International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

The Role of Information Technology in Overcoming Business Development Barriers in the Era of Globalization

Sabrina Arsy Wijaya [1], Ana Sakinah[2], Umi Makhbubi Zakiyah[3], Aini Zaqiyah[4], Nunuk Indarti[5]

[1] Economics Education Student at PGRI Wiranegara University, Pasuruan, Indonesia
[2]Economics Education Student at PGRI Wiranegara University, Pasuruan, Indonesia
[3]Economics Education Student at PGRI Wiranegara University, Pasuruan, Indonesia
[4]Economics Education Student at PGRI Wiranegara University, Pasuruan, Indonesia
[5] Lecturer in Economics Education at PGRI Wiranegara University, Pasuruan, Indonesia

Corresponding Author: nunukindarti53@gmail.com, arsysabrin@gmail.com.

Abstract

Information Technology (IT) in overcoming business development barriers in the era of globalization. Globalization creates various obstacles such as increasingly fierce international competition, rapid market changes, limited access to information, and demands for operational efficiency. Through a literature review approach, this article identifies these key barriers and analyzes the contribution of IT as a strategic solution. IT plays a role in improving information access and expanding markets through digital platforms and modern marketing technologies. In addition, IT promotes operational efficiency through business process automation, system integration, and the use of management software. IT also supports data-driven decision making through big data analytics and business intelligence. However, IT implementation faces challenges such as high costs, limited human resource competencies, digital security risks, and resistance to change. Overall, IT is a key factor in strengthening business competitiveness in the global era, as long as companies are able to manage the challenges of its implementation.

Keywords: Information Technology, Business Development, Globalization, Operational Efficiency, Data-Driven Decision Making.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

INTRODUCTION

The era of globalization has brought fundamental changes to the dynamics of modern business, where companies are required to be able to adapt quickly to technological developments, international market expansion, and increasingly complex changes in consumer behavior and needs. Increasingly fierce competition and an uncertain business environment have created various obstacles, such as limited access to information, technological inequality, and increasing demands for efficiency and continuous innovation. In this context, information technology (IT) plays a key role as a catalyst in overcoming various business development challenges. Through the application of IT, companies can optimize operational processes, accelerate information flow, and expand market reach through digital platforms and e-commerce systems. In addition, the use of big data and business intelligence enables more accurate and data-driven decision making, allowing companies to adapt strategically to global market changes. IT also strengthens competitiveness by supporting inter-organizational integration and improving the quality of customer service.

However, IT implementation is not without challenges, such as high investment requirements, limited digital competence of human resources, cybersecurity risks, and resistance to organizational change. Therefore, a deep understanding of strategies for optimal IT utilization is necessary in order to provide sustainable added value to the company. This article aims to analyze the strategic role of IT in overcoming business development obstacles in the era of globalization through a literature study approach, as well as to provide a comprehensive overview of the opportunities and challenges of IT implementation in a global context..

METHOD

This study uses a qualitative method with a literature study approach obtained through Google Scholar. Various scientific articles, journals, and academic publications relevant to the topic of the role of information technology in business development were collected and analyzed using keywords such as information technology, business development, globalization, and operational efficiency. The selected sources were then examined to identify concepts, findings, and discussions that support the analysis, so that the research results can provide a comprehensive overview of the contribution of IT in overcoming obstacles to business development in the era of globalization.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

International Journal of Technology and Education Research

https://e-journal.citakonsultindo.or.id/index.php/IJETER

E-ISSN: 2986-0733

RESULTS AND DISCUSSION

Identification of Major Barriers to Business Development in the Era of Globalization

Businesses operating in the era of globalization often face internal barriers such as limited capital, production capacity, and managerial readiness. These conditions make it difficult for many MSMEs to compete with global companies that have greater resources (Karim & Gide, 2018). These barriers are the main factors holding back the pace of business development towards the international market.

In addition, low digital literacy and unequal access to information technology are also significant obstacles. Many businesses are unable to optimally utilize digital platforms due to limited skills and understanding of technology, so the application of IT to expand markets or improve efficiency is not running optimally (Lukas, 2023).

External factors such as IT implementation costs, data security issues, and global trade regulations also complicate the business development process. Limited infrastructure support and financing also result in uneven technology adoption, slowing down digital transformation in many MSME sectors (Muljono et al., 2021; Silviawati et al., 2024)

The Role of Information Technology in Improving Access to Information and Markets

The use of information technology (IT) has become a strategic factor in expanding business information access and opening up global market opportunities. Based on literature analysis, information technology (IT) plays a crucial role in improving information access for businesses in the era of globalization by providing advanced data analysis tools such as big data and artificial intelligence, which enable companies to gain deep insights into consumer behavior and market trends in real-time. This reduces geographical barriers and accelerates evidence-based decision-making, allowing businesses to adjust their strategies more effectively. In addition, IT supports cross- border collaboration through digital platforms, which ultimately increases operational efficiency and global competitiveness (Barus et al., 2024).

