

**ADAPTIVE RATIONALITY IN THE AGE OF GLOBAL INSTABILITY:
THE EMERGENCE OF A POST-RATIONAL PARADIGM OF
SOCIO-ECONOMIC SYSTEMS DEVELOPMENT**

Olena HREBESHKOVA, <https://orcid.org/0000-0002-6896-3941>,

Ph.D in Economics, Associate Professor, Kyiv National Economic University named after Vadym Hetman, Kyiv, Ukraine, grebeshkova@kneu.edu.ua

Article type:
Research Article

Received:
14.02.2026

Accepted:
18.04.2026

Published:
31.05.2026

UDC
330.101.541:005.21

JEL Classification:
D81, L25, M10,
O33

**Founder and
Publisher:**
Kyiv National Eco-
nomic University
named after Vadym
Hetman

Abstract. The growing instability of the global economic environment increasingly challenges the classical logic of economic rationality, grounded in optimization, predictability, and long-term planning. Under conditions of geopolitical turbulence, technological disruptions, military conflicts, and radical uncertainty, traditional strategic management approaches often prove insufficient to ensure organizational resilience and strategic continuity. The purpose of the article is to conceptualize adaptive rationality as a context-sensitive form of strategic behavior under instability and to substantiate the emergence of a post-rational development paradigm in which the viability of economic systems depends not primarily on optimization efficiency, but on behavioral flexibility and adaptive responsiveness. The methodological framework integrates behavioral strategy, bounded rationality, dynamic capabilities theory, resilience-oriented management, complexity theory, and real options logic. The study applies systems analysis, conceptual synthesis, comparative analysis, and exploratory interpretation of adaptive strategic behavior using examples from Ukrainian enterprises operating under wartime instability, particularly within the pharmaceutical sector. The results demonstrate that managerial decisions traditionally considered inefficient under classical optimization logic — including reserve capacity formation, supply chain diversification, duplication of logistical routes, and staged investment strategies — increasingly serve as mechanisms for preserving resilience under radical uncertainty. The study's scientific originality lies in the development of a multidimensional model of post-rational development of socio-economic systems, constructed through the interaction among environmental uncertainty, strategic flexibility, and behavioral adaptability. The study's practical significance lies in the potential to apply the proposed framework to design adaptive development strategies and to support managerial decision-making in unstable environments.

Keywords: adaptive rationality; post-rational development; systemic instability; strategic flexibility; behavioral adaptability; resilience; radical uncertainty; dynamic capabilities; strategic optionality; socio-economic systems development.

Cite as: Hrebeshkova, O. (2026). Adaptive Rationality in the Age of Global Instability: The Emergence of a Post-Rational Paradigm of Socio-Economic Systems Development. *Strategy of Economic Development of Ukraine*, 58, 7-24. <https://doi.org/10.33111/sedu.2026.58.007.024>



Copyright: © 2026 by the authors. This is an Open Access article, distributed under the terms of the Creative Commons Attribution 4.0 International license:

<https://creativecommons.org/licenses/by/4.0/>

Introduction

The growing frequency of systemic crises, geopolitical disruptions, technological turbulence, and institutional instability increasingly challenges the foundational assumptions of classical economic rationality. For decades, dominant approaches to economic development and strategic management were grounded in the ideas of predictability, analytical efficiency, and long-term planning. Within this logic, the effectiveness of economic systems was associated with the ability to make internally consistent and analytically justified decisions. However, contemporary socio-economic environments are increasingly characterized by discontinuity, non-linearity, and radical uncertainty, which substantially limit the feasibility of fully rational strategic behavior.

Recent global shocks — including the COVID-19 pandemic, geopolitical fragmentation, supply chain disruptions, accelerating digital transformation, and military conflicts — have demonstrated that rigid strategic models often fail to ensure organizational resilience and long-term continuity. Under such conditions, excessive reliance on formal analytical logic may even increase strategic fragility by reducing responsiveness and slowing adaptation to rapidly changing environments. As a result, enterprises, institutions, and broader socio-economic systems increasingly rely on adaptive, heuristic, and context-sensitive forms of decision-making.

