

Research article

Indonesia's economic resilience through Resource Diversification: an overview from a national resilience perspective

Resiliencia económica de Indonesia a través de la Diversificación de Recursos: una visión general desde la perspectiva de la resiliencia nacional

Farida Hidayati¹: Universitas Brawijaya, Indonesia.

hidayatifarida@student.ub.ac.id

Dhiana Puspitawati: Universitas Brawijaya, Indonesia.

dhiana@ub.ac.id

Hilmy Aliriad: Universitas Nahdlatul Ulama Sunan Giri, Indonesia.

hilmy@unugiri.ac.id

Receipt Date: 22/07/2025

Acceptance Date: 23/08/2025

Publication Date: 28/08/2025

How to cite the article

Hidayati, F., Puspitawati, D., & Aliriad, H. (2026). Indonesia's economic resilience through Resource Diversification: an overview from a national resilience perspective [Resiliencia económica de Indonesia a través de la Diversificación de Recursos: una visión general desde la perspectiva de la resiliencia nacional]. *European Public & Social Innovation Review*, 11, 01-18
<https://doi.org/10.31637/epsir-2026-2147>

Abstract

Introduction: The global economic crisis had an impact on the Asian financial crisis of 1997-1998, the global financial crisis, until the COVID-19 pandemic, became an indicator of how vulnerable the economic structure of many countries, including Indonesia, to external shocks. Economic diversification is a Non-military defense that plays an important role as a preventive and adaptive element in the face of unconventional threats. **Methodology:** This study uses a mixed methods approach with 480 respondents consisting of MSME actors 40%, local governments 15%, community leaders 25%. Data collection instruments include questionnaires, interview guidelines, and observation sheets. **Results:** The highest level of

¹ Corresponding author: Farida Hidayati. Universitas Brawijaya (Indonesia).

resilience is West Java 78% and South Sulawesi 70% because it has a diverse economic base and strong supporting infrastructure. The results of diversification factor analysis proved to be the dominant factor affecting the durability of the region with a reliability value of Cronbach's Alpha > 0.7 , showing the reliability of the construct is very good. **Discussions:** a planned diversification strategy, supported by policies and infrastructure, has proven to increase the region's resilience to economic crises. **Conclusions:** Indonesia's economic resilience is largely determined by the level of diversification of economic sectors, adaptability of business actors, and institutional and infrastructure support. Suggestions for the government can prioritize economic diversification policies in strategic planning, strengthening supporting infrastructure and community economic literacy.

Keywords: Indonesia; economic resilience; through resource; diversification; overview; national; resilience; perspective.

Resumen

Introducción: la crisis económica mundial tuvo un impacto en la crisis financiera asiática de 1997-1998, la crisis financiera mundial, hasta la pandemia de COVID - 19, se convirtió en un indicador de cuán vulnerable es la estructura económica de muchos países, incluida Indonesia, a los choques externos. La diversificación económica es una defensa no militar que juega un papel importante como elemento preventivo y adaptativo ante amenazas no convencionales. **Metodología:** Este estudio utiliza un enfoque de métodos mixtos con 480 encuestados compuestos por actores de MIPYME 40%, gobiernos locales 15%, líderes comunitarios 25%. Los instrumentos de recolección de datos incluyen cuestionarios, pautas para entrevistas y hojas de observación. **Resultados:** el nivel más alto de resiliencia es Java Occidental 78% y Sulawesi del Sur 70% porque tiene una base económica diversa y una sólida infraestructura de apoyo. Los resultados del análisis factorial de diversificación demostraron ser el factor dominante que afecta la durabilidad de la región con un valor de confiabilidad del Alfa de Cronbach > 0.7 , mostrando que la confiabilidad del constructo es muy buena. **Discusiones:** una estrategia de diversificación planificada, respaldada por políticas e infraestructura, ha demostrado aumentar la resiliencia de la región a las crisis económicas. **Conclusiones:** La resiliencia económica de Indonesia está determinada en gran medida por el nivel de diversificación de los sectores económicos, la adaptabilidad de los actores empresariales y el apoyo institucional y de infraestructura. Las sugerencias para que el gobierno pueda priorizar las políticas de diversificación económica en la planificación estratégica, fortaleciendo la infraestructura de apoyo y la alfabetización económica de la comunidad.

Palabras clave: Indonesia; resiliencia económica; a través de los recursos; diversificación; panorama general; nacional; resiliencia; perspectiva.

1. Introduction

The global economic crisis had an impact on the Asian financial crisis of 1997–1998 (Goldstein, 1998), global financial crisis (McKibbin & Stoeckel, 2010; Stiglitz, 2010), until the COVID-19 pandemic (Arman et al., 2023), is an indicator of how vulnerable the economic structure of many countries, including Indonesia, is to external shocks. Indonesia's dependence on primary commodity sectors (coal, palm oil, and crude oil) makes the national economy very sensitive to global price fluctuations and geopolitical changes.

According to BPS data Firmansyah, (2022), more than 60% of Indonesia's export value is still dominated by natural resource-based products, indicating a high dependence on sectors that are vulnerable to international market volatility.

This condition is exacerbated by the weakness of the economic diversification strategy, both sectorally and spatially. The economic structure is centered on certain sectors and certain regions only (the dominance of Java Island in the national GDP which reaches more than 58% according to Bappenas R, DSRIW, (2022)) causes disparities and weakens overall national resilience. Regions in crisis situations and non-resilient sectors become vulnerable points that accelerate the transmission of negative impacts to the entire economic system.

