognized as having great potential in supporting national economic growth in Indonesia is the creative economy sector.

Measuring the influence of digital transformation on organizational performance in technology startups in Indonesia.

Measuring the impact of digital transformation on organizational performance is an important step in understanding the impact of these changes on startups. One of the key indicators that can be used is productivity improvement, which is measured through operational efficiency and time spent completing tasks. In addition, the measurement of customer satisfaction is also an important indicator, where digital transformation can improve the user experience through faster and more responsive services. Analysis of sales data and customer growth after the implementation of digital technology also provides valuable insights. Many startups report significant increases in sales after adopting more efficient digital systems. By leveraging data analytics, startups can better understand customer purchasing patterns and preferences, which positively impacts their marketing and product development strategies.

Previous research has shown that digital transformation has an important role in improving organizational performance through various mechanisms. One of the significant impacts of digital transformation is increased operational efficiency. Business process automation allows companies to reduce operational costs and speed up workflows, resulting in higher efficiency (Wahyuningsih et al., 2024). In the context of startups and Micro, Small and

Medium Enterprises (MSMEs) in Indonesia, the application of digital technology has proven to be able to increase productivity and accelerate business processes, especially in the midst of fierce market competition. In addition to efficiency, digital transformation also accelerates innovation in product and service development. Technology allows companies to be more responsive to market needs by presenting new products that are relevant and innovative. According to Verhoef et al. (2021), the use of digital technology can create a competitive advantage that has a direct impact on improving organizational performance. The findings of Wahyuningsih et al. (2024) also show that the entrepreneurial ecosystem and embedded finance contribute greatly to supporting digital transformation, which ultimately accelerates product and service innovation in the MSME sector.

Digital transformation allows companies to expand the market through the use of digital platforms. With digital technology, companies can reach a wider range of customers without geographical restrictions, increase market penetration, and strengthen competitiveness (Wahyuningsih et al., 2024). The presence of various e-commerce and social media platforms allows companies to interact more effectively with customers and adjust marketing strategies according to the needs of the dynamic market. This is increasingly relevant in today's digital age, where connectivity and accessibility are key in expanding business reach. Digital transformation has a significant positive impact on organizational performance. Increasing operational efficiency, accelerating product and service innovation, and expanding the market are factors that support each other in creating a competitive advantage. Therefore, companies that are able to optimize digital technology will be more adaptive and competitive in the ever-changing global market.

Identify Factors which affects the successful implementation of digital transformation in technology startups in Indonesia.

The successful implementation of digital transformation in tech startups is greatly influenced by a number of factors. First, support from top management is key to creating a culture that supports innovation and change. Proactive management can provide the necessary resources and encourage employees to adapt to new technologies. In addition, the availability of training and skill development also plays a big role in ensuring that employees have the ability to utilize the applied technology. Another factor that is no less important is adequate technological infrastructure. Startups that have access to the latest technology and efficient systems are more likely to succeed in digital transformation. Collaboration with third parties, such as technology providers and educational institutions, can also help address the lack of resources and knowledge. By identifying and managing these factors, startups can increase their chances of success in implementing digital transformation.

Digital transformation also has a direct effect on employee performance in the organization. A study at PT Pegadaian Jamblang Sub-Branch shows that digital transformation contributes positively to improving employee performance, although this influence can still be optimized through human resource development and optimization of technology application (Irfandani et al., 2023). These findings confirm that the success of digital transformation depends not only on technological sophistication, but also on the readiness of organizations to adopt changes and build an adaptive work culture. In addition to supporting business operations, digital transformation is also an important foundation in development business

strategy and product innovation. For example, Tokopedia, through features such as Tokopedia Salam, has successfully targeted the growing sharia market in Indonesia. This innovation shows how companies can use digital transformation to create products that meet the needs of specific market segments, while increasing added value for consumers (Fradesa et al., 2022). Digital-based product innovation is a key strategy for startups in maintaining competitiveness in the midst of increasingly dynamic market competition.

Knowing the challenges faced by technology startups in Indonesia in the digital transformation process.

The digital transformation process in technology startups in Indonesia is inseparable from various significant challenges. One of the main challenges is the limited funds for investment in new technologies. Many startups operate on tight budgets, making it difficult to allocate enough resources to the necessary technology. Additionally, the risk of failure in the implementation of new technologies can hinder decisions to invest further, creating uncertainty that stifles growth. In addition to financial problems, another challenge faced is resistance to change among employees. Many employees feel uncomfortable with new technologies or lack the necessary skills to adapt, which can create barriers in effective implementation. Therefore, it is important for startups to develop a good change management strategy, including clear training and communication, so that all parties can better embrace digital transformation.

Research on digital transformation and its impact on organizational performance has been conducted by various researchers, both at the international and national levels. Mahmood et al. (2019) highlight the challenges and impacts of implementing digital transformation in organizations, showing that proactive strategies in technology and knowledge management can improve operational efficiency. However, this study has not specifically discussed the application of digital transformation to technology startups in Indonesia, which have unique and dynamic business characteristics. At the national level, Riduan and Firdaus (2024) examine the influence of organizational culture, digital competencies, and business strategies on performance in the telecommunications industry. This research is relevant because it shows that an adaptive organizational culture and business strategies aligned with digital transformation can improve performance. However, the context of research focused on the telecommunications sector makes the results less applicable to technology startups that face different challenges and business dynamics. As such, it's important to continue to explore the specific challenges that tech startups face in their digital transformation process.

CONCLUSION

This research highlights that digital transformation is crucial for tech startups in Indonesia, like Tokopedia, where success depends not only on adopting technologies such as cloud computing, big data, and AI but also on fostering an adaptive organizational culture and supportive management. Digital transformation has significantly enhanced operational efficiency, customer experience, and innovation, leading to increased productivity and competitive advantage. However, startups face challenges including limited financial resources and employee resistance, indicating the need for effective change management strategies. Factors such as top management support, adequate training, and robust technology infrastructure have proven essential for successful implementation. Future research should

explore the long-term impact of digital transformation on startup sustainability and scalability, as well as strategies for overcoming cultural and financial barriers to technology adoption in emerging market startups. This would provide deeper insights into optimizing digital transformation processes for sustained organizational performance in Indonesia's dynamic digital economy.

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