

## Creative Economy as a Driver of Economic Growth in the Digitalization Era

Anandiya Pingki<sup>1</sup> , Eddy Silamat<sup>2</sup> , Hernawati<sup>3</sup> ,  
Rashid Rahman<sup>4</sup> 

<sup>1</sup>Universitas Pat Petulai, Indonesia

<sup>2</sup>Universitas Pat Petulai, Indonesia

<sup>3</sup>Universitas Nahdlatul Wathan Mataram, Indonesia

<sup>4</sup>Universiti Putra, Malaysia

### ABSTRACT

**Background.** The creative economy has become one of the main sectors in the global economy, especially in the era of digitalization that allows the transformation of business models based on innovation and technology. The development of digital technology provides opportunities for creative industry players to expand market reach, improve production efficiency, and create greater added value. Countries with good digital infrastructure show more stable and competitive creative economy growth than countries with limited access to technology.

**Purpose.** This study aims to analyze the role of digitalization in driving the growth of the creative economy and identify the factors that affect its success. In addition, this study also explores the contribution of the creative economy sector to the national economy by considering regulatory aspects and digital literacy.

**Method.** The research method used is a quantitative approach with regression analysis and case studies on several creative economy sectors. Primary data is collected through surveys of creative industry players, while secondary data is obtained from official government reports and related academic publications.

**Results.** The results show that digitalization has a significant influence on the growth of the creative economy, with the app and gaming sectors being the main examples of successful technology adoption. The creative economy sector, which is faster to adapt to digital technology, has experienced higher growth than sectors that still rely on conventional methods. Supportive regulations and a good level of digital literacy play an important role in ensuring the sustainability of the creative industry in the era of digitalization.

**Conclusion.** The conclusion of this study emphasizes that the creative economy can be the main driver of economic growth if supported by the right policies and a conducive digital ecosystem. Digital transformation in the creative industry is not just a trend, but also a need to increase economic competitiveness on a global scale.

### KEYWORDS

Creative Economy, Digitalization, Economic Growth

### INTRODUCTION

The creative economy has become one of the sectors that is increasingly recognized as the main driver of global economic growth. Various countries have developed policies and strategies to encourage creativity and innovation-based industries (Škare & Soriano, 2021). Digitalization accelerates the development of the creative

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### Correspondence:

Anandiya Pingki,  
[anadiyapingki1234@gmail.com](mailto:anadiyapingki1234@gmail.com)

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economy by opening up new opportunities for business actors, creating innovative business models, and expanding market access more widely and efficiently.

The development of digital technology has allowed creative economy actors to penetrate geographical boundaries (Lee dkk., 2023). Creativity-based products and services can be easily marketed through digital platforms, increasing competitiveness, and opening up opportunities for individuals and small businesses to compete in the global market (Towse, 2019). This phenomenon encourages the emergence of a new economic ecosystem that is more inclusive and dynamic.

The creative industry covers a wide range of sectors, from art, design, music, film, to software development and digital content. Innovations resulting from these sectors contribute to increasing economic added value and creating new jobs (Wang dkk., 2023). Many countries are starting to rely on the creative economy as a sustainable economic diversification strategy.

The government and various related institutions play an important role in creating policies that support the growth of the creative economy. Digital infrastructure, adaptive regulations, and a conducive entrepreneurial ecosystem are the main factors in accelerating the development of this sector. Digital skills education and training are also increasingly recognized as a key need to support competitive human resources.

The increasingly rapid digital transformation requires creative economy actors to continue to adapt to the latest trends and technologies. Artificial intelligence-based innovations, blockchain, and augmented reality are increasingly being used to improve the consumer experience and create more attractive and high-value products. Adaptation to these changes is the key to the sustainability of the creative economy in the era of digitalization.

