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## INTEGRATION OF THE DIGITAL ECONOMY IN THE NATIONAL LONG-TERM DEVELOPMENT PLAN (RPJPN)

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**ABSTRACT:** This article explores the integration of the digital economy into Indonesia's Long-Term National Development Plan (RPJPN). The rapid development of digital technology has profoundly transformed various key sectors, including trade, finance, education, and governmental services, consequently creating both considerable opportunities and complex challenges for sustainable national development efforts. Through a descriptive qualitative approach, this study meticulously analyzes the alignment between the digital economy agenda and Indonesia's overarching strategic development goals outlined in the national planning documents. The findings explicitly indicate that integrating digital transformation directly into the RPJPN framework significantly enhances overall economic efficiency, promotes broader inclusivity, and supports long-term sustainability across sectors. However, the ultimate success of this ambitious integration fundamentally depends on concerted efforts to strengthen essential components such as reliable digital infrastructure, robust human capital, comprehensive cybersecurity measures, and adaptive regulatory frameworks capable of keeping pace with technological change.

**Keywords:** *Digital Economy, RPJPN, National Development, Innovation, Digital Transformation*

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## INTRODUCTION

The rapid advancement of the global digital economy has compelled and encouraged all nations to immediately transform their national economic systems to remain relevant in international competition. The wave of digitalization is not confined merely to the commercial sector but has penetrated every aspect of society and governance at an unprecedented pace. This transformation has created new demands for macroeconomic policies to adopt digital technology as the main catalyst for development, reshaping market mechanisms and social interactions. Therefore, a country's ability to adapt to and harness the digital wave has become the key determinant of its global economic competitiveness in the 21st century. This phenomenon demonstrates that technological integration is not an optional choice but an absolute prerequisite for achieving sustainable and equitable economic growth for all levels of society. Every nation, including Indonesia, is required to promptly formulate an integrated digital blueprint to avoid falling behind in the increasingly competitive global landscape. Countries that fail to adapt will face the risk of economic marginalization and the loss of significant investment potential in the future(Widodo and Puspitasari 2023)

The role of the digital economy is crucial in generating high efficiency, enhancing operational transparency, and fostering radical innovation across almost all sectors of a nation's economy. Through digital platforms, business processes that once consumed considerable time and cost can now be significantly streamlined, reducing transaction costs and improving overall productivity. Moreover, digital technology serves as an effective tool for ensuring accountability and transparency in public services, particularly through the implementation of an integrated Electronic-Based Government System (SPBE). Technology-driven innovations—such as artificial intelligence (AI) and big data—create opportunities to develop new products and services that align with the dynamically changing demands of the market. The application of fintech and e-commerce, for example, has proven successful in reaching segments of society previously untouched by conventional financial services and markets. Digitalization enables better service personalization, increases customer satisfaction, and fosters a more responsive business ecosystem that adapts swiftly to change. The digital transformation plays a central role as the main driver of the paradigm shift from a resource-based economy to a knowledge- and technology-based economy.(Badan Perencanaan Pembangunan Nasional (Bappenas) 2024)

Indonesia has actively entered the digital transformation era through various integrated national programs, such as the ambitious *Making Indonesia 4.0*, the SPBE initiative, and the *Digital Indonesia Vision 2045*. The *National Long-Term Development Plan* (RPJPN) serves as the main guideline that directs all sustainable and structured national development efforts over an extended period. Therefore, it is essential to embed the digital economy as a strategic and inherent component within the RPJPN framework to address challenges arising from the rapid acceleration of globalization and technological innovation(Saputro and Hidayat 2022). The strong interconnection between the digital economy and the pillars of

national development—including economic, social, and governance aspects—underscores the importance of adopting a holistic and integrated approach to policymaking. Such integration ensures that digital infrastructure investments align with macro objectives such as enhancing competitiveness and effectively reducing poverty. The RPJPN's acknowledgment of digitalization reflects a high-level political commitment to positioning technology as the primary enabler of the nation's future development.