These transformations reflect a broader shift in the logic of development itself. In highly unstable environments, development increasingly depends on economic systems' ability to navigate uncertainty, continuously reconfigure organizational behavior, and maintain continuity amid incomplete information and ongoing disruption. In this context, resilience, adaptive coordination, and context-sensitive rationality emerge not as supplementary managerial characteristics but as fundamental determinants of long-term development.

At the same time, the growing importance of adaptive strategic responses creates an important theoretical contradiction. Classical economic and managerial theories traditionally associate deviations from formal rationality with inefficiency, behavioral distortions, or suboptimal decision-making. However, contemporary empirical observations increasingly indicate that, under conditions of radical uncertainty, context-dependent, partially non-formalized decisions may outperform analytically grounded approaches. Such interpretations are increasingly reflected in contemporary studies on behavioral strategy, adaptive heuristics, and organizational resilience (Gigerenzer, 2008; Powell et al., 2011; Foss et al., 2024). As a result, responsiveness, heuristic adaptation, and selective modification of established strategic trajectories increasingly function as mechanisms supporting organizational resilience and strategic continuity.

Despite the rapid growth of studies devoted to resilience, behavioral strategy, adaptive governance, and strategic responsiveness, existing research remains relatively fragmented. Most studies either examine organizational adaptation within conventional strategic management frameworks or focus on behavioral aspects of decision-making without reconsidering the broader developmental logic of economic

systems (Duchek, 2020; Snowden & Boone, 2007; Heifetz et al., 2009). Consequently, insufficient attention has been devoted to the transformation of economic rationality itself under conditions of systemic instability and to the emergence of what may be interpreted as a post-rational development paradigm.

The purpose of this study is to develop a conceptual framework of adaptive rationality under conditions of global instability and to substantiate the emergence of a post-rational paradigm of socio-economic systems development, in which strategic viability depends not primarily on optimization capacity, but on adaptive behavioral flexibility and the ability to navigate radical uncertainty. The study also aims to empirically illustrate this transformation by analyzing the behavioral patterns and strategic responses of enterprises operating in highly unstable environments.

Literature Review

1. From optimization logic to adaptive rationality

Classical approaches to economic development and strategic management were historically grounded in the rational optimization paradigm, according to which organizational effectiveness depends on analytically grounded decisions, long-term planning, and efficient resource allocation under relatively predictable environmental conditions. Such logic substantially influenced both international and Ukrainian schools of strategic management, where strategic development was traditionally associated with competitiveness, consistency of managerial decisions, and optimization of enterprise development trajectories (Nalyvaiko, 2010).

However, the assumptions of complete rationality have increasingly been criticized as insufficient for explaining decision-making in complex and unstable socio-economic systems. The concept of bounded rationality demonstrated that managerial decisions are formed under cognitive, informational, and temporal limitations rather than through fully optimal calculations. This behavioral perspective was later extended within behavioral strategy research, which emphasized the role of heuristics, cognition, emotions, and contextual interpretation in strategic decision-making (Powell et al., 2011; Levinthal, 2011).

Contemporary studies further strengthen this shift toward adaptive interpretations of strategic behavior. Foss et al. (2024) conceptualize behavioral strategy as an approach that explains competitive advantage by making realistic assumptions about managerial cognition and organizational behavior, while Cristofaro et al. (2025) demonstrate the growing importance of the interaction among environmental complexity, managerial cognition, and organizational adaptation. Similar tendencies are increasingly evident in Ukrainian strategic management research, where instability is seen as a factor that requires strategic flexibility, adaptive responsiveness, and transformation-oriented management (Antonenko & Tsitsilenko, 2025; Hrebeschko & Horin, 2025).

2. Radical uncertainty and the transformation of strategic logic

The limitations of optimization-oriented management become particularly visible under conditions of radical uncertainty, where future environmental states cannot be reliably predicted or reduced to stable probabilistic models. Contemporary economic

systems increasingly operate in contexts marked by geopolitical fragmentation, technological turbulence, systemic crises, and military conflicts, thereby substantially weakening the explanatory power of traditional forecasting approaches.