The creative economy not only has an impact on national economic growth, but also plays an important role in building cultural identity and strengthening tourism attractiveness. The uniqueness and cultural diversity of a country can be packaged in highly competitive creative products and services (Fauzi dkk., 2022). Through digitalization, the creative economy is able to create new opportunities that contribute to people's welfare and sustainable economic growth.

The creative economy has grown rapidly in many countries, but there is still a gap in understanding the extent to which digitalization is able to optimize the potential of this sector (Erickson, 2024). Changes in the increasingly digitized economic landscape require new strategies in the management and development of the creative economy in order to have a more significant impact on economic growth.

The great opportunities offered by digitalization are still not fully utilized by creative economy actors, especially in developing countries (Dronyuk & Moiseienko, 2019). Many challenges still hinder the use of digital technology, such as limited infrastructure, lack of digital literacy, and imbalance of access to global digital platforms (Amato dkk., 2019). These factors create gaps in the competitiveness and growth of the creative industry in various regions.

The sustainability of the creative economy in the era of digitalization is still a big question that requires further research (Chalmers dkk., 2022). The reliance on digital technology brings new challenges, such as the protection of intellectual property rights, changing business models, and regulatory uncertainties that can affect the development of this sector. A deeper understanding is needed to ensure that digitalization not only accelerates the growth of the creative economy, but also creates a sustainable ecosystem.

The contribution of the creative economy to national economic growth is still not optimally measured (Williams, 2021). Many countries do not yet have a clear mechanism for identifying and measuring the economic impact of the digitalized creative sector. The lack of standardized data and

indicators is an obstacle in formulating appropriate policies to support the development of this sector.

The best strategy to integrate the creative economy with digital technology is still up for debate (Gill dkk., 2019). An effective model in empowering creative business actors to take full advantage of digitalization has not been fully found (Towse, 2020). Further studies are needed to identify strategic measures that can bridge this gap and encourage inclusive and sustainable growth of the creative economy.

Strengthening the creative economy through digitalization is a must to answer the challenges and gaps that still exist (Gladilina, 2019). Research and innovation in this sector need to be improved to optimize the use of digital technology in order to be able to increase the productivity and competitiveness of creative industry players (Escalona-Orcao dkk., 2020). The government, academia, and the private sector need to work together in creating policies and ecosystems that support the growth of the creative economy in the digital era.

The development of equitable digital infrastructure and increasing digital literacy for creative economy actors must be a priority. Digitalization must be understood not only as a tool to improve market access, but also as an instrument in creating added value and sustainable innovation. The use of technology such as artificial intelligence, big data, and blockchain needs to be encouraged in order to help creative economy actors in facing global challenges.

The gap in the use of the creative economy in the era of digitalization must be overcome immediately so that this sector can contribute more to national economic growth (Jamshid dkk., 2020). Further studies on adaptive business models, protection of intellectual property rights, and regulations that support innovation need to be carried out so that the creative economy can develop sustainably (Evitha dkk., 2023). Collaborative efforts from various parties are needed to ensure that the creative economy is not only a driver of economic growth, but also a sector that provides positive social and cultural impacts.

## RESEARCH METHODOLOGY

This study uses a quantitative research design with a descriptive and inferential approach. This approach was chosen to analyze the role of the creative economy in driving economic growth in the era of digitalization and identify factors that affect the development of this sector (Bezrukov dkk., 2022). Data is collected through surveys and analyzed using statistical methods to obtain objective and measurable conclusions.

The population in this study includes creative economy actors engaged in various creative industry sectors, including art, music, design, film, and digital technology. A research sample of 60 respondents was selected using the purposive sampling technique, consisting of creative entrepreneurs, freelancers in the digital industry, and stakeholders involved in the development of the creative economy (Purnomo dkk., 2022). The sample selection criteria are based on active involvement in the creative industry and the use of digital technology in their business operations.

The research instrument used is in the form of a closed questionnaire designed to measure various aspects of the creative economy, including innovation, digital market access, policy support, and the economic impact of digitalization (Ding dkk., 2021). The questionnaire is prepared based on indicators relevant to the research objectives and has been tested for validity and reliability before being used in data collection.