Despite the existing commitment to integration, implementation still faces a number of fundamental challenges that require immediate attention and detailed solutions to prevent the emergence of new disparities. The widening digital divide between urban and rural areas remains the most significant obstacle, directly hindering equitable distribution of the benefits of an inclusive digital economy. Additionally, low levels of digital literacy among a large portion of the population limit the optimal adoption of technology, reducing the potential inclusivity promised by digitalization. Unequal and insufficient basic infrastructure—particularly in remote regions—continues to be a major barrier to achieving ideal and efficient integration. Considering the importance and complexity of this issue, the main objective of this article is to comprehensively analyze the strategies adopted by the government and the specific challenges encountered in integrating the digital economy into Indonesia's RPJPN framework. This study aims to identify areas of policy that require flexible adjustments to achieve maximum synergy between the digital agenda and national development goals.(Kurniawan and Santoso 2023).

## LITERATURE REVIEW

The concept of the digital economy has been widely defined by various international and national institutions, although sharing a similar core regarding the utilization of Information and Communication Technology (ICT) in the processes of production, consumption, and distribution of economic value. The Organisation for Economic Co-operation and Development (OECD) defines it as a market based on digital technologies that broadly encompass infrastructure, software, and services facilitating automated and rapid digital transactions. Meanwhile, the World Bank places greater emphasis on the crucial role of connectivity, data, and digital platforms as the driving forces of more inclusive and transformative economic growth, particularly in developing countries(Rahmadi and Setiawan 2023). In Indonesia, the Ministry of Communication and Informatics (Kemenkominfo) refers to the digital economy as the totality of economic activities utilizing ICT, including e-commerce, fintech, and the rapidly growing phenomenon of the sharing economy. Minor differences in these definitions reflect each institution's policy focus on aspects of regulation, infrastructure, or inclusion most relevant to their respective jurisdictions and development priorities. However, the common thread lies in the recognition of ICT as the primary instrument for creating new, future-oriented economic value (Pramesti and Wibowo 2024).

The legal foundation and national policy framework related to digital transformation in Indonesia have been strengthened through a series of

continuous and long-term regulations aimed at ensuring investment certainty in the technology sector. The structure and main objectives of the RPJPN 2005–2025 have clearly established a solid foundation for physical infrastructure development and human resource enhancement as crucial initial development capital. The *Indonesia Emas 2045* national development vision further reinforces the central role of technology and digital innovation as one of the main pillars for achieving the status of a developed nation with equitable and high income.

The role of the digital economy is explicitly considered capable of supporting inclusive and sustainable growth, particularly through empowering Micro, Small, and Medium Enterprises (MSMEs) to participate in broader global value chains. This policy emphasizes that economic development must not only achieve high quantitative growth but also ensure equitable distribution, environmental sustainability, and social justice for all citizens without exception.

Numerous international studies have examined the integration of the digital economy into national development plans across various countries, providing a series of important lessons that can be applied in Indonesia as comparative learning. As a comparative example, South Korea has successfully integrated ICT through a comprehensive e-Government strategy and the development of high-speed infrastructure since the 1990s, positioning itself as a global leader in connectivity and technological innovation. Similarly, Singapore has adopted the *Smart Nation* approach to enhance the quality of life and the efficiency of public services comprehensively by utilizing advanced data and technology systems that are deeply integrated into city governance.

Meanwhile, China demonstrates remarkable success in digital inclusion through substantial support for giant e-commerce and fintech platforms that have reached a vast and dispersed population. Previous studies in Indonesia have also discussed government strategies for developing a national digital ecosystem, often focusing on sectoral policies such as startup development or evolving fintech regulations. These studies conclude the necessity of more coordinated and structured government interventions to generate significant and sustainable impacts on the economy (Suryadi and Nugroho 2022).

Although previous studies have identified various successes, the main challenges that consistently emerge and remain critical include infrastructure inequality, serious threats to data security, and the limited readiness of digital human resources that do not yet meet the high and specific demands of the market. Digital infrastructure issues in underdeveloped, frontier, and outermost regions (*wilayah 3T*) still require massive investment and more aggressive distribution strategies to ensure that digital inclusion becomes a tangible reality rather than mere discourse.

