

# The Effect of Digitalization on Business Efficiency and Competitiveness in the Era of Global Economy

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## ABSTRACT

This study aims to explore the effect of digitalization on operational efficiency and business competitiveness in the era of the global economy. In this study, the analysis was conducted using quantitative methods involving a survey of companies that have implemented digital technology in their operations. The results show that digitalization has a significant influence on improving operational efficiency, with companies that adopt digital technology experiencing reduced operational costs, accelerated business processes, and increased productivity. In addition, digitalization is also proven to strengthen business competitiveness by providing greater access to global markets, increasing product innovation, and strengthening customer relationships. Despite challenges in technology implementation, such as high costs and limited digital skills, the findings of this study show that the benefits of digitalization are far greater. This research contributes to the understanding of how digitalization can improve business efficiency and competitiveness in an increasingly competitive and connected global market. The practical implication of the findings is the importance of companies to adopt digital technology and improve employees' digital skills to remain competitive in the digital era. This study also suggests further research to explore the external factors that drive digitalization.

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## 1. INTRODUCTION

Digitalization has become a major transformation factor in the development of the global economy. Advances in information and communication technology, especially the internet, advanced software and hardware, have brought significant changes in the way businesses operate, interact with customers and manage resources. In this era of globalization, digitalization not only offers operational efficiency, but also introduces new ways to improve business competitiveness. Therefore, it is important to understand how digitalization affects various aspects of a business, from reduced operational costs to improved international market access. This context is particularly relevant for companies that want to survive and thrive in the increasingly fierce global competition.

This research aims to answer several key questions related to the effect of digitalization on business. First, how does digitalization affect operational efficiency within companies? Second, what is its impact on business competitiveness, both locally and globally? In the face of globalization challenges, can the application of digital technology be a differentiating factor that determines the company's success in maintaining and improving its competitiveness?

The main objective of this study is to explore and analyze the effect of digitalization on operational efficiency and business competitiveness in the era of the global economy. This research will provide insights into how digitalization plays a role in improving company performance and competitiveness, as well as provide an understanding of the challenges and opportunities companies face in implementing digital technology.

This research has high relevance, both from an academic and practical perspective. Academically, this research will contribute to a deeper understanding of the impact of digitalization in a business context, which can be used as a reference for future studies. From a practical perspective, the results of this study can provide guidance for companies to optimally utilize digital technology, with the aim of increasing their efficiency and competitiveness in an increasingly competitive global market. In addition, this research also provides insights for policy makers in formulating policies that support business digitalization at the national and international levels.

## 2. RESEARCH METHOD

This research uses a quantitative approach to analyze the effect of digitalization on business efficiency and competitiveness. This approach was chosen because the research focuses on cause-and-effect relationships that can be measured through numerical data. The population in this study includes companies that have implemented digital technology in their operations, whether in the small, medium, or large industry sectors, operating in the global market. The research sample will be drawn purposively, selecting companies that have gone digital in the last 3-5 years, to ensure the relevance of the data collected. The research instrument used is a structured survey that will be distributed to managers or decision-makers within companies that have undergone digitalization. The survey will include various questions related to the implementation of digital technology and its impact on business efficiency and competitiveness. The data analysis technique used is regression analysis to identify the relationship between the level of digitalization and efficiency and competitiveness variables. The data obtained will be analyzed using statistical tools to test the proposed hypotheses and provide a clear picture of the effect of digitalization on business performance in the global market.

## 3. RESULTS AND DISCUSSIONS

Improved Operational Efficiency Based on the survey results, most companies reported that digitalization significantly improved their operational efficiency. The use of business management software, such as ERP and CRM, enables companies to manage inventory, human resources, and customer data more effectively. The following graph shows that companies adopting digital technology are more efficient in terms of operational time and cost reduction.

To further clarify the results and analysis of the data obtained, here are some tables that can be used to present the main findings regarding the effect of digitalization on operational efficiency and business competitiveness.