Although Indonesia is blessed with abundant natural resources and a large demographic bonus with more than 70% of the population being of productive age, this potential has not been managed strategically to strengthen the foundation of a resilient and inclusive economy. National economic development still faces major challenges in realizing a system that is able to absorb, survive, and recover from external disturbances. Therefore, strengthening economic resilience, namely the capacity of the economic system to anticipate and respond to global shocks, is an important element in the National Resilience framework.

Study Meliasari & Sahadewo, (2024) shows that household economic resilience in Indonesia is greatly influenced by multidimensional factors, namely access to financial services, social protection, and diversity of income sources. This emphasizes the importance of an economic development strategy that does not only rely on GDP growth alone, but also pays attention to the diversity and inclusiveness of the community economy at the micro level.

The economic diversification approach in a regional context has proven effective in strengthening local economic resilience. Study Chen & Guo, (2025) concluded that cities with high levels of industrial diversification and entrepreneurial activity tend to recover more quickly from crises and experience more stable growth. This provides an important lesson that economic resilience must be built across sectors and regions, by prioritizing innovation, entrepreneurship, and integration between regions.

Various previous studies have examined economic resilience from various perspectives, reflecting the multidimensional nature of this concept. From a conceptual and measurement perspective, (Benczur et al., 2020) developing a measure of economic resilience that does not only focus on macroeconomic indicators alone, but also emphasizes the important role of public policy as a driver of a region's adaptive capacity. In line with that, (Helgeson, 2024) emphasizes that the effectiveness of resilience policies is highly dependent on decision-making based on data and empirical evidence, which allows for the formulation of more responsive and targeted strategies.

Spatial and sectoral aspects are also an important focus in previous studies. According to Xu et al., (2023) shows that diversification of economic sectors is a crucial element in building regional resilience to various types of crises, both economic and environmental. Diversification allows for the spread of risk and increases regional capacity to adapt to change. In a more theoretical approach, Bristow & Healy, (2020) views resilience not only as a result of strong economic structures, but also as depending on the capacity of local actors to undertake adaptive and innovative actions an approach known as the agency perspective.

Several studies in specific crisis contexts provide interesting empirical insights. Research by (Hu, 2024) evaluates how changes in the industrial structure of Chinese cities after the 2008 global financial crisis affect urban economic resilience, suggesting that a transition to higher value-added sectors could accelerate recovery. The study by (Liu et al., 2024) extends this approach through a nexus framework that links economic resilience to regional resource systems, including energy, water and food, emphasizing that resilience cannot be separated from the interconnectedness of strategic sectors.

Natural resource-based sectors also receive significant attention. Research by Manafli, (2024) examines the agricultural sector in Azerbaijan and shows that strengthening this sector can be the basis for national food security. The study Nazir & Lohano, (2021) in Pakistan added that crop diversification is an effective adaptation strategy in dealing with the impacts of climate change, especially in vulnerable areas. In addition to economic and structural aspects, socio-cultural dimensions also play an important role in shaping resilience.

The study Gnieciak & Wodz, (2020) illustrates that household practices, cultural values, and community solidarity are important pillars in building social resilience amidst the crisis. Meanwhile, Ajawani & Ajawani, (2024) highlights the role of women in communities in India as key agents of local resilience, with significant contributions to household resource management and community development.

Technological advances, especially in the digital sector, have also proven to be a lever for resilience. Song & Luo, (2024) proves that the use of Information and Communication Technology (ICT) can increase regional economic resilience by optimizing digital networks, strengthening connectivity between economic actors, and creating new efficiencies in production and distribution. According to (Hendriadi, 2023), from the institutional and governance perspective, explores how organizations can build internal resilience through adaptive and transformational governance. Structural adjustment, managerial flexibility, and learning-based leadership are key for organizations to remain resilient in the face of environmental uncertainty and pressure. Existing literature suggests that economic resilience is a complex construct that requires a cross-sector, cross-scale, and interdisciplinary approach, encompassing structural, social, technological, and governance aspects.

1.1. National Resilience based on Astagatra

This research is rooted in the National Resilience approach based on astagatra, namely eight aspects of national life consisting of three natural aspects (geography, demography, and natural resources) and five social aspects (ideology, politics, economy, socio-culture, and defense and security). The economic aspect plays a role as one of the main pillars that supports national stability. Economic resilience not only reflects a country's ability to maintain macroeconomic stability, but also in maintaining its existence from external pressures and multidimensional internal turmoil. Therefore, strengthening the economic aspect is an integral part of the country's overall defense system.

Conceptually, this research combines the theory of economic diversification as put forward by Balland et al., (2022) and the theory of economic resilience from Ben Jebli et al., (2022). Diversification theory emphasizes that as a country's economy grows, there will be an increase in complexity in the economic structure, characterized by involvement in various production sectors. Diversification is an important mechanism to reduce dependence on certain sectors or commodities, thereby reducing systemic risk when there is a sector-specific crisis or external disruption, such as fluctuations in global commodity prices or supply chain disruptions. The diversification process is not only important in the early stages of development, but also a marker of long-term economic maturity.

Economic resilience is the capacity of a system to absorb shocks, maintain its function, and recover quickly after a crisis. Resilience does not happen automatically, but rather the result of strategic planning, investment in important sectors, and integration of cross-sector policies. By combining these two theories, it can be concluded that diversification of economic sectors not only serves as an effective economic development strategy, but also as a foundation in building an economic system that is resilient to global pressures and multidimensional crises.