Furthermore, IT contributes to market expansion by facilitating e-commerce and digital marketing, which opens up opportunities for small and medium-sized enterprises (SMEs) to reach international consumers without a physical presence, thereby overcoming resource constraints and expanding market share. Platforms such as social media and web based applications enable personal interaction with global customers, which increases loyalty and responsiveness to changing market preferences. However, challenges such as data security must be overcome to maximize these benefits (Ginting et al., 2024).

Overall, IT integration in business not only improves access to information and markets but

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

also drives more adaptive business model transformation, where automation and technological innovations such as cloud computing enable real-time collaboration and reduced operational costs amid global competition. This approach strengthens business resilience to environmental changes, although it requires government support in human resource training to overcome the digital divide (Sayuti, 2023).

The Role of IT in Operational Efficiency and Business Processes

The role of information technology (IT) in improving business operational efficiency is increasingly crucial in the era of globalization. Literature studies show that the implementation of integrated information systems can reduce operational costs and accelerate work processes. For example, the implementation of technology-based management systems can automate workflows and minimize human error, thereby increasing organizational productivity. In addition, the use of digital platforms such as WhatsApp Business has also been proven to support customer communication and accelerate business responses, which has a direct impact on operational efficiency (Yulianti & Nugroho, 2025).

Furthermore, the implementation of an appropriate management accounting information system plays a major role in supporting strategic decision-making. This system enables data integration between divisions and provides real-time information needed by management to optimize resources. Thus, information technology not only functions as an administrative tool, but also as a foundation for improving the effectiveness of business strategies. IT integration in management systems helps companies conduct comprehensive operational performance analysis so that decisions made are more accurate and efficient (Elza, 2025).

In addition, the digitization of business processes through technological transformation has pushed organizations towards more adaptive and agile operations. Digital transformation enables rapid and efficient automation of the supply chain and coordination between business units. In the context of globalization, the operational efficiency resulting from IT implementation is a key factor in maintaining business competitiveness. Therefore, organizations need to continuously adjust their IT strategies to be able to face the rapidly changing and data-driven dynamics of the global market (Matondang et al., 2025).

TIT as a Data-Driven Decision-Making Solution

Information Technology (IT) has become an important solution in supporting accurate decision-making in the era of globalization. Through the use of Business Intelligence and information systems, companies can process raw data into more meaningful information.

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

(Munawar et al. (2021)) explains that data quality and information quality are key factors that determine the quality of managerial decisions. IT helps ensure that the data used is accurate, relevant, and ready to use, so that decisions made are more precise and reduce the risk of error.

In addition to improving data quality, IT also makes it easier for managers to monitor the company's condition in real time through dashboards and automated reports. This speeds up the analysis process and allows decisions to be made more quickly. (Arujisaputra, 2025) found that the implementation of information systems can improve operational efficiency and support management in identifying problems, evaluating alternative actions, and selecting the best solutions based on available data.

Thus, the combination of Business Intelligence, information systems, and good data management makes IT the main foundation for companies in facing global business challenges and improving the quality of decisions on an ongoing basis.

Challenges in IT Implementation for Business Development

The main challenge in IT implementation is the lack of experts who understand technology systems well. Many companies do not yet have competent staff, so the use of IT is not optimal (Alawamleh et al., 2021). The cost of IT implementation is also quite high, such as the procurement of equipment, software, training, and system maintenance. This is an obstacle, especially for small businesses with limited budgets (Alawamleh et al., 2021).

Inadequate infrastructure, such as unstable networks or outdated equipment, makes IT implementation less than optimal and hinders the business digitalization process (Alawamleh et al., 2021). The lack of management support is also a cause of the failure of many IT projects. Without clear budgetary and strategic support, technology development is difficult to implement effectively (Alawamleh et al., 2021).

Resistance from employees is also an obstacle because they fear change or are not yet familiar with the new system. This slows down the IT implementation process (Alawamleh et al., 2021). Data security risks are a major challenge because the use of IT increases the potential for cyber attacks and leaks of important company information (Alawamleh et al., 2021).

