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Digital Competitiveness and Economic Resilience

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ABSTRACT:
In the era of rapid digital transformation, understanding digital competitiveness becomes crucial for assessing a country's economic resilience. This study contributes to existing literature by systematically reviewing the impact of digital competitiveness on economic resilience, emphasizing dimensions such as knowledge, technology, and future readiness. By analyzing 58 selected articles from leading academic databases like Google Scholar, Scopus, and Web of Science published between 2019 and 2024, this research identifies significant positive correlations between these factors and economic resilience. Practical implications of the findings suggest the necessity of enhancing digital infrastructure, cultivating digital talent through education, and fostering a collaborative digital ecosystem to stimulate innovation across sectors. These recommendations aim to fortify national economies against global uncertainties through strategic digital investments and advancements.
Keywords: Digital competitiveness, Economic resilience, Digital economy, Systematic literature review, Empirical gap

INTRODUCTION

In an era marked by rapid technological transformation, competitive advantage remains a cornerstone for every country seeking to secure its position in the global economy. Traditionally, competitive advantage has been shaped by factors such as natural resources, labor, and geographical position. However, the advent of digital transformation has introduced a new paradigm—digital competitiveness—that now plays a critical role in determining a country's economic prospects and resilience.

Digital competitiveness refers to a country's capacity to utilize digital technology to improve outcomes in various aspects of its economy and society (Idat, 2019). Along with the unprecedented development of digital technology, it is reshaping industries, redefining productivity, and changing the dynamics of international trade. This transformation is not only about the adoption of new technologies but also about how well a country can adapt its economic structure and policies into the digital framework (IMD, 2022). The ability to do so

effectively can provide significant resilience to economic shocks, by driving innovation, improving efficiency, and opening up new markets.

The concept of economic resilience, which is critical in today's interconnected world, involves the ability of economies to anticipate, prepare for, respond to, and recover from shocks (Azzahra et al., 2024). Digital competitiveness increases economic resilience by enabling rapid adaptation to change, encouraging diversification of economic activities, and facilitating a smooth flow of information (IMD, 2022). Thus, understanding the relationship between digital competitiveness and economic resilience offers valuable insights into how countries can leverage digital transformation for sustainable growth.

This research makes a significant contribution by integrating the concepts of digital competitiveness and economic resilience. It goes beyond highlighting the adoption of digital technologies to emphasize the critical importance of a country's ability to effectively adjust its economic structure and policies within the digital framework. This approach provides a comprehensive understanding of how advancements in digital technology can enhance a country's resilience to economic shocks. By emphasizing adaptation and innovation, the research also offers practical implications for policymakers and practitioners in formulating strategic policies that leverage digital transformation for sustainable economic growth, addressing contemporary global economic dynamics effectively.

This paper aims to explore the impact of digital competitiveness on economic resilience, with a particular focus on how advances in knowledge, technology, and future-readiness contribute to sustaining economies amid global disruptions. By examining these relationships, the study aims to provide a framework for policymakers and businesses to improve their strategic decisions in the digital age.

RESEARCH METHODS

The main objective of this review is to investigate whether digital competitiveness significantly affects economic resilience. This involves a thorough examination of existing literature to understand the contribution of various components of digital competitiveness to a country's economic resilience. This review aims to answer the main research question: How does digital competitiveness affect economic resilience?

Search Strategy

The review process begins with a comprehensive search of academic databases and relevant sources. The databases selected for this search include Google Scholar, Scopus, and Web of Science, among others, known for their extensive repositories of peer-reviewed academic journals, conference papers, and books. The search will focus on articles published in the period from 2019 to 2024 to capture the most recent studies relevant to digital competitiveness and economic resilience.

RESULTS AND DISCUSSION

Empirical data from the systematic review show a strong positive relationship between various determinants and economic resilience. The data includes various determinants including Technology, Future Readiness, and Knowledge both singly and in various combinations across various studies.