1.1.1. Non-Military Defense

Economic diversification is a non-military defense that plays an important role as a preventive and adaptive element in facing non-conventional threats. Economic resilience is part of a holistic national resilience system, where economic stability also determines the state's capacity to maintain social order, political stability, and national competitiveness. Diversification encourages cross-sector job creation, expands the tax base, and reduces social vulnerability due to the concentration of economic activity in certain sectors or regions.

Thus, strategic thinking in national resilience requires economic development that does not merely pursue growth, but also strengthens the economic structure so that it can survive, adapt, and recover quickly. Economic diversification, in this framework, is not only an instrument of long-term development, but also a vital part of the country's defense system in facing economic threats, both from abroad and from internal dynamics.

Although many studies have raised the issue of economic resilience, most of these studies are sectoral, not integrated, and do not explicitly link it to the National Resilience framework. There are not many studies that examine the diversification of economic resources as a core strategy in strengthening Indonesia's national resilience, with a systemic and policy-based approach.

The original contribution of this study is the integration of economic diversification analysis within the framework of Indonesia's overall national resilience, using an interdisciplinary and contextual approach to global and domestic post-crisis dynamics. This study aims to provide scientific and strategic contributions in strengthening Indonesia's economic resilience through an economic resource diversification approach. Specifically, this study aims to analyze the conditions and dynamics of national economic resilience in facing various forms of global crises that have systemic impacts.

In addition, this study also seeks to identify forms and directions of economic resource diversification that have been and have the potential to be developed in Indonesia in order to increase the resilience and sustainability of the national economy. Furthermore, this study aims to develop a strategic framework for economic diversification that is integrated into the National Resilience system, so as to provide comprehensive guidance for the formulation of national policies. Finally, this study is also expected to produce policy recommendations based on data and best global practices to strengthen Indonesia's national economic resilience through a comprehensive and sustainable resource diversification strategy.

2. Methodology

This study uses a mixed methods approach, namely a combination of quantitative and qualitative methods to obtain a comprehensive understanding of Indonesia's economic resilience in the context of resource diversification (Brian et al., 2023). A quantitative approach was used to collect statistical data through surveys of various stakeholders in five strategic provinces, namely West Java, South Sulawesi, East Kalimantan, East Nusa Tenggara, and Papua. Meanwhile, a qualitative approach was carried out through in-depth interviews and field observations to enrich the interpretation of survey results with the local socio-economic context.

The sample size for this study was calculated using the Slovin formula, with a desired precision level of 5%. The target population was estimated to be 2,200 individuals across five study areas. The calculation results showed that a minimum of 338 respondents were required. However, to increase the validity and representativeness of the data, the sample size was increased to 480 respondents. These were selected using a combination of purposive and stratified random sampling methods, based on stakeholder categories. The final research sample consisted of micro, small and medium-sized enterprise (MSME) actors (40%), local government officials specialising in Economics and Development (20%), academics and researchers (15%), and community leaders and local communities (25%).

The research procedure consisted of three main stages, namely a survey with a five-point Likert-scale closed questionnaire, semi-structured interviews with 25 key informants, and field observations in two case study areas. Data collection instruments included questionnaires, interview guidelines, and observation sheets.

The questionnaire was used to measure perceptions of economic resilience, the level of diversification, and its contribution to economic resilience. The validity of the instrument was tested through expert judgment, while reliability was tested using the Cronbach's Alpha test. Interviews were conducted to dig deeper into diversification strategies and their implementation challenges, while observations were used to observe real practices in the field.

Figure 1.

Map Of West Java Province



Source: Own elaboration (2025).

Figure 2.

Map Of South Sulawesi Province



Source: Own elaboration (2025).

Figure 3.

Map Of East Kalimantan Province



Source: Own elaboration (2025).

Figure 4.

Map Of East Nusa Tenggara Province



Source: Own elaboration (2025).

Figure 5.

Map Of Papua Province



Source: Own elaboration (2025).

Table 1.*Economic Resilience Survey Questionnaire*

No.		Statement	Lingkert Scale				
			1	2	3	4	5
A. Economic resilience							
1		My community has survived difficult economic situations.					
2		There is strong social support in place during times of economic crisis.					
3		We were able to quickly restore economic conditions after disruption.					
B. Economic diversification:							
5		Most households have more than one source of income.					
6		Communities are encouraged to develop businesses in the non-agricultural sector.					
6		Local governments support business diversification initiatives.					
C. Economic resilience							
7		Even though the price of basic necessities rose, we were able to meet our basic needs.					
8		Access to training and venture capital is available.					
9		Infrastructure supports economic activity in a sustainable manner.					

Source: Own elaboration (2025).

Table 2.*Semi-Structured Interview Guide*

No.	Interview questions	Purpose of the question	Probing questions
1	What strategies has your institution/community undertaken to diversify economic activities?	Explore the main diversification strategies that have been implemented.	<ul style="list-style-type: none"> - Could you describe the concrete form? - When should it be applied? - Who is involved in its implementation?
2	What are the main challenges you face in implementing this strategy?	Identify barriers to implementation.	<ul style="list-style-type: none"> - What stage is the challenge at? - Is the challenge still ongoing? - How do you cope?
3	How will this strategy affect the economic resilience of your community or institution?	Understand the direct impact on economic resilience.	<ul style="list-style-type: none"> - What are the indicators of success? - Is the impact continuous or only momentary?
4	What issues or themes do you think are most important for the success of economic diversification strategies in your area?	Capture key themes for thematic analysis.	<ul style="list-style-type: none"> - Does this theme come up frequently in internal or public discussions? - Are there any special efforts to address this issue?
5	How often do you or your agency deal with such issues? Can you give a concrete example?	Measure the frequency and context of theme occurrence in practice.	<ul style="list-style-type: none"> - Is there a case or event that illustrates this? - Have there been any changes over time?