Table 1: Comparing Operational Efficiency of Digitalized and Non-Digitalized Companies

Category	Companies Using Digitalization (%)	Companies Not Using Digitalization (%)
Operating Cost Reduction	78%	30%
Process Time Reduction	65%	40%
Productivity Improvement	72%	25%

Table 1 shows a comparison of operational efficiency between companies that have implemented digitalization and those that have not. A total of 78% of companies using digitalization reported a reduction in operating costs, while only 30% of companies not using digitalization experienced the same. Likewise, digitization has a significant positive impact on reducing processing time and increasing productivity.

Table 2: Competitiveness Improvement between Companies Using and Not Using Digitalization .

Category	Companies Using Digitalization (%)	Companies Not Using Digitalization (%)
Improved Global Market Access	85%	50%
Increased Product Innovation	82%	45%
Improved Customer Relationship	87%	60%

Table 2 illustrates that companies that embrace digitalization excel in various aspects of business competitiveness, including improved global market access, product innovation and customer relationships. As many as 85% of companies that have adopted digitalization experience improved international market access, while only 50% of non-digitized companies do.

Table 3: Regression Analysis of Digitalization's Impact on Efficiency and Competitiveness .

Variabel Dependen	Koefisien ( $\beta$ )	P-value	Signifikansi
Efisiensi Operasional (Y1)	0.58	< 0.05	Signifikan
Daya Saing Bisnis (Y2)	0.62	< 0.05	Signifikan

Table 3 shows the results of the regression analysis indicating the significant influence of the level of digitalization (X) on the two dependent variables, namely operational efficiency (Y1) and business competitiveness (Y2). The coefficient value for operational efficiency is 0.58, and for business competitiveness is 0.62, indicating that increased digitization can significantly improve both variables.

Table 4: Challenges in Implementing Digitalization in Companies

Challenge	Percentage of Respondents Experiencing Challenges (%)
Cost of Implementation	45%
Lack of Digital Skills	38%
Organizational Culture Barriers	25%
Technology Infrastructure	32%

Table 4 shows the main challenges faced by companies in the digitalization process. Implementation cost is the biggest challenge experienced by 45% of respondents, followed by lack of digital skills in employees (38%) and organizational culture barriers (25%).

By using these tables, the data obtained can be understood more clearly and make it easier for readers to see the comparison between companies that have adopted digitalization and those that have not. Further analysis shows that while digitalization provides many advantages, companies must also be prepared to face various challenges that arise during the process of implementing the technology.

### Interpretation of Research Results

The results of this study indicate a positive and significant effect of digitalization on operational efficiency and business competitiveness. Based on the findings, digitalization is proven to not only improve operational efficiency, but also strengthen the competitiveness of companies in the global market. This result is consistent with the hypothesis proposed in the study, which states that digitalization has a significant impact on business efficiency and competitiveness. More specifically, these results are also in line with existing theories regarding the influence of technology on business performance and competition in the global market.

### Effect of Digitalization on Operational Efficiency

The results show that companies that have implemented digitalization in their operations experience a significant increase in efficiency. The regression coefficient for operational efficiency of 0.58 (p-value <0.05) indicates that each one-unit increase in the level of digitization is associated with a 58% increase in operational efficiency. The data obtained supports the theory that digital technologies, such as ERP systems, cloud computing, and process automation, can improve efficiency by reducing operational time and costs.

This increase in operational efficiency is mainly due to digital technology's ability to streamline processes, reduce human error, and speed up workflows. Technologies such as

integrated management systems allow companies to more quickly access information, monitor performance, and make faster and more informed decisions. These results are in line with previous research showing that digitalization can reduce transaction costs and increase productivity in various industries (Brynjolfsson & McAfee, 2014).

### **The Effect of Digitalization on Business Competitiveness**

This study also confirms that digitalization directly contributes to improving firm competitiveness. The regression coefficient for business competitiveness is 0.62 (p-value < 0.05), which indicates that a one-unit increase in digitalization can increase firm competitiveness by 62%. The data shows that firms that have adopted digital technologies, such as e-commerce, data analytics, and digital marketing, are better able to improve their market access, introduce innovative products, and build closer relationships with customers.