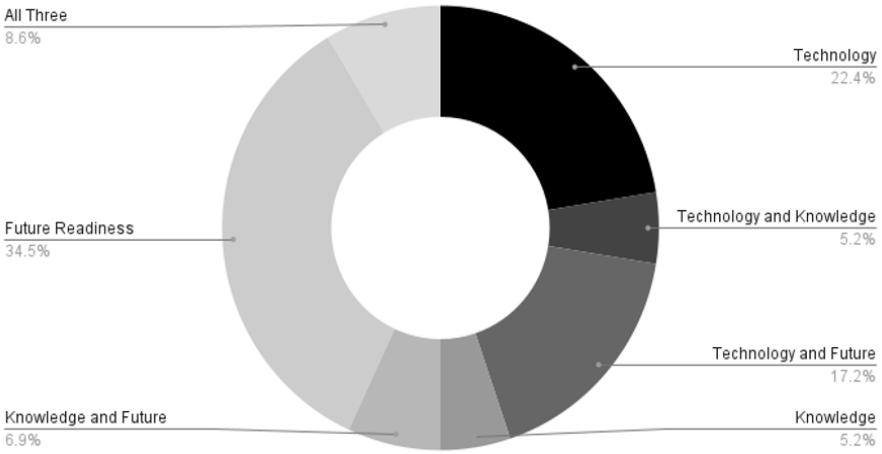

Figure 1. Digital Competitiveness Dimensions Affect Economic Resilience
Source: Primary data, 2022 (Edited)

These determinations have consistently demonstrated a positive impact on economic resilience, demonstrating their crucial role in enhancing the economy's capacity to recover from shocks and pressures.

Table 1. The Influence of the Digital Competitiveness Dimension on Economic Resilience

Determine	Articles Stating the Influence on Economic Resilience (%)	Role in Influencing Economic Resilience	Qualitative (%)	Quantitative (%)
Technology	80	Technological advancements drive agility, efficiency, and innovation, allowing economies to recover quickly from shocks.	30	70

Future Readiness	70	Future readiness ensures adaptability to technological and economic changes, increasing long-term economic stability.	40	60
Knowledge	60	Knowledge improves workforce skills, productivity, and innovation, supporting sustainable economic growth and diversification.	50	50

1. Technology (80%): This means that 80% of all articles analyzed state that technology affects economic resilience.
2. Future Readiness (70%): This means that 70% of all articles analyzed stated that future readiness affects economic resilience.
3. Knowledge (60%): This means that 60% of all articles analyzed stated that knowledge affects economic resilience.

Technology

In the digital economy, "Technology" refers to the overall environment that enables the development and spread of digital technologies. It assesses the quality of technological infrastructure that includes factors such as broadband connectivity, internet speed, and technological frameworks that support digital innovation and applications. It also examines the regulatory framework that affects ease of doing business, contract enforcement, and intellectual property protection, which is critical to fostering a culture of innovation in the digital sector. (IMD, 2022). Almost all studies involving technology as a determinant show a positive impact on economic resilience. This reflects the important role of technological advancements in driving economic agility and strength.

Digital technology has become one of the main drivers in strengthening economic resilience. Research shows that the adoption of new technologies plays an important role in improving a country's economic competitiveness and resilience. Previous studies have found that technology has a significant positive impact on economic resilience (Akar et al., 2021; Brad, 2022; Gu & Liu, 2024; Hu et al., 2022; Huda, 2023; Rolf & Schindler, 2023; Tian & Guo, 2023; Vu et al., 2020; Yang et al., 2024; Zhang et al., 2024) Research in China and other countries reveals that digital technologies are improving economic resilience at both the regional and national levels

(Du et al., 2023; Gu & Liu, 2024; Hou et al., 2023; Ji & Huang, 2024; Shi et al., 2023; Song & Jiang, 2024; Tian & Guo, 2023; Yang et al., 2024; Zhang et al., 2021))

Technology plays an important role in improving operational efficiency in the business and government sectors. With the adoption of advanced technology, companies can automate various processes that were previously done manually, reduce human error, and speed up production time. This saves costs, improves output quality, and allows companies to respond to market demand more quickly. In the government sector, technology makes data management easier, speeds up administrative processes, and increases transparency and accountability. This creates a more efficient and effective environment for carrying out government functions.

Additionally, technology opens up access to global markets, which previously may have been difficult for many businesses to reach. The internet and digital platforms allow companies, even small and medium-sized ones, to expand their reach to customers worldwide. Thus, business opportunities increase significantly as companies can offer their products and services to a wider market. It also encourages healthy competition, innovation, and greater product diversification, all of which contribute to increased economic resilience.