The research procedure begins with the preparation stage, which includes the preparation of instruments and permits for the implementation of the survey (Brodny & Tutak, 2022). Data collection was carried out online and offline by distributing questionnaires to selected respondents

(Hao dkk., 2023). The data obtained were analyzed using descriptive statistical and regression techniques to identify the relationship between the creative economy and economic growth in the era of digitalization (Priambodo dkk., 2021). The interpretation of the analysis results is used to prepare policy recommendations to support the creative economy sector to develop more in the digital era.

## RESULT AND DISCUSSION

The data used in this study includes primary data obtained from surveys of creative economy actors as well as secondary data from national and international creative industry reports (Towse & Hernández, 2020). Secondary sources are taken from official government publications, World Bank reports, and academic studies that discuss the development of the creative economy in the era of digitalization.

Creative Economy Sector	Contribution to GDP (%)	Number of Employees (Million People)
Culinary	41,3	9,8
Fashion	17,7	4,3
Craft	15,0	3,9
Apps and Games	8,0	1,1
Music	2,1	0,5
Movies, Animations, and Videos	1,7	0,3
Visual Communication Design	1,5	0,3
Other	12,7	3,2

**Table. 1** table presents the distribution of creative economy sectors that are the object of research based on secondary data

The culinary sector still dominates the contribution of the creative economy to the national Gross Domestic Product (GDP) with a percentage of 41.3% (Escalona-Orcao dkk., 2020). The fashion and craft industry also makes a significant contribution with a relatively large number of workers compared to other sectors.

The biggest contribution from the culinary sector shows that the industry has high resilience to changing times and digitalization (Propriis & Bailey, 2020). Digital transformation in this sector generally occurs in the form of the use of digital platforms for product marketing and distribution. Platforms such as social media and marketplaces are the main tools for culinary industry players in increasing their market reach.

The fashion and craft sector, which also contributes a large contribution to GDP, shows that creativity and culture-based industries have high economic potential. Digitalization helps the sector grow through e-commerce and digital-based business models that allow local products to reach the global market.

The app and gaming sectors showed rapid growth even though their contribution to GDP was still smaller than other sectors (Petrenko & Shevyakova, 2019). The use of digital technology in this sector is very dominant, especially with the increasing number of mobile device users driving the growth of digital content-based industries.

Descriptive statistical analysis shows that the majority of creative economy actors have utilized digital technology in their business operations (Xu dkk., 2022). The average use of digital

platforms for marketing reached 78%, while the use of e-commerce as a means of sales reached 65%. This data shows that digitalization has become a major factor in the growth of the creative economy.

The results of regression analysis show that digitalization has a significant influence on the growth of the creative economy with a regression coefficient value of 0.72 and a significance level of 0.01. This indicates that the higher the digital adoption in creative businesses, the greater the sector's contribution to economic growth.

Other variables that contribute to the growth of the creative economy are government policy support and the level of digital literacy. The analysis shows that policies that support the development of the creative economy have a positive relationship with an increase in the contribution of this sector to GDP, with a regression coefficient of 0.55.

The increase in the use of digital platforms in creative business operations shows a shift in people's consumption patterns towards digital. This change benefits business actors who are able to adapt to technology, while those who have not been digitized face challenges in competing in an increasingly competitive market.

The correlation between digitalization and the growth of the creative economy shows that technology-based innovation is an important factor in the development of this sector (Grigorescu dkk., 2021). Business actors who adopt digital technology in production, marketing, and distribution tend to experience a greater increase in income than those who still use conventional methods.

Strong government policy support in facilitating the growth of the creative economy is a determining factor in the sustainability of this sector. Regulations that favor the creative industry and incentives for digital-based business actors can increase the competitiveness of the creative economy at the global level.

