



## Empirical Study on the Conceptual Approach of Worldwide Economic Resilience

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**Abstract:** The appearance of new notions in economic theories is due to the dynamic and applied nature of the economy regarding the involvement of studies and researches in the solution of pressing problems. The notion of economic resilience appears as a new concept provided by the community of scientists from various continents, a fact that confirms the synergy and rationale of economic thinking on the phenomena that are increasingly being approached at the global level. The author's interest in this phenomenon comes in the context of the joint study initiated by a team of researchers from the National Institute of Economic Research in the Republic of Moldova concerned with the issues of adapting the national economy to current challenges. In this context, we would like to present this study as an analysis of the concepts of the world's scientists, who had in their study objectives the element of economic resilience and on which they expressed their own opinion. This study is of particular importance for the researches initiated by clarifying the diversity and size of the concept and the conclusions of all those cited in this paper as reference points to some formulations and the process of developing the subject in the context of the Republic of Moldova.

**Keywords:** economic resilience; economy; crisis; resistance; change; adaptation

**JEL Classification:** B20; D00; E00; N00

### 1. Introduction

Starting from the meaning of economic resilience as the ability of an economy to adapt and recover in the face of external shocks and disturbances. The phenomenon of economic resilience has been highlighted and increased in importance due to

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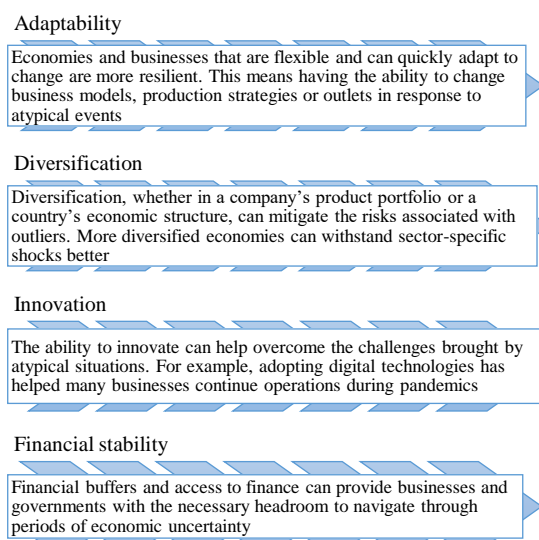
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several global challenges such as economic crises, climate challenges, demographic problems, the development of information technologies, the globalization of economies, geopolitical factors and others.

Economic resilience is currently a priority for many economies around the world as they face unprecedented challenges. In particular, recent crises, such as the COVID-19 pandemic and the military conflict in Ukraine, have had significant impacts on national economies and revealed the acute need to develop response mechanisms and increase the capacity to cope with external shocks.

To address these challenges and enhance economic resilience, governments and organizations have implemented various strategies, including increasing infrastructure investment, diversifying economies, improving corporate governance, developing human capital and increasing international collaboration. These measures can help mitigate the negative effects of future shocks and ensure a faster and more durable recovery.

**The link between atypical situations** (Şargu, 2020, pp. 160-179) **and economic resilience** is a complex and multidimensional one, involving how economies and businesses adapt, survive and ultimately thrive in the face of unexpected challenges or crises. Atypical situations may include events such as pandemics, financial crises, natural disasters, geopolitical conflicts and sudden technological changes. Economic resilience refers to an economy's ability to cope with these shocks and recover effectively from them.



**Figure 1. Key Factors Linking Atypical Situations to Economic Resilience**

In this context, we propose this theoretical study based on the analysis of publications on the topic of economic recovery as a point of consultation and optimization of the actions taken by public administrations in the adaptation and more effective recovery in the case of opposing the resistance of some shocks and disturbances of the economy.

The concept of economic resilience has been explored in depth in the academic literature and economic policy research given its importance in understanding how economies and societies can adapt and recover from shocks over time. In order to understand the evolution of the concept, we will analyze the period 2000-present.