Technology is also a key driver of innovation, which is key to improving economic resilience. Technological innovation allows for the development of new products and services that are more efficient, cheaper, and better. This helps the economy to develop and adapt quickly to changes in the market environment. Technology also allows for economic diversification by opening up new sectors such as information technology, biotechnology, and renewable energy. This diversification is important to reduce dependence on traditional sectors and make a significant contribution to increasing the added value of the economy. Thus, technology not only helps the economy survive external shocks but also positions it for sustainable long-term growth.

Future Readiness

"Future Readiness" explores the extent to which governments, businesses, and communities are prepared to take advantage of digital transformation. It involves the adoption of digital technologies in areas such as e-commerce, robotics in industry, and data analytics in the private sector. Future Readiness also dives into cybersecurity measures and public-private partnerships that are critical to securing digital interactions and increasing trust in digital systems. The adaptability of business models to digital challenges and opportunities, as well as people's attitudes towards technology and globalization, are also key components. (IMD, 2022)

Future readiness includes the ability to adapt and respond to technological and economic changes. This factor is very important to ensure long-term economic resilience. Based on previous research, future readiness has a significant positive impact on economic resilience ((Chou et al., 2023); (Hou et al., 2023); ; (Ye & Hu, 2023); Increase, 2023; (Ding & Zhou, 2023); (Cheng et al., 2024); (Zhang et al., 2021); (Du et al., 2023); (Huang & Hou, 2023)) Research in various cities and regions in China and other countries shows that future readiness plays an important role in improving economic resilience (Brad, 2022; Chou et al., 2023; Ding & Zhou,

2023; Hu et al., 2022; Nayyar, 2022; Shen & Hu, 2024; Vu et al., 2020; Yang et al., 2024; Zhang et al., 2024))

Future readiness allows economies to adapt quickly to external changes, such as global market fluctuations, international policy changes, or new technological developments. With a proactive and flexible strategy, a future-ready economy can adapt quickly and effectively, mitigate the negative impact of external shocks and take advantage of new opportunities. It involves investing in education, training, and technology to ensure that the economy's workforce and infrastructure remain relevant and capable of meeting future challenges.

Business agility is one of the key aspects of future readiness. Businesses that have a long-term vision and adaptive strategies can respond quickly to changes in the market and technology, maintaining their competitiveness in the global market. Agile companies are able to identify new trends, adopt innovative technologies, and transform their business models to meet the evolving needs of customers. This capability not only allows businesses to survive in a changing environment but also to expand and expand their markets.

Increased investment is another result of strong future readiness. Economies that demonstrate the ability to adapt and respond quickly to external changes tend to attract more investment, both domestic and foreign. Investors are looking for a stable and dynamic environment that is able to manage risk well and offer growth opportunities. Strong future readiness reflects a commitment to innovation, education, and infrastructure that can improve the overall competitiveness of the economy. This not only increases capital flows into the economy but also aids in the development of new technologies, increased productivity, and job creation, all of which contribute to sustainable economic growth.

These determinants are often analyzed, often in conjunction with other factors such as technology and knowledge, and consistently show a positive influence on economic resilience. This shows that economies that are prepared to face future challenges through proactive strategies tend to perform better in adverse conditions.

Knowledge

In the context of the digital economy, "Knowledge" relates to the intangible infrastructure that enables individuals and organizations to discover, understand, and develop new technologies. It includes an education and training system that equips the workforce with the digital and technological skills necessary for innovation. "Knowledge" also includes scientific research and development activities, which are measured by indicators such as expenditure on research, availability of skilled researchers, and outputs such as the granting of patents. This dimension ensures that a country's human resources are ready to support and sustain technological advancements and digital transformation. (IMD, 2022)

Knowledge is a key factor in strengthening a country's economic resilience. Previous research has shown that investments in education, training, and human resource development

contribute significantly to economic resilience. Studies from various researchers have shown that knowledge, including education and training, has a positive impact on economic resilience. For example, knowledge has a good effect on economic resilience (Chou et al., 2023; Copestake et al., 2024; Hu et al., 2022; Rodríguez-Pose, 2021; Shi et al., 2023; Ştefan et al., 2023; Tan et al., 2020; Zhao & Li, 2018; Zhou & Qi, 2023; Zhu et al., 2023).