Kay and King (2020) argue that uncertainty in contemporary economic systems often cannot be reduced to measurable risk, while Taleb (2007) demonstrates that highly improbable but transformative events fundamentally undermine optimization-based strategic logic. Similar conclusions are reflected in recent management research, which emphasizes that Knightian uncertainty undermines the practical applicability of rational choice models in unstable environments (Foss, 2023; Bastian, 2025).

These transformations are also actively discussed within Ukrainian academic discourse. Dligach & Stavytskyi (2024) interpret instability as a structural characteristic of contemporary economic systems that calls for a transition from rigid planning to strategic navigation and adaptive development. Kundieieva et al. (2023) similarly argue that instability increasingly becomes a permanent condition of economic activity rather than a temporary deviation from equilibrium.

Consequently, instability should be interpreted not merely as a complication of strategic management, but as a factor transforming the very logic of economic development and organizational decision-making.

3. Adaptive capabilities, resilience, and behavioral flexibility

The growing instability of external environments has significantly increased the importance of resilience, strategic flexibility, and adaptive capabilities within management and development studies. Unlike optimization-oriented approaches, these perspectives focus on organizations' ability to maintain viability amid disruption and continuous environmental change.

Within the dynamic capabilities framework, organizational success is associated with the ability to sense environmental change, seize emerging opportunities, and continuously reconfigure resources and organizational processes (Eisenhardt & Martin, 2000; Teece, 2007). The concept of organizational resilience further develops this perspective by emphasizing behavioral flexibility, adaptive learning, and the capacity of organizations to maintain continuity under adverse conditions (Lengnick-Hall et al., 2011; Duchek, 2020).

Contemporary Ukrainian research increasingly reflects similar ideas. Strategic transformation under instability is associated with adaptive management architectures, organizational responsiveness, and behavioral flexibility, all of which are necessary for maintaining competitiveness in turbulent environments (Antonenko & Tsitsilenko, 2025). Studies devoted to enterprise behavior under global instability also demonstrate that turbulence increases the variability of managerial decisions and weakens the effectiveness of rigid planning models (Hrebeshkova & Horin, 2025).

This perspective is reinforced by research on adaptive heuristics and behavioral adaptability. Gigerenzer (2008) argues that simplified, context-sensitive heuristics may outperform analytically optimized models under uncertainty because they enable faster, more flexible responses to environmental change. Similarly, Bingham and

Eisenhardt (2011) demonstrate that simplified adaptive rules can support organizational effectiveness in complex, unstable environments.

Accordingly, contemporary research increasingly associates strategic rationality not with static optimization, but with adaptive responsiveness, resilience, and behavioral flexibility under uncertainty (Sakaki, 2023).

4. Strategic optionality, adaptive leadership, and post-rational development

The transformation of strategic rationality also changes the mechanisms through which organizational development is implemented. In times of instability, organizations increasingly rely on iterative, project-based, and experimental approaches rather than on deterministic, long-term planning. Within this context, real options theory emphasizes the importance of preserving strategic flexibility through staged and partially reversible investments (Trigeorgis, 1996). Strategic success, therefore, depends less on identifying a single optimal trajectory and more on maintaining optionality in the face of uncertainty.

At the same time, instability substantially transforms the role of leadership and strategic coordination. Adaptive leadership approaches interpret leaders not as actors capable of identifying universally optimal solutions, but as facilitators of organizational learning and coordinated adaptation under uncertainty (Heifetz et al., 2009). Similarly, the sensemaking approach emphasizes organizations' ability to continuously reinterpret environmental change and reconstruct behavioral responses in the face of ambiguity (Weick, 1995).

Complexity-oriented management research additionally reinforces this transformation. Complexity leadership theory and related approaches stress distributed adaptation, emergence, and contextual navigation within non-linear systems rather than rigid managerial control (Snowden & Boone, 2007; Uhl-Bien et al., 2007). Taken together, these perspectives indicate that contemporary development increasingly depends on adaptive rationality, strategic flexibility, and resilience-oriented behavior rather than static optimization logic.