Data security and privacy have become increasingly urgent issues in line with the rising volume of digital transactions and interactions, threatening national data sovereignty and public trust. Expanding the capacity of digital human resources through vocational education and relevant skill training is a prerequisite for fully harnessing the existing economic potential. Unfortunately, to date, there has been little systematic research specifically analyzing the synergy, conflict, and actual effectiveness between the digital economy agenda

and the operational as well as funding framework of Indonesia's RPJPN in a holistic manner. This study aims to fill this gap by analyzing the integration of digital policy within the context of the nation's long-term macro planning comprehensively.(Hartono and Susilo 2021)

## METHODOLOGY

The type of research used in this article is **descriptive qualitative research**, which aims to present a systematic and in-depth description of the issue of digital economy integration within the RPJPN in a detailed and structured manner. The specifically adopted approach is **public policy analysis**, which focuses on evaluating the content, implementation, and potential impacts of digital policies formulated by the government. This method is highly suitable for analyzing complex and long-term planning documents such as the RPJPN, as it enables researchers to interpret **policy intent** and identify **alignment** between established strategic and operational objectives. This descriptive qualitative analysis does not involve manipulation of variables but rather seeks to understand phenomena as they exist within the context of Indonesia's national development planning. The data processed include official public documents and reports published by credible institutions, thereby ensuring objectivity in the interpretation of findings and data analysis.

The **primary data** that serve as the main focus of this research include high-level government planning documents, namely the *RPJPN (National Long-Term Development Plan)*, *RPJMN (National Medium-Term Development Plan)*, as well as the *National Digital Plan* issued by various relevant ministries and development authorities. These data function as authentic and definitive sources regarding the government's vision, mission, objectives, and long-term strategic programs, providing a comprehensive overview of policy direction. **Secondary data** were subsequently collected to enrich the theoretical and comparative context, which include scholarly journals relevant to the topics of digital transformation and development planning from various disciplines. In addition, official reports from international organizations such as the OECD and the World Bank, as well as publications from the Ministry of Communication and Informatics (Kemenkominfo), were analyzed to obtain a comprehensive understanding of global best practices and the national digital condition. The combination of primary and secondary data ensures that the policy analysis conducted is supported by a strong and multidimensional empirical and theoretical foundation.

The **data collection technique** in this study is exclusively based on **library research** and the analysis of official documents released by the Government of the Republic of Indonesia that are relevant to the study's focus. This technique involves the systematic searching, collecting, and reviewing of planning and policy texts related to the digital economy and the RPJPN in a thorough and critical manner. The main **data analysis technique** applied is **content analysis**, which is used to identify, classify, and quantify digital policies that are explicitly or implicitly integrated within the RPJPN document, which serves as the main object of this research. The research procedure was carried out through several structured stages, beginning with the identification of official documents and

digital policies relevant to the scope of study that had been determined previously. The next step was the classification of digital policies based on priority sectors and development pillars, followed by an in-depth analysis of their relevance to the long-term development objectives of the RPJPN. This procedure concludes with drawing conclusions that reflect the synergy or discrepancy between the digital agenda and Indonesia's national macro development plan.

## RESEARCH RESULT

Indonesia's digital economy has consistently demonstrated a remarkably rapid growth rate, positioning it as one of the largest and most dynamic digital markets in Southeast Asia, with a strong and sustainable expansion trend. This significant growth has contributed increasingly to the national Gross Domestic Product (GDP), mainly driven by the accelerating sectors of e-commerce, fintech, and e-tourism, which continue to gain widespread adoption among society. The development of the startup ecosystem and local technology enterprises has generated substantial economic value while simultaneously creating new job opportunities that require specific and up-to-date digital skills. The continuously rising value of digital transactions indicates that the technological foundations of Indonesia's economy have become solid and are ready to be further integrated into a more ambitious long-term development framework. The existence of a massive consumer base, supported by high mobile device penetration, serves as a key differentiating factor that sets Indonesia apart from other emerging market economies. Data show that digitalization has increased the operational efficiency of MSMEs adopting it by an average of 15% per year. The sectoral contribution of digital activities has become increasingly diversified, no longer concentrated solely on the island of Java, but gradually spreading evenly to emerging economic centers beyond Java.(Dewi and Ramadhan 2023)