The knowledge dimension has an important role in increasing economic productivity. With the increase in the skills of the workforce, which is the result of effective education and training, productivity and efficiency in various sectors of the economy are also increasing. Higher skills allow workers to complete their tasks more efficiently and with quality, which ultimately increases output and reduces production costs. This is especially important in the era of globalization and high technology, where competitive advantage is often determined by how productive and efficient a country's workforce is. In addition, education and research are the main drivers of innovation. Innovation is at the core of sustainable economic growth and economic resilience. Through in-depth research and education that encourages critical and creative thinking, society can create new solutions to existing challenges and open up new opportunities for growth. These innovations can be new products, more efficient production processes, or more effective business models, all of which contribute to economic resilience by creating new jobs and opening up new markets.

Economic diversification is also an important benefit of the knowledge dimension. With a strong knowledge base, an economy can develop new sectors that previously did not exist or were underdeveloped. This diversification is important to reduce dependence on just one or a few sectors of the economy, which can increase the risk if those sectors are exposed to shocks. Through diversification, the economy becomes more flexible and able to adapt to changing global market conditions, thereby increasing overall economic resilience. Thus, the knowledge dimension not only strengthens existing sectors but also paves the way for the development of new sectors that contribute positively to long-term economic stability and growth.

When combined with technology and future readiness, knowledge significantly contributes to economic resilience, emphasizing the importance of informed and educated strategies in economic planning and crisis management (Chou et al., 2023; Copestake et al., 2024). In broader discussions about digital competitiveness and economic resilience, the determinants of knowledge, while of critical importance, have been the least reviewed and explored in the literature. This omission is very striking when compared to more frequently analyzed determinants such as technology and future readiness.

The lack of a comprehensive review that focuses on knowledge as a major or single factor affecting economic resilience suggests a gap in academic and practical understanding of its role. This gap highlights the importance of this systematic mapping review, which aims to highlight and investigate knowledge along with technology and future readiness, to provide balanced insights into the components of digital competitiveness.

By addressing these overlooked areas, the review aims to contribute significantly to the existing body of knowledge, offering an in-depth analysis of how all components of digital competitiveness—not just the more commonly studied aspects of technology—contribute to strengthening economic resilience. This approach not only enriches the academic literature but also offers practical guidance for policymakers and stakeholders in formulating more comprehensive strategies for digital transformation and economic stability.

Recommendation on How to Improve?

Digital Infrastructure Development

The development of digital infrastructure is a critical step to support the adoption of technology across all sectors of the economy and society, which in turn will increase economic resilience (IMD, 2022). These recommendations include:

Infrastructure Investment: Governments need to increase investment in the development of digital infrastructure such as high-speed internet networks, data centers, and 5G technology. This will ensure equitable connectivity across the country, including in remote and rural areas, which is essential for future economic sustainability (Cheng et al., 2024; Duan et al., 2022; Hu et al., 2022; Ji & Huang, 2024; Rodríguez-Pose, 2021; Tian & Guo, 2023; Zhou & Qi, 2023).

Regional Infrastructure Development: The development of digital infrastructure at the regional level will help drive more balanced and inclusive economic development. Good infrastructure in different regions will enable these areas to participate in the digital economy effectively (Cheng et al., 2024; Hu et al., 2022).

Public-Private Collaboration: Collaborating with the private sector in the development of digital infrastructure will speed up the process and increase efficiency. Governments can offer incentives such as tax reductions or subsidies to attract private investment in digital infrastructure projects, thus strengthening the overall economic network (Hu et al., 2022; Ji & Huang, 2024; Rodríguez-Pose, 2021; Tian & Guo, 2023).

Talent Development and Digital Education

Digital talent development and education are essential to ensure that the workforce is prepared to face the challenges of the digital economy and contribute to economic resilience (IMD, 2022). These recommendations include:

Training and Education: Provides comprehensive digital training and education programs at all levels of education, from primary school to higher education. These programs should include basic skills such as programming, data analysis, and cybersecurity (Cheng et al., 2024; Duan et al., 2022; Ji & Huang, 2024; Ngantung et al., 2021; Ştefan et al., 2023; Zhou & Qi, 2023).