Despite the substantial development of behavioral strategy, resilience-oriented management, and adaptive governance research, these approaches remain relatively fragmented and rarely address the transformation of rationality itself as a foundation of economic development. Most existing studies continue to interpret adaptive behavior primarily as a managerial response to instability rather than as evidence of a broader transformation in development logic. Accordingly, insufficient attention has been devoted to the emergence of a post-rational paradigm of socio-economic systems development, in which organizational viability increasingly depends on the ability to adapt, experiment, and navigate radical uncertainty rather than on the exclusive pursuit of strategic optimization.

Methodology

1. Theoretical foundations of the research

The methodological foundation of this study is an interdisciplinary approach integrating the concepts of behavioral strategy, bounded rationality, dynamic capabilities, resilience theory, complexity-oriented management, and real options

logic. Such integration enables analysis of strategic behavior not only through the prism of optimization efficiency but also through the adaptive capacity of economic systems under conditions of instability and radical uncertainty (Sakaki, 2023).

The study proceeds from the assumption that contemporary global instability substantially transforms the traditional logic of economic development and strategic management. In contrast to classical optimization-oriented approaches, which interpret rationality primarily as analytically grounded decision-making aimed at maximizing efficiency, the proposed approach views rationality as a context-dependent, adaptive phenomenon that emerges under conditions of incomplete information, environmental turbulence, and nonlinearity.

Within this framework, adaptive rationality is interpreted as the ability of economic systems to maintain strategic viability through behavioral flexibility, contextual responsiveness, strategic optionality, and continuous reconfiguration of managerial decisions. Accordingly, strategic effectiveness is associated not only with the quality of analytical planning but also with the capacity to adapt to rapidly changing, poorly predictable environments.

The conceptual logic of the study is also grounded in the assumption that instability today should be interpreted not merely as a temporary deviation from equilibrium, but as a structural characteristic of contemporary socio-economic systems. Under such conditions, development increasingly depends on organizations' ability to navigate uncertainty rather than on the exclusive optimization of predefined strategic trajectories.

2. Research design and conceptual logic

The research is based on a conceptual-empirical design combining theoretical synthesis with exploratory empirical illustration. Such an approach enables the integration of fragmented theoretical streams related to behavioral strategy, resilience, and adaptive development while simultaneously demonstrating the practical manifestation of adaptive rationality in real organizational contexts.

The central research hypothesis assumes that under conditions of high systemic instability, the effectiveness of economic systems increasingly depends not on the level of formal rationality of strategic decisions, but on the capacity for adaptive navigation, behavioral flexibility, and preservation of strategic optionality.

To investigate this assumption, the study develops a conceptual framework of adaptive rationality and substantiates the emergence of a post-rational development paradigm. Within this paradigm, the development of socio-economic systems is interpreted not as a process of stable optimization and trajectory maximization, but as the ability to preserve viability and adapt behavioral models under radical uncertainty.

3. Empirical illustration framework

The empirical component of the study is exploratory in nature and aims to illustrate the practical manifestations of adaptive rationality in highly turbulent environments. The Ukrainian pharmaceutical sector was selected as an illustrative empirical context due to its sensitivity to geopolitical shocks, regulatory changes, and

logistical constraints requiring continuous strategic adaptation. The analysis focuses on behavioral manifestations of adaptive strategic responses, including supply chain diversification, reserve capacity formation, operational process restructuring, and changes in investment behavior. A comparative case-based approach is applied to identify differences in adaptive flexibility between enterprises and to demonstrate how decisions that may appear inefficient within the framework of classical optimization logic may contribute to organizational resilience and strategic continuity. Accordingly, the empirical component functions not as an econometric verification of a universal causal model, but as a contextual illustration of the transformation of strategic rationality under conditions of systemic instability.

4. Methods and data sources

The study employs a combination of general scientific and specialized research methods. Comparative analysis, interdisciplinary synthesis, systems analysis, and conceptual modeling were used to develop the theoretical framework of adaptive rationality and the post-rational development paradigm.