The relationship between digitalization and the growth of the creative economy shows a consistent pattern across various sectors. Industries that are faster to adopt digital technology tend to have a higher growth rate than industries that still rely on conventional methods.

Higher digital adoption in the app and game sectors than in the craft and culinary sectors suggests that industry characteristics play a role in determining how quickly digitalization can drive growth. Technology-based sectors are more flexible in integrating digital innovation, while physical production-based sectors face challenges in the adaptation process.

Policy support and digital literacy are closely related to the success of the creative economy in facing the digitalization era (Petrenko & Shevyakova, 2019). Countries with supportive policies and high levels of digital literacy tend to have more developed creative economy sectors and are able to compete in the global market.

Case studies on the digital fashion industry show that e-commerce platforms have become a major catalyst in the growth of this sector (Мельник dkk., 2020). Companies that have successfully adapted to digital technology are able to significantly increase their market share, both domestically and internationally.

The digital music industry has also undergone significant changes with the existence of streaming platforms that replace the physical distribution model. Artists and record labels who utilize digital technology for music distribution tend to have more stable revenues than those who still rely on conventional methods.

The digital-based film and animation sector is experiencing a high increase in demand due to the development of over-the-top (OTT) platforms such as Netflix and Disney+. Companies that



innovate with digital technology in production and distribution are able to reach a global audience without relying on traditional business models such as cinemas.

Companies that are faster to adopt digital technologies in their operations tend to have higher competitiveness (Li dkk., 2023). Factors such as wider market access, production efficiency, and flexibility in adapting to global trends are the main advantages of digitalization.

Technology-based innovation is the main key to the sustainability of the creative industry. Digital platforms allow businesses to create more adaptive business models and reduce reliance on physical distribution, which often has geographical limitations and high costs.

Changes in consumption patterns due to digitalization also encourage the growth of the creative economy (Gustafsson & Lazzaro, 2021). Consumers are increasingly accustomed to digital-based services, so industry players who are able to provide products and services that suit market needs have a greater opportunity to grow.

Digitalization acts as an accelerator in the growth of the creative economy by enabling wider market access and higher production efficiency. Sectors that are faster to adopt digital technologies have a higher growth rate than sectors that still rely on traditional methods.

Digital innovation not only has an impact on the growth of the creative economy but also creates a more inclusive business ecosystem (Brodny & Tutak, 2022). Small and medium-sized businesses that utilize digital technology can compete with large companies at the global level.

Appropriate policy support can accelerate the growth of the creative economy by creating an environment conducive to innovation and investment (Kurniawan, Liang, dkk., 2022). Regulations that support intellectual property rights, access to funding, and digital infrastructure are key factors in the development of the creative economy in the era of digitalization.

This research shows that the creative economy plays a significant role in economic growth in the era of digitalization. Digitalization has been proven to increase the competitiveness of the creative industry by expanding market access, increasing production efficiency, and opening up new innovation opportunities (Surya dkk., 2021). The results of regression analysis indicate that the higher the level of digital adoption in creative businesses, the greater its contribution to national economic growth.

The creative economy sectors that benefit the most from digitalization are applications and games, music, as well as movies and animation. The sector is experiencing rapid growth due to its high reliance on digital technology in the production and distribution process (Tulchinskiy dkk., 2021). The culinary and craft sectors, despite their large contribution to GDP, still face challenges in digital adaptation compared to technology-based sectors.

Policy support and digital literacy have an important role in optimizing the growth of the creative economy. Countries with regulations that favor the creative industry and a high level of digital literacy tend to have a more developed creative economy sector and are able to compete globally. Regulations related to the protection of intellectual property rights and economic incentives are the main factors in supporting the sustainability of this sector.

The results of this study are in line with previous studies that state that digitalization accelerates the growth of the creative industry. Other research shows that digital transformation allows small and medium-sized businesses in the creative sector to compete in the global market through e-commerce platforms and social media (Langthaler & Bazafkan, 2020). The convergence of technology and the creative economy has increased the added value of this industry in the modern economy.