Digital Education Program: Develop digital education programs for the general public, including digital literacy programs for adults and vulnerable groups such as children, women, and the elderly. This will ensure that all levels of society can effectively utilize digital technologies,

increase digital inclusion, and strengthen economic resilience (Cheng et al., 2024; Ji & Huang, 2024; Zhu et al., 2023).

Collaboration with Industry: Collaborate with the technology industry to develop curriculum and training programs relevant to market needs. Industry-based internship and training programs can help students gain practical experience and skills necessary in the workplace, thereby increasing the adaptive capacity of the economy (Cheng et al., 2024; Duan et al., 2022b; Ştefan et al., 2023).

Collaboration and Digital Ecosystem

Developing a digital ecosystem that supports innovation and collaboration between sectors is key to creating an environment conducive to the growth of the digital economy, which in turn increases economic resilience(IMD, 2022). These recommendations include:

Public-Private Collaboration: Encourage collaboration between the public and private sectors in the development and application of digital technologies. Governments can play the role of facilitators by providing a platform for cooperation and removing regulatory barriers. This collaboration will strengthen synergies between sectors, increase innovation, and accelerate technology adoption (Tian & Guo, 2023; Rolf & Schindler, 2023; Cheng, Zhao, & Zhao, 2024; Ji & Huang, 2024; Hu, Li, & Dong, 2022; Rodríguez-Pose, 2021)

Digital Ecosystem Development: Build a digital ecosystem that includes startup incubators and accelerators, innovation centers, and mentor networks to support entrepreneurs and innovators. This will help accelerate the development of innovative digital products and services, expand the economic base, and increase resilience (Cheng et al., 2024; Hu et al., 2022; Ji & Huang, 2024; Rodríguez-Pose, 2021; Rolf & Schindler, 2023; Tian & Guo, 2023).

Regulations that Support Innovation: Develop regulations that support digital innovation and data protection. Flexible and adaptive regulation will allow businesses to experiment with new technologies without facing excessive bureaucratic barriers, thus fostering a dynamic and resilient business environment (Cheng et al., 2024; Ji & Huang, 2024; Rodríguez-Pose, 2021; Rolf & Schindler, 2023).

By implementing these three policy recommendations, the country can strengthen its digital foundation, improve the skills and capacity of its workforce, and create an ecosystem that supports innovation and growth in the digital economy. This will ensure that the country has strong economic resilience and is able to face future challenges.

Interpretation of Findings

The positive outcomes associated with Technology, Future Readiness, and Knowledge in promoting economic resilience highlight the importance of integrating these elements into economic policies and strategies. Consistent findings across studies reinforce the need for economies to adopt advanced technological infrastructure and ensure that their workforce and decision-makers are well-informed and prepared for future challenges.

Implication for Future Research

Further research can explore the specific aspects of the technologies and knowledge that are most effective in improving economic resilience. In addition, understanding the role of government policies in supporting these factors can provide deeper insights into the development of structured economic resilience. Above all, more research is needed to understand the specific aspects of knowledge that are least reviewed in any article in strengthening economic resilience. In addition to exploring specific aspects, further research in developing countries is needed to understand better the possible differences between developing and developed countries.

Practical Implications

Policymakers should consider investments in technology and educational programs that improve their economy's future readiness. Developing a robust information infrastructure and promoting continuous learning and adaptability among the workforce can be key strategies.

CONCLUSION

A systematic review of empirical results clearly shows that Technology, Future Readiness, and Knowledge are important determinants in digital competitiveness that affect economic resilience. Consistent positive impacts reported across studies suggest that these elements should be integral to economic planning and policy formulation to foster resilience to economic disruption.

BIBLIOGRAPHY

Akar, G., Saritas, T., & Kizilkaya, O. (2021). The impact of human development on economic growth: an application on transition economies. *Business and Economics Research Journal*, *12*(3), 307–318.