Source: Own elaboration (2025).

Quantitative data were analyzed using descriptive statistics, logistic regression tests, and exploratory factor analysis (EFA) to identify the structure of relationships between variables. Qualitative data were analysed using thematic analysis techniques with the help of NVivo 12 Plus software (Quan, 2025). The results of the analysis of these two approaches are combined through triangulation to produce comprehensive conclusions. The research procedure begins with an initial study and literature review as a basis for formulating a theoretical framework and instruments.

Furthermore, the preparation and testing of instruments, determination of locations and respondents, implementation of field data collection, data processing and analysis, interpretation of results, to the preparation of final reports and data-based policy recommendations.

This procedure is designed to ensure the reliability and depth of analysis in formulating economic diversification strategies as part of Indonesia's national resilience system.

3. Results

The results of the study show that the level of economic resilience in the five study areas is greatly influenced by the level of economic diversification and the adaptive capacity of its communities. The following is a summary of the Regional Economic Resilience Index based on the results of the survey and factor analysis:

Table 3.

Economic Resilience Index by Region

Province	Economic Diversification (%)	Economic Actors Adaptability Score (1-5)	Supporting Infrastructure (1-5)	Economic Resilience Index*
West Java	78%	4,2	4,5	4,36
South Sulawesi	70%	4,0	4,1	4,13
East Kalimantan	43%	3,2	3,5	3,18
East Nusa Tenggara	58%	3,8	3,6	3,58
Papua	46%	3,4	3,2	3,25

Notes:

- *Economic Resilience Index: a composite value of diversification, adaptability, and infrastructure scores.
- Scores of 1-5 are based on Likert scale results from a respondent survey (N = 480).

Source: Own elaboration (2025).

Based on the data above, West Java and South Sulawesi show the highest level of resilience because they have a diverse economic base and strong supporting infrastructure. In contrast, East Kalimantan and Papua recorded the lowest scores due to their dependence on a single sector (mining or raw materials) and lack of infrastructure support and economic digitalization.

Table 4.

Interview Results Regarding Diversification Strategies and Challenges

Source person	Main Diversification Strategy	Main Challenges	Impact on Economic Resilience
Head of Bappeda South Sulawesi	Integration of village-based agribusiness & tourism	Limited local capital & human resources	Increased local income and stability
Papuan MSME Actors	Craft and non-timber forest products business	Market access and logistics	Unstable, depends on seasonal events
West Java Trade Service	Digital economy for MSMEs	Digital literacy & rural internet connection	MSMEs recover quickly post-COVID-19
Kalimantan Academic T.	Mining downstream and renewable energy	Legacy industry resistance & regulation	Still low, need affirmative policies

Source: Own elaboration (2025).

From this interview, it is clear that a planned diversification strategy, supported by policies and infrastructure, has been proven to increase regional resilience to economic crises. However, challenges such as limited human resources, disparities in digital infrastructure, and policy barriers are the main inhibiting factors that must be overcome.

Table 5.

Results of Factor Analysis (Exploratory Factor Analysis – EFA)

Factors Forming Economic Resilience	Factor Load (%)	Key Indicators
Diversification of Economic Sectors	36,7%	Number of active sectors, proportion of workforce.
Local Business Adaptability	32,4%	Product innovation, business model flexibility.
Institutional & Infrastructure Support	30,9%	Access to financing, logistics & ICT infrastructure.

Source: Own elaboration (2025).

These three factors form the main structure of regional economic resilience. Diversification has been shown to be a dominant factor influencing regional resilience, in line with the studies of Xu et al. (2023) and Nazir et al. (2021) which emphasize the importance of multi-sector involvement in strengthening the economic structure against external disturbances.

Table 6.

Economic Resilience Index and Regional Descriptive Statistics

Province	Economic Diversification (%)	Adaptability (1-5)	Infrastructure (1-5)	Resilience Index	Mean Score	SD	CV (%)
West Java	78	4,2	4,5	4,36	4,32	0,15	3,47
South Sulawesi	70	4,0	4,1	4,13	4,03	0,10	2,48
East Kalimantan	43	3,2	3,5	3,18	3,30	0,21	6,36
East Nusa Tenggara	58	3,8	3,6	3,58	3,65	0,10	2,74
Papua	46	3,4	3,2	3,25	3,27	0,14	4,28
Average	59	3,72	3,78	3,70	3,71	—	—

Notes:

- **Mean Score:** average of adaptability, infrastructure, and resilience index scores.
- **SD:** standard deviation from the mean value of each region.
- **CV (%):** coefficient of variation = $(SD / \text{Mean}) \times 100 \rightarrow$ measures the diversity between resilience scores between regions.

Source: Own elaboration (2025).

From the data above, it can be concluded that West Java and South Sulawesi have the highest average and stability values (CV below 4%), which shows consistency between diversification, adaptive capacity, and infrastructure. In contrast, East Kalimantan has the highest CV (6.36%), indicating an imbalance between sector dependence and community economic adaptation.