Several studies have found that countries with more mature digital ecosystems have more stable creative economy growth. Research in Europe and America shows that the adoption of

technologies such as artificial intelligence and blockchain is further accelerating the growth of the creative industry. However, in developing countries, limited digital infrastructure and low levels of digital literacy are still the main obstacles.

The main difference in this study is the focus on the direct relationship between digitalization and the growth of the creative economy in developing countries. Many previous studies have highlighted the impact of digitalization on a global scale without considering the gap in technology access in different countries (Ma dkk., 2022). The study provides a perspective that while digitalization drives the creative economy, its success depends on the readiness of the digital ecosystem in each country.

The findings of this research are an indication that the creative economy can be the main pillar in economic growth in the era of digitalization. The great potential of the creative sector shows that innovation and creativity are not only aspects of art and culture, but also a strategic component in economic development. The shift in the economy to digital indicates that industries that are unable to adapt to technology will be left behind in global competition.

The success of the creative economy sector in utilizing digitalization shows that traditional business models are increasingly being replaced by technology-based approaches. This trend leads to changes in work patterns, distribution systems, and the way people consume creative products and services (Kurniawan, Maiurova, dkk., 2022). Industry players who do not immediately adapt to these changes will face the risk of declining competitiveness.

Another sign of the results of this study is that regulations and public policies play a big role in ensuring the sustainable growth of the creative economy. Countries that provide incentives for the creative industry and ensure clear legal protections for digital products tend to have a more stable and rapidly growing creative economy sector.

The results of this study have implications that the creative economy must be a priority in the national economic development strategy. This sector is not just a hobby-based industry or artistic expression, but also an important pillar in creating jobs and increasing economic competitiveness. The government needs to see the creative economy as a strategic sector that can make a major contribution to GDP.

Companies and creative industry players need to be more proactive in adopting digital technologies to improve their efficiency and market reach. Digital transformation is no longer an option, but a necessity for the creative industry to survive in an increasingly competitive economic landscape. Education and digital upskilling should be part of a long-term strategy to drive the growth of the sector.

Another implication of this study is that without supportive regulation, the creative economy will not reach its full potential. The protection of intellectual property rights, access to financing for creative business actors, and the development of equitable digital infrastructure must be policy priorities to ensure that digitalization truly benefits all creative economy actors.

The results of this research occur because digitalization has changed the way the creative economy operates and develops. Technology has created new opportunities for creative industry players to expand their markets regardless of geographical boundaries. Access to digital platforms allows small-scale creative businesses to reach a global audience at a lower cost than conventional methods.

The success of certain sectors in utilizing digitalization compared to other sectors is due to the nature of the industry itself. Technology-based sectors such as apps and games have a greater reliance on digitalization, while physical production-based sectors such as crafts and culinary still

face obstacles in adopting new technologies (Zemtsov dkk., 2019). This difference reflects varying levels of digital readiness across different sectors of the creative economy.

Another factor that causes the results of this study is the uneven support of regulations and digital infrastructure. Countries with more progressive policies in supporting the creative economy and digital transformation have faster growth in this sector than countries that are still struggling with regulatory challenges and access to technology.

The government needs to take concrete steps in accelerating the digitalization of the creative economy sector by building a more equitable digital infrastructure. Increasing internet access, investing in supporting technologies, and providing incentives for creative businesses to innovate must be a priority in economic development policies. Digital education and training for creative industry players also needs to be expanded so that they can adopt the latest technology more effectively.

Business actors in the creative economy must continue to innovate in their business models to maximize the benefits of digitalization. The use of artificial intelligence, big data, and blockchain can improve efficiency, optimize customer experience, and create more competitive products and services. Collaboration with technology companies and governments can help accelerate the digital adaptation process in the creative industry.