Azzahra, A., Rahayu, R., Marlina, N. S., Saebah, N., & Saputro, W. E. (2024). The Role of Education in Economic Growth and Breaking the Chain of Poverty in Indonesia. *Journal of Management, Economic, and Financial*, *2*(2), 55–63. https://doi.org/10.46799/jmef.v2i2.31

Brad, S. (2022). Digital Transformation to Support Resilient Economies and Stakeholder Capitalism. *International Journal of Advanced Statistics and IT&C for Economics and Life Sciences*, *12*(1).

Cheng, T., Zhao, Y., & Zhao, C. (2024). What determines the economic resilience of Chinese cities amid pandemic crisis: An economic operating state perspective. *International Journal of Disaster Risk Reduction*, *104*, 104389. https://doi.org/10.1016/j.ijdrr.2024.104389

Chou, M.-H., Erkkilä, T., & Mölsä, J. (2023). Crafting innovation hubs: Future cities and global challenges. *The British Journal of Politics and International Relations*. https://doi.org/10.1177/13691481231191921

Copestake, A., Estefania-Flores, J., & Furceri, D. (2024). Digitalization and resilience. *Research Policy*, *53*(3), 104948. https://doi.org/10.1016/j.respol.2023.104948

Ding, J., & Zhou, C. (2023). *Regional Economic Resilience Enhancement Effect and Mechanism of Digital Financial Inclusion--Analysis Based on the Perspective of Entry and Exit of Micro, Small and Medium-sized Business Entities*.

Du, Y., Wang, Q., & Zhou, J. (2023). How does digital inclusive finance affect economic resilience: Evidence from 285 cities in China. *International Review of Financial Analysis*, *88*, 102709. https://doi.org/10.1016/j.irfa.2023.102709

Duan, W., Madasi, J. D., Khurshid, A., & Ma, D. (2022a). Industrial structure conditions economic resilience. *Technological Forecasting and Social Change*, *183*, 121944. https://doi.org/10.1016/j.techfore.2022.121944

Duan, W., Madasi, J. D., Khurshid, A., & Ma, D. (2022b). Industrial structure conditions economic resilience. *Technological Forecasting and Social Change*, *183*, 121944. https://doi.org/10.1016/j.techfore.2022.121944

Gu, J., & Liu, Z. (2024). A study of the coupling between the digital economy and regional economic resilience: Evidence from China. *PLOS ONE*, *19*(1), e0296890. https://doi.org/10.1371/journal.pone.0296890

Hou, S., Zhang, Y., & Song, L. (2023). Digital finance and regional economic resilience: Evidence from 283 cities in China. *Heliyon*, *9*(10), e21086. https://doi.org/10.1016/j.heliyon.2023.e21086

Hu, X., Li, L., & Dong, K. (2022). What matters for regional economic resilience amid COVID-19? Evidence from cities in Northeast China. *Cities*, *120*, 103440. https://doi.org/10.1016/j.cities.2021.103440

Huang, Z., & Hou, B. (2023). How Does Economic Resilience Enhance the Innovation Capability of the High-Tech Industry? Evidence from China. *Systems*, *11*(11), 531. https://doi.org/10.3390/systems11110531

Huda, M. (2023). Digital marketplace for tourism resilience in the pandemic age: voices from budget hotel customers. *International Journal of Organizational Analysis*, *31*(1), 149–167. https://doi.org/10.1108/IJOA-10-2021-2987

IMD, W. (2022). *IMD World Digital Competitiveness Ranking 2022*. IMD World Competitiveness Center.

Ji, Z., & Huang, Y. (2024). Does digital transformation promote economic resilience? Urban-level evidence from China. *Heliyon*, *10*(4), e26461. https://doi.org/10.1016/j.heliyon.2024.e26461

Nayyar, M. (2022). Asian Development Bank, *Asian Economic Integration Report 2022: Advancing Digital Services Trade in Asia and the Pacific* , Asian Development Bank, 2022, 300 pp., $51 (Paperback). ISBN: 978-92-9269-361-9 (print), ISBN: 978-92-9269-362-6 (electronic), 978-

92-9269-363-3 (eBook). *Journal of Asian Economic Integration*, *4*(2), 211–213. https://doi.org/10.1177/26316846221107416

Ngantung, E. M. C., Tulung, J. E., & Arie, F. V. (2021). THE INFLUENCE MSMEs AND CREATIVE ECONOMY ON ECONOMIC RESILIENCE IN THE NEW NORMAL (CASE STUDY: UNSRAT STUDENT). *Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi*, *9*(1).