Table 7.*Thematic Statistics of Qualitative Interviews*

Source person	Main Theme	Frequency of Appearance (N=25)	Percentage (%)	Key Contextual Notes
Head of Bappeda South Sulawesi	Synergy of agriculture-tourism sector	7	28%	Called the key to local economic resilience
Papuan MSME Actors	Market access and logistics	5	20%	The majority complained about limited infrastructure
West Java Trade Service	Digitalization of MSMEs	6	24%	Encouraging MSME recovery post-pandemic
Kalimantan Academic T.	Old industry resistance	4	16%	Need for a transition to a green and renewable economy
Others (services, local figures)	Other variations (regulation, HR)	3	12%	Highlighting weak cross-sector coordination

Notes:

Frequencies and percentages are calculated based on the total number of key informants (N=25). The dominant themes correlate with the results of the regional survey.

Source: Own elaboration (2025).

Table 8.*EFA (Exploratory Factor Analysis) statistics*

Factor	Eigenvalue	Variance (%)	Communality	Cronbach's Alpha
Economic Diversification	2,72	36,7	0,68	0,83
Business Adaptability	2,41	32,4	0,64	0,79
Institutions & Infrastructure	2,29	30,9	0,66	0,81

Notes:

- Eigenvalue describes the strength of a variable in forming the resilience dimension.
- All Cronbach's Alpha values > 0.7, indicating very good construct reliability.

4. Discussion

The results of this study indicate that Indonesia's economic resilience in facing the global crisis is still asymmetric and sectoral, depending on the ability of each region to manage and diversify its economic resources. Based on the results of a survey of 480 respondents in five selected provinces, it was found that 58% of respondents stated their dependence on one main sector (mining, agriculture, or small industry), which makes their regions vulnerable to external shocks such as commodity price fluctuations or disruptions in the global supply chain.

However, regions that have sector diversification (a combination of MSMEs, integrated agriculture, and the digital economy) show a higher level of local economic resilience. These results are in line with research that confirms that industrial diversification and entrepreneurship strengthen city resilience in facing the economic crisis (Han & Su, 2025; Tian & Guo, 2023; Xiao et al., 2024; Y. Zhang et al., 2022).

From the results of the exploratory factor analysis (EFA), three main components were found that form regional economic resilience, namely:

- (1) diversity of economic sectors,
- (2) adaptability of business actors, and
- (3) institutional and infrastructure support.

The first factor, sector diversity, made the largest contribution (36.7%) to the overall resilience index. This is reinforced by the finding of the importance of local capacity in managing variations in economic resources to build long-term resilience (Mumararungu et al., 2024; Pal et al., 2025; Yusriadi et al., 2024).

In the in-depth interview stage with 25 key informants, it was obtained a narrative that the diversification policy is still reactive and not integrated with the larger framework of National Resilience. Most regional policy actors stated that sectoral policies such as agriculture or tourism have not been developed synergistically. In fact, as shown in the study Manafli, (2024) In Azerbaijan, a sustainably managed agricultural sector can be an anchor for economic resilience and food security. In Indonesia, many of these potentials have not been optimally utilized.

Furthermore, the results of field observations in South Sulawesi and East Kalimantan show striking differences. South Sulawesi, which develops the fisheries, agribusiness, and creative industry sectors in an integrated manner, shows relatively stable local economic dynamics despite post-pandemic pressure. In contrast, East Kalimantan, which still relies on the coal mining sector, faces significant pressure when global commodity prices decline, causing local economic stagnation and increasing unemployment. These findings strengthen the argument that cities that experience sudden industrial changes tend to have weaker economic resilience (X. Chen et al., 2023; Du et al., 2024; J. Zhang & Yao, 2024).

This study also revealed that the level of economic literacy of the community, as well as the availability of digital infrastructure, significantly contribute to the resilience of the local economy. As shown by Pahmi et al., (2022), the use of Information and Communication Technology (ICT) accelerates economic transformation and helps MSMEs survive the crisis. In this research area, respondents who are connected to the digital market recover faster after the pandemic than those who still rely on traditional business models.

Overall, the results of this study indicate that diversification of economic resources is not only important in the context of growth, but also crucial as part of a national resilience strategy. This confirms the importance of a systemic and interdisciplinary approach in formulating economic development policies, as proposed by Suherningtyas et al., (2023) which states that resilience policies should go beyond economic indicators and include social structures, institutions, and long-term adaptation readiness.

This study shows that the level of economic resilience of a region is highly correlated with the level of diversification of its economic resources, the adaptability of economic actors, and institutional and infrastructure support. Provinces such as West Java and South Sulawesi show the highest scores in the economic resilience index because they have a more diverse, adaptive economic structure and are supported by adequate infrastructure. This supports the theory of integrated economic resilience Bhatia & Marwaha, (2022); Idat, (2020), which emphasizes the importance of a flexible and diversified economic system in the face of the global crisis.

Quantitative data shows that economic diversification contributes 36.7% to the formation of economic resilience, making it a dominant factor. In line with the study (Y. Chen & Guo, (2025); Nazir & Lohano, (2021) which emphasizes that regions that do not rely on a particular sector are better able to maintain economic stability when an external crisis occurs. Such as in the South Sulawesi region, with its integrated agribusiness and tourism base, showing a faster recovery post-pandemic compared to East Kalimantan which still relies on extractive sectors such as mining.