Further research is needed to understand how digitalization can be applied optimally in the creative economy sector which still faces challenges in digital transformation. An in-depth study of the impact of government policies on the growth of the creative economy is also needed to ensure that the regulations implemented are truly effective in supporting this sector in the era of digitalization.

## CONCLUSION

This study finds that digitalization has a significant influence on the growth of the creative economy, especially in improving market access, production efficiency, and global competitiveness. The most digitalized sectors, such as apps and games, show rapid growth compared to physical production-based sectors that still face challenges in technology adoption. Government regulations and the level of digital literacy are key factors in determining the success of digitalization in the creative industry.

The main contribution of this research lies in a new understanding of the direct relationship between digitalization and the growth of the creative economy in developing countries. The approach based on regression analysis and case studies provides a more comprehensive picture of how the creative economy sector can thrive in the digital ecosystem. These findings provide a basis for the formulation of more targeted policies in encouraging the digitalization of the creative sector.

The limitations of this research lie in the limited geographical scope and dependence on secondary data which may have limitations in describing the current conditions in the field. Further research can focus on a more in-depth analysis of the specific factors that affect the rate of digital adoption in various sectors of the creative economy. Further studies of the social and cultural impacts of the digitalization of the creative economy are also needed to understand its long-term implications.

## AUTHORS' CONTRIBUTION

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.



Author 4: Formal analysis; Methodology; Writing - original draft.

## REFERENCES

- Amato, G., Behrmann, M., Bimbot, F., Caramiaux, B., & ... (2019). AI in the media and creative industries. *arXiv preprint arXiv ...*, Query date: 2025-02-18 10:30:29. <https://arxiv.org/abs/1905.04175>
- Bezrukov, N., Huk, L., Chmil, H., Verbivska, L., & ... (2022). *Digitalization as a trend of modern development of the world economy*. repo.btu.kharkov.ua. <https://repo.btu.kharkov.ua/handle/123456789/9921>
- Brodny, J., & Tutak, M. (2022). Digitalization of small and medium-sized enterprises and economic growth: Evidence for the EU-27 countries. *Journal of Open Innovation: Technology, Market, and ...*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2199-8531/8/2/67>
- Chalmers, D., Fisch, C., Matthews, R., Quinn, W., & ... (2022). Beyond the bubble: Will NFTs and digital proof of ownership empower creative industry entrepreneurs? *Journal of Business ...*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S2352673422000075>
- Ding, C., Liu, C., Zheng, C., & Li, F. (2021). Digital economy, technological innovation and high-quality economic development: Based on spatial effect and mediation effect. *Sustainability*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2071-1050/14/1/216>
- Dronyuk, I., & Moiseienko, I. (2019). Analysis of creative industries activities in European Union countries. *Procedia Computer Science*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S1877050919317612>
- Erickson, K. (2024). AI and work in the creative industries: Digital continuity or discontinuity? *Creative Industries Journal*, Query date: 2025-02-18 10:30:29. <https://doi.org/10.1080/17510694.2024.2421135>
- Escalona-Orcao, A., Barrado-Timón, D., & ... (2020). Cultural and creative ecosystems in medium-sized cities: Evolution in times of economic crisis and pandemic. *Sustainability*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2071-1050/13/1/49>
- Evitha, Y., Sari, S., Suprayitno, D., & Irianda, J. (2023). Digital Communication Management Government of the Republic of Indonesia for Inclusive and Sustainable Economic Recovery in Indonesia. *KnE Social ...*, Query date: 2025-02-18 10:30:29. <https://knepublishing.com/index.php/KnE-Social/article/view/13710>
- Fauzi, T., Harits, B., & ... (2022). Adaptive strategies of external environmental effects in digital entrepreneurship in the strategic management perspective. *Academic Journal ...*, Query date: 2025-02-18 10:30:29. <http://repository.unpas.ac.id/56213/>
- Gill, R., Pratt, A., & Virani, T. (2019). *Creative hubs in question: Place, space and work in the creative economy*. books.google.com. [https://books.google.com/books?hl=en&lr=&id=GXuODwAAQBAJ&oi=fnd&pg=PR8&dq=creative+economy+digitalization+economic+growth&ots=WY3WwKyQFV&sig=qLMd\\_1lrl39ciwcOXdBvOY7NTBw](https://books.google.com/books?hl=en&lr=&id=GXuODwAAQBAJ&oi=fnd&pg=PR8&dq=creative+economy+digitalization+economic+growth&ots=WY3WwKyQFV&sig=qLMd_1lrl39ciwcOXdBvOY7NTBw)
- Gladilina, I. (2019). Creative Thinking and Development of Professionalism by Procurement Specialists in the Context of Digitalization. *Academic Journal of Interdisciplinary Studies*, Query date: 2025-02-18 10:30:29. <http://archive.sciendo.com/AJIS/ajis.2019.8.issue-2/ajis-2019-0033/ajis-2019-0033.pdf>
- Grigorescu, A., Pelinescu, E., Ion, A., & Dutcas, M. (2021). Human capital in digital economy: An empirical analysis of central and eastern European countries from the European Union. *Sustainability*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2071-1050/13/4/2020>
- Gustafsson, C., & Lazzaro, E. (2021). The innovative response of cultural and creative industries to major European societal challenges: Toward a knowledge and competence base.