The empirical component is based on exploratory comparative case analysis, contextual interpretation, and secondary data analysis. The study uses publicly available information sources, including corporate financial reports, analytical reviews, open company data, industry publications, market reports, and public statements of enterprises operating under conditions of instability.

Unlike traditional approaches that evaluate strategic effectiveness primarily through optimization efficiency and consistency of managerial decisions, the proposed methodological approach focuses on the ability of economic systems to maintain viability through adaptive behavioral reconfiguration under instability and environmental discontinuity.

Results

1. The erosion of optimization logic under systemic instability

The growing instability of the contemporary economic environment increasingly challenges the effectiveness of strategic management models grounded in optimization logic. Under relatively stable market conditions, strategic effectiveness was traditionally associated with efficiency maximization and stable long-term planning. Such approaches relied on the assumption that the external environment remained sufficiently predictable for analytically grounded strategies to preserve their relevance over time.

However, the current dynamics of global crises indicate a gradual decline in the viability of this approach. Geopolitical disruptions, pandemic shocks, military conflicts, supply chain fragmentation, and accelerated technological change create conditions in which analytically optimized strategies may rapidly lose effectiveness due to their inability to adapt to discontinuous, weakly predictable environmental changes. In this context, contemporary economic systems increasingly operate within the logic of radical uncertainty, in which future states of the environment cannot be reliably described by stable probabilities or conventional forecasting models (Kay & King, 2020).

This transformation became particularly visible in the activities of Ukrainian enterprises after 2020. During the COVID-19 pandemic and the subsequent full-scale war, enterprises faced simultaneous logistical disruptions, resource shortages, energy instability, and abrupt market changes. Under such conditions, organizations relying primarily on lean optimization and reserve minimization often proved more vulnerable to external shocks than enterprises that maintained adaptive flexibility and reserve capacity. Such observations correspond with Taleb's (2007) argument that excessive optimization may increase systemic fragility under radical uncertainty.

The Ukrainian pharmaceutical sector serves as an illustrative empirical environment due to its operational complexity, regulatory sensitivity, and the need to maintain continuity during crises. After 2022, pharmaceutical companies increasingly diversified suppliers, restructured logistical routes, and expanded reserve capacities despite rising short-term costs. In particular, Farmak emphasized supply chain diversification and maintaining reserve inventory to ensure production continuity amid wartime instability (Farmak, 2026), while Darnitsa implemented adaptive restructuring of procurement and operational processes to preserve organizational resilience (Darnitsa, 2026).

From the perspective of classical, efficiency-oriented management, such decisions could be interpreted as economically excessive because they entail increased short-term costs and operational redundancy. However, these adaptive responses enhanced organizational resilience and enabled enterprises to maintain reserve capacities and alternative supply channels, thereby preserving greater continuity under systemic disruptions.

These findings correspond with adaptive heuristics and dynamic capabilities approaches (Gigerenzer, 2008; Teece, 2007).

Therefore, the findings indicate a gradual erosion of the classical assumption that higher levels of optimization automatically ensure greater strategic effectiveness. Under conditions of systemic instability, excessive optimization may instead increase strategic fragility by reducing adaptive reserves and limiting behavioral flexibility.

The identified transformations in strategic behavior under systemic instability allow the changing logic of strategic rationality to be systematized, as presented in Figure 1.

Systemic instability gradually shifts the strategic logic of economic systems from analytical optimization toward adaptive navigation and resilience preservation. Under such conditions, effectiveness increasingly depends not on maintaining static optimality, but on the capacity to rapidly reconfigure behavioral and organizational models in response to environmental change.