Rodríguez-Pose, A. (2021). Costs, incentives, and institutions in bridging evolutionary economic geography and global production networks. *Regional Studies*, *55*(6), 1011–1014. https://doi.org/10.1080/00343404.2021.1914833

Rolf, S., & Schindler, S. (2023). The US–China rivalry and the emergence of *state platform capitalism*. *Environment and Planning A: Economy and Space*, *55*(5), 1255–1280. https://doi.org/10.1177/0308518X221146545

Shen, Y., & Hu, G. (2024). How does digital inclusive finance improve rural economic resilience? Evidence from China. *Digital Economy and Sustainable Development*, *2*(1), 12. https://doi.org/10.1007/s44265-024-00035-4

Shi, Y., Zhang, T., & Jiang, Y. (2023). Digital Economy, Technological Innovation and Urban Resilience. *Sustainability*, *15*(12), 9250. https://doi.org/10.3390/su15129250

Song, Y., & Jiang, Y. (2024). How Does the Digital Economy Drive the Optimization and Upgrading of Industrial Structure? The Mediating Effect of Innovation and the Role of Economic Resilience. *Sustainability*, *16*(4), 1352. https://doi.org/10.3390/su16041352

Ştefan, G. M., Trașcă, D. L., Sahlian, D. N., Popa, A. F., Iacob (Pîrșcoveanu), L.-M., & Chiriac, S. C. V. (2023). Private and Public Digitalization and Economic Resilience during COVID-19 Pandemic. *Electronics*, *12*(5), 1224. https://doi.org/10.3390/electronics12051224

Tan, J., Hu, X., Hassink, R., & Ni, J. (2020). Industrial structure or agency: What affects regional economic resilience? Evidence from resource-based cities in China. *Cities*, *106*, 102906. https://doi.org/10.1016/j.cities.2020.102906

Tian, Y., & Guo, L. (2023). Digital development and the improvement of urban economic resilience: Evidence from China. *Heliyon*, *9*(10), e21087. https://doi.org/10.1016/j.heliyon.2023.e21087

Vu, K., Hanafizadeh, P., & Bohlin, E. (2020). ICT as a driver of economic growth: A survey of the literature and directions for future research. *Telecommunications Policy*, *44*(2), 101922. https://doi.org/10.1016/j.telpol.2020.101922

Yang, Y., Lin, Z., Xu, Z., & Liu, S. (2024). The impact of digital finance on regional economic resilience. *Pacific-Basin Finance Journal*, *85*, 102353. https://doi.org/10.1016/j.pacfin.2024.102353

Ye, Z., & Hu, X. (2023). Digital Industry Agglomeration and Regional Economic Resilience—Evidence from Provincial Panel Data in China. *2023 International Conference on Culture-*

Oriented Science and Technology (CoST), 28–31. https://doi.org/10.1109/CoST60524.2023.00015

Zhang, W., Wang, J., & Jin, H. (2024). Digital finance, innovation transformation, and resilient city growth. *Scientific Reports*, *14*(1), 7056. https://doi.org/10.1038/s41598-024-56998-z

Zhang, W., Zhao, S., Wan, X., & Yao, Y. (2021). Study on the effect of digital economy on high-quality economic development in China. *PLOS ONE*, *16*(9), e0257365. https://doi.org/10.1371/journal.pone.0257365

Zhao, Y., & Li, X. (2018). Research on the concept and promotion mechanism of enterprise economic resilience. *Mod. Econ. Manag. Forum*, *15*, 504–508.

Zhou, Q., & Qi, Z. (2023). Urban economic resilience and human capital: An exploration of heterogeneity and mechanism in the context of spatial population mobility. *Sustainable Cities and Society*, *99*, 104983. https://doi.org/10.1016/j.scs.2023.104983

Zhu, Z., Yang, Y., & Li, H. (2023). A study of the spillover effects of digital financial agglomeration on economic resilience. *Frontiers in Applied Mathematics and Statistics*, *8*. https://doi.org/10.3389/fams.2022.1085563