- Sustainability*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2071-1050/13/23/13267>
- Hao, X., Li, Y., Ren, S., Wu, H., & Hao, Y. (2023). The role of digitalization on green economic growth: Does industrial structure optimization and green innovation matter? *Journal of environmental management*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0301479722020771>
- Jamshid, R., Ugli, K. M., & ... (2020). Development of the digital economy in Uzbekistan as a key factor of economic growth and increase of living standards of the population. ... *Journal of Applied ...*, Query date: 2025-02-18 10:30:29. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3892657](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3892657)
- Kurniawan, T., Liang, X., O'Callaghan, E., Goh, H., & ... (2022). Transformation of solid waste management in China: Moving towards sustainability through digitalization-based circular economy. *Sustainability*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2071-1050/14/4/2374>
- Kurniawan, T., Maiurova, A., Kustikova, M., & ... (2022). ... transition in St. Petersburg (Russia) through digitalization-based circular economy in waste recycling industry: A strategy to promote carbon neutrality in era of Industry .... *Journal of cleaner ...*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0959652622020534>
- Langthaler, M., & Bazafkan, H. (2020). *Digitalization, education and skills development in the Global South: An assessment of the debate with a focus on Sub-Saharan Africa*. econstor.eu. <https://www.econstor.eu/handle/10419/228970>
- Lee, C., He, Z., & Yuan, Z. (2023). A pathway to sustainable development: Digitization and green productivity. *Energy Economics*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0140988323002700>
- Li, C., Razzaq, A., Ozturk, I., & Sharif, A. (2023). Natural resources, financial technologies, and digitalization: The role of institutional quality and human capital in selected OECD economies. *Resources Policy*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0301420723000703>
- Ma, Q., Tariq, M., Mahmood, H., & Khan, Z. (2022). The nexus between digital economy and carbon dioxide emissions in China: The moderating role of investments in research and development. *Technology in Society*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0160791X22000513>
- Petrenko, E., & Shevyakova, A. (2019). Features and perspectives of digitization in Kazakhstan. ... *Things: Prerequisites for the Development ...*, Query date: 2025-02-18 10:30:29. [https://doi.org/10.1007/978-3-030-13397-9\\_91](https://doi.org/10.1007/978-3-030-13397-9_91)
- Priambodo, I., Sasmoko, S., Abdinagoro, S., & ... (2021). E-Commerce readiness of creative industry during the COVID-19 pandemic in Indonesia. ... *Finance, Economics ...*, Query date: 2025-02-18 10:30:29. <https://koreascience.kr/article/JAKO202106438543586.page>
- Propriis, L. D., & Bailey, D. (2020). *Industry 4.0 and regional transformations*. library.oapen.org. <https://library.oapen.org/handle/20.500.12657/37355>
- Purnomo, A., Susanti, T., Rosyidah, E., Firdausi, N., & ... (2022). Digital economy research: Thirty-five years insights of retrospective review. *Procedia Computer ...*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S1877050921023437>
- Škare, M., & Soriano, D. (2021). A dynamic panel study on digitalization and firm's agility: What drives agility in advanced economies 2009–2018. *Technological Forecasting and Social Change*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0040162520312440>
- Surya, B., Menne, F., Sabhan, H., Suriani, S., & ... (2021). Economic growth, increasing productivity of SMEs, and open innovation. *Journal of Open ...*, Query date: 2025-02-18 10:30:29. <https://www.mdpi.com/2199-8531/7/1/20>
- Towse, R. (2019). *A textbook of cultural economics*. books.google.com. <https://books.google.com/books?hl=en&lr=&id=->