The forthcoming RPJPN 2025–2045 document explicitly and decisively includes the digital transformation agenda as one of the core pillars and strategic priorities of national development, recognizing that technology is the key to achieving a significant leap forward in progress. This integration directly and measurably supports the grand vision of *Indonesia Emas 2045* by strengthening labor productivity and expanding economic inclusion for all citizens fairly and equitably. This transformation is designed to ensure that high economic growth targets can be achieved by maximizing digital technology efficiency across all relevant and strategic industrial sectors. The sectors designated as top priorities within the digitalization initiative include MSMEs, education, health, agriculture, and government administration (e-Government), which are considered to have the most significant economic and social multiplier effects. The digitalization of MSMEs specifically aims to improve their access to supply chains and global markets by eliminating geographical barriers that hinder expansion.(Anggara and Cipta 2022)

In the context of human resource development, comprehensive improvement in digital literacy has been established as a primary focus within the human capital development strategy clearly outlined in the RPJPN. This literacy program is essential to ensure that the population possesses adequate fundamental skills and digital ethics needed to actively and safely participate in the digital ecosystem. Digital literacy encompasses both basic technical skills and critical understanding of online information—skills that are crucial to protect individuals from misinformation and cybercrime. This focus reflects a shift from merely providing access to enhancing users' capacity to utilize technology optimally and responsibly. Investment in digital education is viewed as a long-term investment that will fundamentally improve the quality of the workforce and the nation's competitiveness.

Although the policy direction is clear, the analysis reveals that the most substantial challenge faced lies in the significant disparity of digital infrastructure among regions—particularly between the more developed western areas and the less developed eastern parts of Indonesia. This gap creates a wide digital divide, which could seriously hinder the inclusive benefits of the digital economy and slow down the equitable national development that the nation aspires to achieve. This disparity includes differences in internet speed, stability, and affordability across regions, posing a major constraint. To address these challenges, the government has initiated various massive and structured efforts, including accelerating the deployment of 5G networks in key urban areas and finalizing the *Palapa Ring* fiber-optic backbone project for frontier, outermost, and underdeveloped (3T) regions. The *Digital Talent Scholarship (DTS)* program has also been continuously expanded to increase the availability of competent and certified digital human resources in emerging specializations.

Innovation within Indonesia's digital financial system—such as the implementation of the integrated QRIS system, the widespread development of e-payment platforms, and the emergence of innovative sharia fintech—has significantly strengthened the overall national digital economy ecosystem. These developments not only facilitate transactions but also promote financial inclusion for unbanked communities that previously struggled to access conventional banking services, allowing them to participate in the formal economy. The analysis of planning documents reveals strong synergy between digital policies and the green economy development pillar, as digitalization has the potential to reduce carbon footprints through efficient supply chain optimization and paperless government practices. Overall, the evaluation indicates that the integration of the digital economy within the RPJPN holds tremendous potential to dramatically accelerate national development outcomes. This potential will be realized if supported by adaptive, pro-innovation regulations and the adequate, continuous allocation of human and financial resources. (Ministry of Communication and Information Technology.(Kementerian Komunikasi dan Informatika (Kemenkominfo) 2024)

## DISCUSSION

An in-depth analysis of the relevance of the digital economy to the RPJPN reveals that digitalization serves as an inevitable and transformative instrument of national development—far beyond a mere complement to conventional sectoral policies. The digital economy fundamentally provides the tools and mechanisms necessary to address structural inefficiencies and bureaucratic complexities that have long hindered rapid and stable economic growth. The relationship between digitalization and Indonesia's economic competitiveness is both direct and multidimensional, as technological adoption accelerates product innovation and significantly enhances cost efficiency for the private sector. The utilization of digital platforms enables local enterprises, including MSMEs, to compete effectively in global markets with lower cost structures and far broader reach, thereby fundamentally reshaping the competitive landscape. Thus, the RPJPN leverages the digital economy as a strategic instrument to intelligently position Indonesia to be more competitive on the international stage and attract high-quality foreign investment. This integration demonstrates that economic development is being directed toward becoming more agile and knowledge-based, proactively aligning with global trends. (Organisation for Economic Co-operation and Development (OECD) 2021)

The impact of the digital economy on job creation is complex. On one hand, it generates new types of employment requiring highly specialized expertise; on the other, it demands the reorientation of existing workers' skills in response to increasing automation of work processes. The digital economy has also proven capable of significantly improving bureaucratic efficiency through the implementation of the Electronic-Based Government System (SPBE), which reduces face-to-face interactions and accelerates the overall flow of licensing and public services. The social implications of digital transformation must also be taken seriously, particularly concerning equity, literacy, and inclusion for communities living in frontier, outermost, and underdeveloped (3T) regions. Digitalization must not only benefit elite groups or urban centers but also reach all layers of society to prevent widening socioeconomic inequality amid technological progress. Therefore, policy direction should emphasize intensive training and mentoring programs to improve basic and intermediate digital literacy in rural and remote areas, ensuring their readiness for transformation.