## **2. The Conceptual Approach to Economic Resilience in the Period 2000-2010**

Aura, Reggiani., Thomas, de, Graaff., Peter, Nijkamp. (2001) in *Resilience: An Evolutionary Approach to Spatial Economic Systems* discuss the evolution of resilience in economic-ecological models, emphasizing its relevance in socio-economic systems, especially in the analysis of transition dynamics and blocking effects in the diffusion of technological innovation (Reggiani, de Graaff & Nijkamp, 2001).

David, Fielding., David, Fielding., Kalvinder, Shields. (2001), in the paper *Modelling macroeconomic shocks in the CFA Franc Zone* presents a study that emphasizes the importance of timely stabilization policy and the homogeneity of the CFA for a monetary union to function effectively (Fielding, Fielding & Shields, 2001, pp. 199-223).

Authors Brian, Walker., C., S., Holling., Stephen, R., Carpenter., Ann, P., Kinzig. (2004) in the paper *Resilience, Adaptability and Transformability in Social-ecological Systems*, emphasizes the importance of resilience, adaptability and transformability in social-ecological systems for sustainable development. It states the need for a new approach to resource governance, focusing on resilience analysis, adaptive resource management and adaptive governance (Walker, Holling, Carpenter & Kinzig, 2004).

Vale, L.J. și Campanella, T.J. (2005), in *Urban Resilience in Post-Disaster Recovery, ocuses more on urban resilience*, this book provides valuable insights into how urban communities can plan for and respond to disasters, providing important lessons for economic resilience (Vale & Campanella, 2005).

While David, Ibarra. (2005), in *La reconfiguración económica internacional* discusses the economic resilience of developed and developing countries in adapting to the new international economic order, focusing on changes in savings, investment and trade dynamics at the global level (Ibarra, 2005).

Ferran, Casadevall, Massuet. (2006), it addresses the importance of remittances for the theoretical phenomenon of economic growth in the context of economic resilience.

Briguglio, L., Cordina, G., Farrugia, N., și Vella, S. (2009), in *Economic Resilience: The Usefulness and Scope of the Concept* (Briguglio, Cordina, Farrugia & Vella, 2009), explores economic resilience in the context of small island economies, providing a sound basis for understanding how vulnerabilities can be managed to promote economic sustainability.

### 3. Conceptual Approach to Economic Resilience in the Period 2010-2020

Cristina, Serrano, Leal., Begoña, Montoro, de, Zulueta., Marta, Mulas, Alcántara. (2010) in the present study they showed that the European Union responded to the economic crisis with the European Economic Recovery Plan, which contributed to the stabilization of the financial markets and the initiation of the economic recovery (Leal, de Zulueta & Alcántara, 2010).

Peter Sunley, Ron Martin, și Ben Gardiner (2011), in *The Resilience of the Long-Term Economic Geography of Globalization in the Face of the 2008 Financial Crisis*, examines economic resilience in the context of the 2008 global financial crisis, with an emphasis on economic geography and how regional and national economic structure influences the capacity to recover.

Martin, R. (2012), in the *Regional Economic Resilience, Hysteresis and Recessional Shocks*, investigates the concept of regional economic resilience, focusing on how regions adapt to and recover from economic shocks, with a particular interest in “hysteresis” mechanisms in the economy (Martin, 2012).

Mark, Pflanz., Alexander, H., Levis. (2012), in the study *An Approach to Evaluating Resilience in Command and Control Architectures* is to measure the resilience of a command and control system to exercise or implement a capability to a disturbance. The paper describes a quantitative approach for evaluating the expected resilience of a command and control system using an executable model based on Petri Net (Pflanz & Levis, 2012, pp. 141-146).