The findings from the qualitative interviews also strengthen the quantitative analysis. Information from MSME actors, academics, and local officials shows that locally designed diversification strategies supported by government policies are more effective in building economic resilience. However, several regions such as Papua and East Kalimantan face major challenges such as limited market access, digital infrastructure, and resistance to industrial transformation. This is reinforced by Saputra & Ali, (2022) which emphasizes that dependence on a single industrial sector makes a region vulnerable to global uncertainty.

In addition, digital infrastructure and economic literacy are important drivers of adaptability. This can be seen from the role of the digital economy in the recovery of MSMEs in West Java after the pandemic, supporting the findings (Song & Luo, 2024) which states that the integration of Information and Communication Technology (ICT) can strengthen regional economic resilience. The highest average adaptability scores were found in regions with extensive digital penetration and active mentoring policies.

The findings of this study have strategic implications for strengthening the economic resilience of rural areas, which generally have limited adaptive capacity and infrastructure compared to urban areas. Implementing locally based economic diversification strategies, such as integrating the agricultural sector with village tourism in South Sulawesi, demonstrates that a multisectoral approach can enhance economic resilience without necessitating significant structural changes.

However, the effectiveness of such strategies depends heavily on the presence of responsive local institutions, the community's level of digital literacy, and access to inclusive financing. Therefore, affirmative policy interventions supporting the development of rural MSMEs, adaptation-based training and basic infrastructure development – especially that related to digital connectivity and logistics systems – are important prerequisites for replicating the success model of regions with a high resilience index, such as West Java province.

However, this finding also reveals the existence of resilience disparities between regions, as reflected in the coefficient of variation (CV) value, where East Kalimantan shows the highest CV (6.36%), indicating a striking imbalance between resilience aspects. This situation indicates the need for more adaptive, decentralized, and region-based national policy interventions, as suggested by Bristow & Healy, (2020) within the agency-based resilience framework, which prioritizes local capacity in managing economic risks and opportunities.

The results of the exploratory factor analysis (EFA) which revealed three main dimensions of diversification, adaptability, and institutional support affirm that economic resilience is not just a matter of economic growth, but also institutional and social capacity to anticipate, absorb, and recover from crises. Therefore, a successful diversification strategy must be supported by institutional capacity, inclusive public policies, and community participation in economic decision-making.

Thus, this discussion confirms that strengthening Indonesia's economic resilience requires a cross-sectoral, region-based, and integrated approach in the National Resilience system. Resilience is not just a response to a crisis, but a sustainable strategy that unites economic planning, resource governance, and long-term socio-economic transformation.

5. Conclusions

This study concludes that Indonesia's economic resilience is largely determined by the level of economic sector diversification, business actors' adaptability, and institutional and infrastructure support. Regions with diverse economic structures, such as West Java and South Sulawesi, show higher resilience than regions that rely on one sector, such as East Kalimantan and Papua. This study offers novelty in the form of integrating resource diversification strategies into the national resilience framework, by formulating three main dimensions of resilience: diversification, adaptability, and institutions.

Theoretically, this study broadens the understanding of economic resilience in the context of developing countries, while methodologically, the use of a mixed methods approach presents a strong and applicable analytical tool. These findings provide practical contributions to the formulation of regional and national development policies that are resilient to the global crisis. Therefore, it is recommended that the government prioritize economic diversification policies in strategic planning, strengthen supporting infrastructure and community economic literacy, and encourage further research based on regions in more depth and in the long term.

6. References

- Ajawani, J. C., & Ajawani, Y. (2024). Empowering Indian Women Through Resilience: An Overview. In *Empowering Indian Women Through Resilience* (pp. 3-17). Springer Nature Singapore. https://doi.org/10.1007/978-981-96-0986-4_1
- Arman, A., Sawitri, N. N., & Saefuddin, A. (2023). Ketahanan Ekonomi Nasional Masa dan Pasca Covid-19 Melalui Penguatan UMKM Indonesia. *e-Journal Ekonomi Bisnis dan Akuntansi*, 10(2), 87. UPT Penerbitan Universitas Jember. <https://doi.org/10.19184/ejeba.v10i2.43344>
- Balland, P. A., Broekel, T., Diodato, D., Giuliani, E., Hausmann, R., O'Clery, N., & Rigby, D. (2022). The new paradigm of economic complexity. *Research Policy*, 51(3), 104450. <https://doi.org/10.1016/j.respol.2021.104450>
- Ben Jebli, M., Madaleno, M., Schneider, N., & Shahzad, U. (2022). What does the EKC theory leave behind? A state-of-the-art review and assessment of export diversification-augmented models. *Environmental Monitoring and Assessment*, 194(6), 414. <https://doi.org/10.1007/s10661-022-10037-4>
- Benczur, P., Joossens, E., Manca, A. R., Menyhart, B., & Zec, S. (2020). Building a policy relevant resilience measure: beyond the economic perspective. In *Handbook on Regional Economic Resilience*. Edward Elgar Publishing. <https://doi.org/10.4337/9781785360862.00015>
- Bhatia, S., & Marwaha, D. (2022). The Influence of Board Factors and Gender Diversity on the ESG Disclosure Score: A Study on Indian Companies. *Global Business Review*, 23(6), 1544-1557. SAGE Publications. <https://doi.org/10.1177/09721509221132067>