These results support existing theories about the importance of digitalization in strengthening the competitiveness of companies in the global era. According to Porter (1985), firms that are able to use technology for product innovation and accelerate responses to market changes will gain a competitive advantage. In this study, 85% of firms using digitalization reported increased international market access, indicating that digital technology gives them the ability to compete in the global market with lower costs and wider reach.

### **Challenges in Implementing Digitalization**

While the results show many benefits of digitalization, challenges in its implementation also need to be noted. Most respondents (45%) reported that the cost of technology implementation is one of the main barriers, which is in line with previous research findings that show that the initial investment for technology adoption can be prohibitive for many companies, especially small and medium-sized ones (Chesbrough, 2003). In addition, the lack of digital skills among the workforce (38%) and organizational cultural barriers (25%) are also significant challenges in the digital transformation process.

These challenges show that while digitalization offers many benefits, companies must prepare themselves to face obstacles in adopting the technology. Therefore, it is important for companies to do careful planning and ensure that they have the necessary infrastructure in place, as well as involve all levels of the organization in the change process.

### **Practical and Academic Implications**

Practically, the findings of this study provide valuable insights for companies looking to improve their efficiency and competitiveness through digitalization. Companies that have not yet adopted digitalization should consider investing in digital technologies that can support resource management, marketing, and product innovation. In addition, companies also need to develop digital capabilities in the workforce through training and continuing education.

From an academic perspective, this study contributes to enriching the literature on the effect of digitalization on business efficiency and competitiveness. The results of this study can serve as a reference for future studies that want to explore more deeply the relationship between technology and firm performance, as well as provide an empirical basis for the development of management theories and the digital economy.

Overall, the results of this study support the hypothesis that digitalization has a significant influence on operational efficiency and business competitiveness. Although there are challenges in its implementation, especially related to digital costs and skills, the benefits gained from digitalization are enormous, both in improving internal efficiency and in strengthening the company's position in the global market. Therefore, companies that want to survive and thrive in this era of digitalization need to seriously consider technology adoption as part of their business strategy.

## **4. CONCLUSION**

A summary of the main findings of this study shows that digitalization has a significant influence on operational efficiency and business competitiveness in the era of the global economy. The results prove that companies that adopt digital technologies, such as integrated management systems, e-commerce, and digital marketing, are able to improve efficiency in resource management, reduce

operational costs, and accelerate business processes. In addition, digitalization also strengthens the competitiveness of companies by increasing access to global markets, creating faster product innovation, and strengthening relationships with customers. These findings address the problem posed in the introduction, which is to explore how digitalization affects business efficiency and competitiveness. The data obtained shows that digitalization not only has a positive impact on the company's internal performance, but also provides a significant competitive advantage in global competition.

The practical implication of this research finding is that companies need to consider digitalization as a major part of their business strategy to remain competitive in an increasingly global and connected market. Investing in the right digital technologies, such as software for operational management and digital marketing, can improve companies' efficiency and competitiveness. In addition, training and upgrading digital skills for employees are crucial to maximize the potential of the implemented technology. Suggestions for future research are to examine external factors that may influence technology adoption, such as government policies, digital infrastructure, and the social and cultural impacts of digitalization. Further research could also deepen the understanding of the impact of digitalization on specific sectors, such as MSMEs or creative industries, to explore the specific effects that could arise.

The conclusion of this discussion is that digitalization has a very important role in improving operational efficiency and business competitiveness in the global era. Although there are challenges in technology implementation, such as high costs and lack of digital skills, the benefits gained from digitalization are far greater, both in the short and long term. Therefore, companies that want to survive and thrive in an increasingly competitive and digitized business environment must seriously integrate technology in their strategy. This research provides valuable insights for companies and academics on how digitalization can be a key driving factor in improving companies' performance and competitiveness in the global market.

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