The study (Williams, Vorley & Ketikidis, 2013) *Building Resilient Economies in Times of Uncertainty*, de Williams, N., Vorley, T., and Ketikidis, P.H. (2013), focuses on strategies through which small and medium-sized enterprises (SMEs) can develop resilience in the face of economic uncertainty, highlighting the role of innovation and entrepreneurship.

Hallegatte, S. (2014) in the article *Economic Resilience in Development Planning: Lessons from the Recovery from the Great East Japan Earthquake*, approaches economic resilience through the lens of post-disaster development and recovery

planning, using the recovery from the Great East Japan Earthquake as a case study from eastern Japan since 2011 (Hallegatte, 2014).

Pei-Chun, Lee., Ryan, Hamamoto (2017) posits that economic resilience emerges in regional innovation systems through policies that allow for adaptation to changing conditions, fostering the ability to learn, reorganize and sustain functions amid inevitable transformations (Lee & Hamamoto, 2017).

Tüzin, Baycan., Hugo, Pinto (2018) believes that the concept of economic resilience emerged as a response to the 2007 financial crisis, causing regions to adapt through innovative restructuring, increasing their ability to cope with economic shocks (Baycan & Pinto, 2018).

#### **4. Conceptual Approach to Economic Resilience in the Period 2020-2024**

Rita, De, Siano., Valerio, Leone, Sciabolazza., Alessandro, Sapio. (2020) address in the paper *Economic Resilience and Regional Disparities: The Value Added of Spatial Analysis the phenomenon of economic resilience* as a challenge that includes vulnerability, resistance to shocks, responses to impacts and recovery strategies in regional economies (De Siano, Sciabolazza & Sapio, 2020). In the same context comes the Approach of the authors Eric, Brown., Karina, Kasztelnik. (2020), in *The Observational Microeconomics Study of the Phenomenon of Entrepreneur Resilience and Collaborative Innovative Financial Leadership in the United States* presents the types of economic resilience include entrepreneurial resilience and financial innovation leadership, crucial for the survival and growth of microenterprises, especially in challenging environments such as Detroit, Michigan (Brown & Kasztelnik, 2020).

Kayvan, Kousha., Shanqing, Jiang., Lin, Yang., Guang, Cheng., Xianming, Gao., Tao, Feng., Yuyang, Zhou. (2021) in *A Quantitative Framework for Network Resilience Evaluation using Dynamic Bayesian Network* addresses the five core resilience capabilities, which are defined to describe various stages of network resilience, including preparation, resilience, adaptation, recovery and evolution. The proposed approach quantifies the crucial performance of network resilience based on core capabilities using a two-section approach with Dynamic Bayesian Network, ensuring time continuity in assessing resilience in time-varying networks (Shanqing, et al., 2021).

The phenomenon of economic resilience has gained significant attention at the global level, especially in the face of challenges such as the COVID-19 pandemic and asymmetric warfare. Economic resilience is crucial for nations and industries to withstand shocks and continue to function effectively.

Danylo Cherevatskyi (2023) in the *The resilience of economics and the economics of resilience* states that the concept of economic resilience is gaining importance globally, especially in the midst of events such as the SARS Covid-19 pandemic, leading to a shift towards Industry 5.0 for increased stress resistance and adaptability (Cherevatskyi, 2023). Ivo, Pezzuto (2020) studied the effect of economic resilience at the global level in the work *World Economy. Resilience or Great Reset*. Social Science Research Network due to the COVID-19 crisis that has promoted economic resilience globally by accelerating new priorities, transforming industries and innovative business models, leading to a more sustainable future (Ivo, 2020, pp. 32-37).

Pe cînd Filipenko Anton (2022) in *Economic resilience in the context of institutional logic* discusses economic resilience as apparent in extreme situations such as crises and wars, emphasizing institutional stability and logic at micro, macro, and geoeconomic levels, influenced by evolutionary principles (Filipenko, 2022). The authors' group is of the same opinion Guntur, Eko, Saputro., Suwito, Suwito, (2022) which in the work *Economic resilience in asymmetric warfare* believes that economic resilience is crucial to dealing with asymmetric warfare threats. Its consolidation through the digital economy, bureaucracy and banking is vital to national power and security in today's world (Saputro & Suwito, 2022).