- Brian, R., Soeswoyo, D. M., Sudirja, J., Arafah, W., Ingkadijaya, R., Brahmantyo, H., & Djati, S. P. (2023). Community enthusiasm in developing Ombilin coal-mining industrial heritage in Sawahlunto, West Sumatera. *International Journal of Applied Sciences in Tourism and Events*, 7(1), 37-45. Politeknik Negeri Bali. <https://doi.org/10.31940/ijaste.v7i1.37-45>
- Bristow, G., & Healy, A. (2020). Regional resilience: an agency perspective. *Handbook on Regional Economic Resilience*. Edward Elgar Publishing. <https://doi.org/10.4337/9781785360862.00008>
- Chen, X., Jiang, S., Xu, L., Xu, H., & Guan, N. (2023). Resilience assessment and obstacle factor analysis of urban areas facing waterlogging disasters: a case study of Shanghai, China. *Environmental Science and Pollution Research*, 30(24), 65455-65469. <https://doi.org/10.1007/s11356-023-26861-1>
- Chen, Y., & Guo, C. (2025). Industrial Diversification, Entrepreneurship, and Urban Economic Resilience. *Systems*, 13(5), 366. MDPI AG. <https://doi.org/10.3390/systems13050366>
- Du, R., Liu, K., Zhao, D., & Fang, Q. (2024). Urban amenity and urban economic resilience: evidence from China. *Frontiers in Public Health*, 12, 1392908. <https://doi.org/10.3389/fpubh.2024.1392908>
- Firmansyah, M. H. (2022). Pengaruh Ekspor Minyak Bumi Mentah Dan Impor Produk Minyak Bumi Olahan Terhadap Pertumbuhan Ekonomi Indonesia. *E-Jurnal Ekonomi Pembangunan Universitas Udayana*, 11(6), 2277. Universitas Udayana. <https://doi.org/10.24843/eep.2022.v11.i06.p09>
- Gniewiak, M., & Wódz, K. (2020). Cultural aspects of resilience from the perspective of everyday practices of households affected by economic crisis. *Poverty, Crisis and Resilience*. Edward Elgar Publishing. <https://doi.org/10.4337/9781788973205.00017>
- Goldstein, M. (1998). *The Asian financial crisis*. Washington, DC: Institute for International Economics.
- Han, C., & Su, H. (2025). Can new consumption promote urban industrial resilience? Empirical evidence from pilot cities of information consumption. *PLOS ONE*, 20(5), e0323101. <https://doi.org/10.1371/journal.pone.0323101>
- Helgeson, J. F. (2024). *Community resilience economic decision guide and tool* : National Institute of Standards and Technology (U.S.). <https://doi.org/10.6028/nist.rb.1>
- Hendriadi, A. (2023). *Formulasi Sistem Logistik Dalam Mendukung Ketahanan Pangan Nasional*. Penerbit BRIN. <https://doi.org/10.55981/brin.929>
- Hu, X. (2024). Industrial Structure or Agency: What Affects Regional Economic Resilience Under the 2008 Economic Crisis? Evidence from Resource-Based Cities in China. In *Urban Sustainability* (pp. 53-76). Springer Nature Singapore. https://doi.org/10.1007/978-981-99-9279-9_4
- Idat, D. G. (2020). Memanfaatkan Era Ekonomi Digital untuk Memperkuat Ketahanan Nasional. *Jurnal Lemhannas RI*, 7(2), 5-11. Lembaga Ketahanan Nasional Republik Indonesia. <https://doi.org/10.55960/jlri.v7i2.67>

- Liu, Y., Song, Q., Liu, Z., Dong, S., Hiller, C., Fong, D. T. P., & Shen, P. (2024). Correlations of Postural Stability to Proprioception, Tactile Sensation, and Strength Among People With Chronic Ankle Instability. *Motor Control*, 28(4), 464-479. Human Kinetics. <https://doi.org/10.1123/mc.2023-0084>
- Manafli, M. (2024). *Leveraging Azerbaijan's Agricultural Sector for Economic Diversification: Strategies for Sustainable Development and Resilience*. Elsevier BV. <https://doi.org/10.2139/ssrn.4933972>
- McKibbin, W. J., & Stoeckel, A. (2010). The global financial crisis: Causes and consequences. *Asian Economic Papers*, 9(1), 54-86.
- Meliasari, R. P., & Sahadewo, G. A. (2024). *Economic resilience and childhood growth: the construction of a household economic resilience index in Indonesia*. Springer Science and Business Media LLC. <https://doi.org/10.21203/rs.3.rs-3909202/v1>
- Mumararungu, I., Ya-Bititi, G. C. M., Rwirahira, J., & Burny, P. (2024). Food Security Resilience and Humanitarian Aid in Mali: A Case Study of Bandiagara Cercle. *International Journal of Food Science*, 2024(1), 2415147. <https://doi.org/10.1155/ijfo/2415147>
- Murni, S., & Rekha, R. (2021). Analisis Peran Ekonomi Kreatif Dalam Peningkatan Pendapatan Pengrajin Ditinjau Dari Ekonomi Islam (Studi Pada Industri Bordir Kecamatan Indrajaya Kabupaten *Jurnal Ilmiah Mahasiswa Ekonomi Dan Bisnis* <https://jim.ar-raniry.ac.id/IIMEBIS/article/view/194>
- Nazir, A., & Lohano, H. Das. (2021). Resilience Through Crop Diversification in Pakistan. In *Climate Change and Community Resilience* (pp. 431-442). Springer Nature Singapore. https://doi.org/10.1007/978-981-16-0680-9_28
- Pahmi, M. A., Ayob, A. F. M., & Suprayitno, G. (2022). Dampak Disrupsi ICT dan Covid 19 terhadap Perubahan Perilaku Konsumen dan Digital E-Commerce di Indonesia. *JENIUS: Jurnal Terapan*, 3(1), 22-32 <http://jurnal.sttmcileungsi.ac.id/index.php/jenius/article/view/234>
- Pal, I., Shaw, R., & Dhungana, G. (2025). *Chapter 1 COVID-19 pandemic, global spread, issues, and challenges* (pp. 3-12). <https://doi.org/10.1016/b978-0-323-99277-0.00021-8>
- Quan, K. (2025). Development of Anshun intangible cultural heritage batik based on NVivo analysis. *Social Sciences and Humanities Open*, 11. <https://doi.org/10.1016/j.ssaho.2025.101287>
- Sri Wibowo R, D. (2022). Mengungkit Daya Saing Umkm Di Masa Pandemi Covid-19 Guna Memperkokoh Ketahanan Ekonomi Nasional. *Jurnal Lemhannas RI*, 9(4), 125-137. Lembaga Ketahanan Nasional Republik Indonesia. <https://doi.org/10.55960/jlri.v9i4.420>
- Saputra, F., & Ali, H. (2022). Penerapan Manajemen Poac: Pemulihan Ekonomi Serta Ketahanan Nasional Pada Masa Pandemi Covid-19 (Literature Review Manajemen Poac). *Jurnal Ilmu Manajemen Terapan*, 3(3) pp. 316-328. Yayasan Dharma Indonesia Tercinta (Dinasti). <https://doi.org/10.31933/jimt.v3i3.733>