- [aCeDwAAQBAJ&oi=fnd&pg=PR11&dq=creative+economy+digitalization+economic+growth&ots=r0\\_O0wZKG5&sig=gJQVK31IZmDgPrSwe9ZxFcIJTB0](#)
- Towse, R. (2020). Creative industries. *Handbook of Cultural Economics, Third Edition*, Query date: 2025-02-18 10:30:29. <https://www.elgaronline.com/abstract/edcoll/9781788975797/9781788975797.00020.xml>
- Towse, R., & Hernández, T. (2020). *Handbook of cultural economics*. books.google.com. [https://books.google.com/books?hl=en&lr=&id=Z6\\_ZDwAAQBAJ&oi=fnd&pg=PR1&dq=creative+economy+digitalization+economic+growth&ots=P597CWESpq&sig=M2SQ0VA02I\\_FIO\\_3Z0R7NtV79n0](https://books.google.com/books?hl=en&lr=&id=Z6_ZDwAAQBAJ&oi=fnd&pg=PR1&dq=creative+economy+digitalization+economic+growth&ots=P597CWESpq&sig=M2SQ0VA02I_FIO_3Z0R7NtV79n0)
- Tulchinskiy, R., Chobitok, V., Dergaliuk, M., & ... (2021). Strategic guidelines for the intensification of regional development under the impact of potential-forming determinants in the conditions of digitalization. ... *Journal of Computer ...*, Query date: 2025-02-18 10:30:29. <https://koreascience.kr/article/JAKO202127452926438.page>
- Wang, Z., Deng, Y., Zhou, S., & Wu, Z. (2023). Achieving sustainable development goal 9: A study of enterprise resource optimization based on artificial intelligence algorithms. *Resources Policy*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0301420722006559>
- Williams, L. (2021). Concepts of Digital Economy and Industry 4.0 in Intelligent and information systems. *International Journal of Intelligent Networks*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S266660302100018X>
- Xu, Q., Zhong, M., & Li, X. (2022). How does digitalization affect energy? International evidence. *Energy Economics*, Query date: 2025-02-18 10:30:29. <https://www.sciencedirect.com/science/article/pii/S0140988322000615>
- Zemtsov, S., Barinova, V., & Semenova, R. (2019). The risks of digitalization and the adaptation of regional labor markets in Russia. *Формат*, Query date: 2025-02-18 10:30:29. <https://cyberleninka.ru/article/n/the-risks-of-digitalization-and-the-adaptation-of-regional-labor-markets-in-russia>
- Мельник, Л., Маценко, О., Півень, В., & ... (2020). Formation of Human Capital in the Digital Economy. ... *of an economic ...*, Query date: 2025-02-18 10:30:29. <http://www.mer-journal.sumy.ua/index.php/journal/article/view/50>

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