In addition, many companies still use old systems that are difficult to integrate with new technologies, thereby hampering the IT development process (Alawamleh et al., 2021). Overall, the challenges of IT implementation are not only related to technology, but also to the readiness of human resources, costs, infrastructure, and corporate work culture. This determines the ability of businesses to thrive in the digital era (Alawamleh et al., 2021).

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

CONCLUSION

Based on the results of the literature analysis, it can be concluded that Information Technology (IT) plays a central role in overcoming various obstacles to business development in the era of globalization. IT has proven to be capable of expanding access to information and markets, increasing operational efficiency through automation and system integration, and supporting more accurate data-driven decision making. The application of information systems, e-commerce, and data analytics not only helps companies adapt to changes in the global environment but also encourages transformation towards more innovative and sustainable business models.

However, IT implementation faces serious challenges such as limited digital competence of human resources, high investment costs, inadequate infrastructure, and information security risks. Therefore, synergy between the government, educational institutions, and the private sector is needed to strengthen digital capacity and create an inclusive business ecosystem. With the right strategy, IT will not only be an operational tool, but also a key foundation for competitive advantage and sustainable business growth in the era of globalization.

REFERENCE

Alawamleh, H. A., ALNawaiseh, K., Shibly, M., & Ali, B. J. A. (2021). The challenges, barriers and advantages of management information system development: Comprehensive review. Academy of Strategic Management Journal, 20(5), 1–7.

Ardiansyah, W. M. (2023). Peran teknologi dalam transformasi ekonomi dan bisnis di era digital. JMEB Jurnal Manajemen Ekonomi & Bisnis, 1(1), 12-16. https://journal.sabajayapublisher.com/index.php/jmeb/article/download/89/73

Arujisaputra, E. T. (2025). Penerapan Sistem Informasi untuk Meningkatkan Efisiensi Operasional dan Pengambilan Keputusan di Perusahaan. Journal Scientific of Mandalika (JSM) e-ISSN 2745-5955| p-ISSN 2809-0543, 6(3), 700-709.

Barus, D. R., Simangunsong, J. S., Ginting, S. E. B., & Saragih, L. S. (2024). Pengaruh perkembangan teknologi informasi terhadap pasar global. Jurnal Intelek Insan Cendikia, 1(4), 495–500. https://jicnusantara.com/index.php/jiic/article/download/459/524

Elza, P. (2025). Sistem Informasi Akuntansi Manajemen dalam Mendukung Keputusan Strategis Perusahaan. Jurnal Akuntansi dan Sistem Informasi, 3(2). https://pustakajurnal.web.id/index.php/jasi/article/view/21

Ginting, A. J. B., Rahmadani, D., Sembiring, M. L., Saragih, L. S., & Putriku, A. E. (2024). Kemajuan teknologi informasi dalam perkembangan bisnis global. Student Scientific Creativity

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.

Journal, 2(4), 71. https://doi.org/10.55606/sscj-amik.v2i4.3394

Karim, S., & Gide, E. (2018). Barriers to adopting e-commerce with small to mid-sized enterprises (SMEs). Global Journal of Information Technology.

Lukas, E. N. (2023). The impact of the digital divide on MSMEs' productivity in Indonesia.International Research Journal of Business Studies.

Matondang, K. A., Laia, S. R. A., & Sanjaya, A. (2025). Peran Transformasi Digital dalam Meningkatkan Efektivitas Rantai Pasok: Tinjauan Empiris dan Strategis. Jurnal Ekonomi, Riset dan Inovasi Masyarakat (JERKIN), 7(4). https://doi.org/10.31004/jerkin.v4i2.3030

Muljono, W., Setiyawati, S., Sudarsana, & Setiawati, P. P. (2021). Barriers to ICT adoption by SMEs in Indonesia. Jurnal Akuntansi & Manajemen.

Munawar, Z., Herdiana, Y., Putri, N. I., & Rustiyana, R. (2021). Dampak Intelijen Bisnis Pada Kualitas Pengambilan Keputusan. Infotronik: Jurnal Teknologi Informasi dan Elektronika, 6(1), 32-41.

Silviawati, S., et al. (2024). Peran e-commerce dalam transformasi digital UMKM. JRIME.

Yulianti, V. R., & Nugroho, R. H. (2025). Implementasi WhatsApp Business dalam Digitalisasi Pemasaran dan Pengelolaan Pelanggan pada Usaha Catering. Jurnal Sinabis, 6(2). https://jsinabis.upnjatim.ac.id/index.php/jsinabis/article/view/257

Copyright to the author of some rights reserved This work is licensed under aCreative Commons Attribution-ShareAlike 4.0 International License.