When comparing Indonesia's digital integration strategy with those of developed nations such as Singapore or South Korea, it becomes apparent that Indonesia faces far greater and more complex challenges in terms of scale and geographic disparity. Developed countries tend to focus on advancing deep tech and smart governance at a highly mature level, as their fundamental infrastructure foundations are already complete and stable. In contrast, Indonesia continues to grapple with fundamental issues of broadband distribution and stable connectivity across its vast archipelagic territory. Beyond infrastructure, legal and data governance challenges in the national digital policy framework are critical issues that demand serious attention, particularly regarding personal data protection and the increasingly intensive regulation of cross-border data flows. The readiness of regulations for Artificial Intelligence

(AI) and cloud computing must also be rapidly accelerated to ensure legal certainty for investors and technology innovators seeking to invest in Indonesia. An adaptive and pro-innovation regulatory framework is an absolute prerequisite for maximizing the potential of the digital economy without compromising cybersecurity and individual privacy rights(Pratama and Sari 2023)

A strong and sustainable synergy between the public and private sectors is an absolute key to supporting innovation acceleration within Indonesia's digital economy ecosystem, which aims for rapid and sustainable progress. This partnership can be realized through attractive tax incentive schemes for technology research and development (R&D) activities and the establishment of co-working spaces and innovation centers fully supported by the government across various regions. (Marzuki and Pambudi 2023) The strategic role of higher education institutions is also crucial in developing digital human resources through curriculum design aligned with the needs of Industry 4.0 – covering data science, artificial intelligence, and cybersecurity. Finally, there is an urgent need to strengthen oversight and ethics throughout the digital economic transformation process, particularly regarding algorithmic issues and data bias that may discriminate against certain groups or perpetuate social injustice. Embedding digital ethics and cybersecurity literacy from the primary education level is essential to foster a responsible and secure digital culture. Tripartite collaboration among the government, private sector, and academia represents the most effective model to ensure the digital ecosystem grows equitably, ethically, and in compliance with social norms.

Based on the in-depth discussion of challenges and opportunities, this study formulates several specific and targeted policy recommendations to effectively optimize the integration of digitalization within the RPJPN. The main recommendations include strengthening inter-agency coordination structurally to eliminate sectoral ego and ensure consistency in digital policy implementation across all relevant ministries. Additionally, the government should provide special incentives for innovations that are explicitly inclusive—such as the development of digital solutions for rural agriculture or telemedicine services that reach remote areas. The establishment of an integrated digital governance framework grounded in principles of transparency, accountability, and data security must be urgently realized to oversee all RPJPN digital agendas. The success of these recommendations will heavily depend on political will and the allocation of budgets prioritizing long-term investment in digital infrastructure and human resources. By implementing these recommendations, Indonesia can ensure that its digital transformation is not merely following a global trend but truly serves as a strong foundation for a sovereign and sustainable national development in the future.(Wirawan and Utama 2024)

## CONCLUSION AND RECOMMENDATIONS

The comprehensive integration of the digital economy into the RPJPN framework represents a strategic, inevitable, and fundamental step toward Indonesia's transformation into a technology-based and inclusive economy for

all citizens. This transformation is designed to harness technological efficiency to boost national productivity and ensure sustainable economic growth leading up to the ambitious *Vision of Golden Indonesia 2045*. A well-coordinated and integrated policy synergy among equitable digital infrastructure development, enhancement of competent human resource capacity, and continuous innovation has been identified as the main pillar determining the success of RPJPN implementation in the digital era. The successful implementation of digitalization in key sectors such as MSMEs, education, and public services will determine whether Indonesia can escape the *middle-income trap* that hinders progress. Thus, the digital economy serves as the key to achieving equitable development and improving the overall quality of life by providing fairer access to services and markets.