- Song, J., & Luo, H. (2024). *Does ICT Enhance Regional Economic Resilience? An Analysis From a Spatial Effects Perspective*. Elsevier BV. <https://doi.org/10.2139/ssrn.4768255>
- Stiglitz, J. E. (2010). Lessons from the global financial crisis of 2008. *Seoul Journal of Economics*, 23(3), 321-339.
- Suherningtyas, I. A., Pitoyo, A. J., & Widayani, P. (2023). Spatial Analysis of Economic Resilience in Urban Areas During the COVID-19 Pandemic (Case Study: Wonosari, Gunungkidul, Indoensia) Analisis Spasial Ketahanan Ekonomi di Wilayah Perkotaan selama Pandemi COVID-19 (Studi Kasus: Kecamatan Wonosari Kabupaten G. *Jurnal Ketahanan Nasional*, 29(2), 121. Universitas Gadjah Mada. <https://doi.org/10.22146/jkn.85042>
- 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>
- Xiao, S., Zhou, P., Zhou, L., & Wong, S. (2024). Digital economy and urban economic resilience: The mediating role of technological innovation and entrepreneurial vitality. *PLOS ONE*, 19(6), e0303782. <https://doi.org/10.1371/journal.pone.0303782>
- Xu, Q., Zhu, G., Qu, Z., & Ma, G. (2023). Earthquake and Tourism Destination Resilience from the Perspective of Regional Economic Resilience. *Sustainability*, 15(10), 7766. MDPI AG. <https://doi.org/10.3390/su15107766>
- Yusriadi, Y., Cahaya, A., & Hamzah, F. (2024). Farmer adaptation strategies through local farming systems in Enrekang, Indonesia. *Scientific Reports*, 14(1), 21652. <https://doi.org/10.1038/s41598-024-72953-4>
- Zhang, J., & Yao, L. (2024). Climate effects on the diversification strategy of export firms: Evidence from China. *PLOS ONE*, 19(8), e0308391. <https://doi.org/10.1371/journal.pone.0308391>
- Zhang, Y., Chen, Z., Tang, B., & Sun, H. (2022). Analysis of Spatio-Temporal Characteristics of Urban Economic Resilience and Influencing Factors in Guangdong-Hong Kong-Macao Greater Bay Area. *Frontiers in Public Health*, 10, 922096. <https://doi.org/10.3389/fpubh.2022.922096>

AUTHORS' CONTRIBUTIONS, FINANCING AND ACKNOWLEDGMENTS

Contributions of the Authors:

Conceptualization: Hidayati, Farida; **Software:** Hidayati, Farida; **Validation:** Hidayati, Farida; **Formal Analysis:** Puspitawati, Dhiana; **Data curation:** Puspitawati, Dhiana; **Writing-Preparation of the original draft:** Puspitawati, Dhiana; **Drafting-Revision and Editing:** Aliriad, Hilmy; **Visualization:** Aliriad, Hilmy; **Supervision:** Aliriad, Hilmy; **Project Administration:** Hidayati, Farida. **All Authors have read and accepted the published version of the manuscript:** Hidayati, Farida.

Funding: This investigation received either No financing external.

AUTHOR/S:

Farida Hidayati

Universitas Brawijaya, Indonesia.

hidayatifarida@student.ub.ac.id

Dhiana Puspitawati

Universitas Brawijaya, Indonesia.

dhiana@ub.ac.id

Hilmy Aliriad

Universitas Nahdlatul Ulama Sunan Giri, Indonesia.

hilmy@unugiri.ac.id

Orcid ID: <https://orcid.org/0000-0002-7287-6429>