In the same time Timothy, R., Betts., Patrice, M., Buzzanell (2022), in the article *Enacting Economic Resilience: A Synthesis of Economic and Communication Frameworks* they talk about the emergence of economic resilience in response to ongoing disruptions in the economic and social world, proposing a synthesis of economic and communication frameworks (Timothy, Betts & Buzzanell, 2022).

The authors Le, Zhang., Ye, Du. (2022), in *Resilience of space information network based on combination of complex networks and hypergraphs*, perform a study highlighting the robustness of spatial information networks using a combination of complex networks and hypergraphs (Le & Ye, 2022).

Ferenc, Tolner., Balazs, Barta., Gyorgy, Eigner (2023), in *Economic Resilience and Antifragility*, they talk about types of economic resilience that include managing crises (resilience) and benefiting from them (antifragility). The study classifies SMEs based on balance sheet and revenue and income data that are key to overcoming the crisis and resilience to other challenges (Tolner, Barta, & Eigner, 2023).

Anne, A., Gharaibeh., Mohammad, N., Alhamad. (2023), in *Potential business-shed model for spatial economic land use planning: towards regional economic resilience*, propune un model business potential (PBS) for planning regional economic resilience, incorporating the Huff-Gravity model, sustainable growth strategies, socio-economic factors and GIS. The model aims to provide guidance for

improving economic resilience in regions facing sudden economic shocks, providing a replicable approach for similar areas (Anne, Gharaibeh & Alhamad, 2023).

Yun-Hsuan, Lee., Liwen, Kao., Wenxing, Liu., Jen-Te, Pai in *A Study on the Economic Resilience of Industrial Parks* (Yun-Hsuan, Liwen, Wenxing, & Jen-Te, 2023), they current focus on economic resilience reflects a paradigm shift towards prioritizing sustainability, innovation and adaptability in the global economic landscape. The study looks at the economic resilience of industrial parks, highlighting the diversified industrial structure as crucial to regional resilience against economic shocks such as the 2008 crisis, the 2016 work week shift and the 2019 pandemic.

It involves the ability to adapt, recover, and even thrive in the face of disruption, whether internal or external. The concept of resilience expands beyond mere recovery to encompass the development of strength and the ability to overcome obstacles and threats, ultimately leading to a more sustainable and inclusive economic model. Regional economic resilience is crucial for dealing with economic crises. Factors such as diversified industrial structure, innovation and digital transformation increase economic resilience, promoting stable and sustainable development paths for industrial parks is a statement of the author team

By analyzing data from a variety of businesses, the researchers developed models to predict companies' responses to sudden declines in sales growth, shedding light on the tangible aspects of economic resilience.

## 5. Concluzii

These works are only a few examples that reflect the diversity of approaches and applications of the concept of economic resilience in different contexts and at different scales. Studying them provides a deep understanding of how economies and societies can be better prepared to cope with shocks and adapt effectively to uncertainties.

We can definitely state in the result of the bibliographic reference sources analysis in this study that the Key Principles of Resilience boil down to:

- **Adaptability:** Ability to adjust to changing conditions or requirements.
- **Disturbance Tolerance:** Resistance to shocks and stresses without losing essential functionality.
- **Recovery:** The ability to recover quickly from adversity or disruption.
- **Transformation:** The ability to change or develop in a positive way in response to difficult experiences.

Resilience, in all its forms and contexts, emphasizes the importance of preparedness, flexibility, adaptability, and recovery. Regardless of domain, the concept emphasizes the ability to navigate uncertainty and difficulty while maintaining or improving functionality and well-being. Grounding the concept of resilience in a variety of disciplines underscores its universal nature and its importance in a constantly changing world.

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