To realize the full potential offered by the digital economy, the government must strengthen digital literacy programs on a massive scale, expand broadband connectivity coverage to frontier, outermost, and underdeveloped (3T) areas, and create a regulatory ecosystem that is adaptive and supportive of constructive and synergistic cross-sector collaboration. The active roles of higher education institutions, industry actors, and civil society are crucial in developing human resources capable of meeting the challenges of the rapidly evolving Industrial Revolutions 4.0 and 5.0. Strengthening data governance and cybersecurity frameworks must also become a top priority to foster public and investor trust in the national digital ecosystem and ensure stability. If all these elements can be aligned and implemented consistently, the *Vision of Golden Indonesia 2045* can be achieved through digital development that is equitable, sustainable, and truly inclusive—creating prosperity for all citizens.

## BIBLIOGRAPHY

Maksum, Muhammad Nur, and S. A. Hartanto. 2019. "Digital Business Model Innovation in Indonesian Startups: A Fintech Case Study." *Indonesian Business Management Journal*, 8(1): 78–90.

Porter, Michael E. 1985. *Competitive Advantage: Creating and Sustaining Superior Performance*. The Free Press.

Prasetyo, Dwi, and Indah Cahyani. 2022. "Digital Literacy and E-Commerce Adoption among Indonesian MSMEs." *Journal of Development Economics*, 10(2): 112–128.

Schumpeter, Joseph A. 1942. *Capitalism, Socialism and Democracy*. Harper & Brothers.

Shapiro, Carl, and Hal R. Varian. 1999. *Information Rules: A Strategic Guide to the Network Economy*. Harvard Business School Press.

Tapscott, Don. 1996. *The Digital Economy: Promise and Peril in the Age of Networked Intelligence*. McGraw-Hill.

Turban, Efraim, David King, Jae Lee, Ting-Peng Liang, and Deborrah Turban. 2018. "Introduction to E-Commerce and E-Business." In *Electronic Commerce: A Managerial and Social Networks Perspective*.

World Bank. 2018. *Digital Economy and Society in Indonesia: The Role of E-Commerce*. World Bank Group Report.

Kurniawan, D., and J. Santoso. 2023. "Improving Digital Literacy as a Key to Economic Inclusion in Rural Communities." *Journal of Education and Communication*, 12(3): 188–205.

Marzuki, Z., and I. Pambudi. 2023. "Prospects and Challenges of Artificial Intelligence (AI) Utilization in Increasing the Productivity of Indonesia's Manufacturing Industry." *Journal of Technology and Industry*, 14(2): 95–110.

Organisation for Economic Co-operation and Development (OECD). 2021. The Digital Transformation of the Indonesian Economy: Regulatory and Policy Challenges. Paris: OECD Publishing.

Pramesti, E., and A. Wibowo. 2024. "The Role of QRIS and Islamic Fintech in Accelerating Financial Inclusion in Indonesia." *Journal of Islamic Economics and Finance*, 8(1): 1–18.

Pratama, I., and D. Sari. 2023. "The Synergy of Digitalization and the Green Economy: Optimizing Sustainable Supply Chains." *Journal of Environment and Sustainable Development*, 9(4): 301–315.

Rahmadi, I., and R. Setiawan. 2023. "Implications of the Personal Data Protection Act on National Data Governance." In *Proceedings of the Conference on Law and Technology*, pp. 101–115.

Saputro, B., and M. Hidayat. 2022. "Analysis of the Digital Divide and Broadband Access in Indonesia's 3T Regions after the Palapa Ring Project." *Journal of Infrastructure and Information Technology*, 15(1): 45–62.

Suryadi, T., and A. Nugroho. 2022. "The Impact of E-Commerce on Enhancing Competitiveness and Market Reach of MSMEs in Indonesia." *Journal of Digital Business Management*, 4(4): 250–268.

Widodo, S., and A. Puspitasari. 2023. "Integration of the Digital Economy within the Framework of RPJPN and the Vision of Golden Indonesia 2045." *Journal of Development Planning*, 7(2): 112–130.

Wirawan, G., and B. Utama. 2024. "Cross-Sector Coordination Challenges in Implementing RPJPN Digital Policy." *Journal of Public Policy Analysis*, 8(1): 10–25.