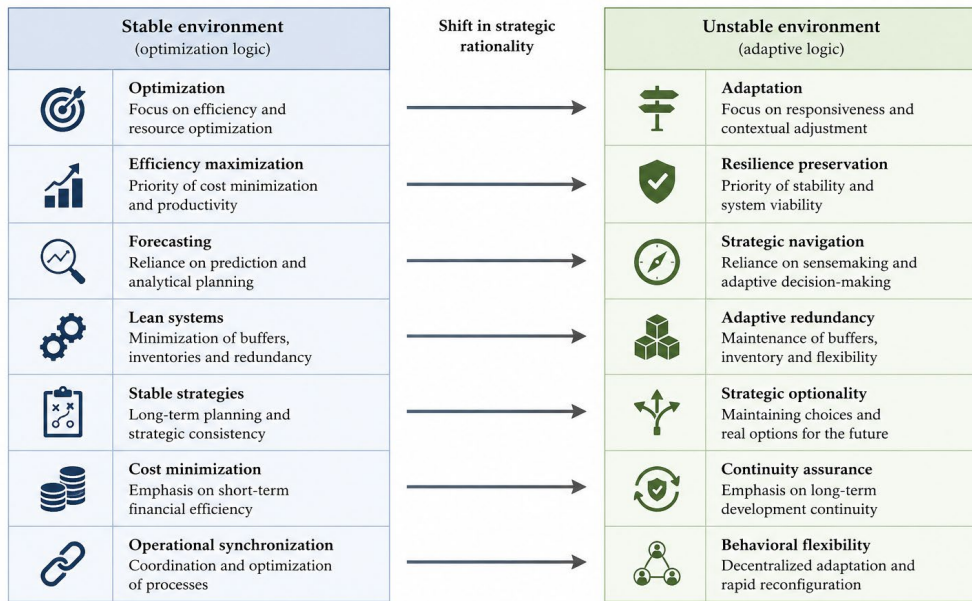


Figure 1. Transformation of strategic rationality under systemic instability

Source: developed by the author.

2. Adaptive rationality as a mechanism of strategic viability

The identified transformation of strategic behavior under instability suggests that organizational effectiveness increasingly depends on adaptive responsiveness rather than on the exclusive analytical consistency of managerial decisions. In this context, adaptive rationality may be interpreted as a context-sensitive form of strategic behavior enabling organizations to preserve continuity under conditions of incomplete information and environmental turbulence. Unlike the classical understanding of rationality grounded in stable optimization criteria, adaptive rationality emerges through continuous reconfiguration of priorities, resources, and behavioral trajectories in response to instability. Such transformation corresponds with contemporary behavioral strategy research emphasizing the role of behavioral adaptation in unstable environments (Foss et al., 2024; Cristofaro et al., 2025).

Empirical observations within the pharmaceutical sector illustrate this transformation particularly clearly. Enterprises demonstrating greater adaptive flexibility relied on supply chain diversification, operational decentralization, staged investments, and the maintenance of strategic reserves despite increased short-term costs, while simultaneously preserving greater operational continuity and resilience.

The experience of Ukrainian enterprises since the full-scale invasion in 2022 has been particularly illustrative in this regard. Many businesses were forced to implement decisions that appeared economically excessive within the framework of clas-

sical efficiency-oriented logic, including relocating production facilities, duplicating operational capacities, creating reserve supply channels, and decentralizing coordination processes. Although such measures entailed increased short-term costs and reduced operational efficiency, they enabled enterprises to maintain continuity amid extreme uncertainty. Similar adaptive responses were observed in the pharmaceutical sector, where companies intensified supply chain diversification, reserve formation, and the restructuring of operational processes to maintain organizational resilience amid wartime instability (Farmak, 2026; Darnitsa, 2026). These findings align with the emergent approach to business resilience, which holds that resilience develops through organizations' ability to rapidly reconfigure behavioral and organizational models in response to systemic shocks (Hrebeshkova et al., 2025).

The identified patterns correspond with research on adaptive heuristics, organizational resilience, and dynamic capabilities, according to which organizational continuity under instability increasingly depends on behavioral adaptability, rapid resource reconfiguration, and flexible coordination mechanisms rather than rigid optimization models (Gigerenzer, 2008; Teece, 2007; Duchek, 2020; Hillmann & Guenther, 2021). In this context, adaptive rationality serves as a behavioral mechanism that supports organizational transformation amid instability. Recent studies also demonstrate that such transformation possesses not only economic but also institutional and ethical dimensions, associated with organizations' ability to maintain trust, coordination, and responsible leadership during systemic crises (Kyzenko et al., 2026).

At the same time, empirical observations suggest that adaptive rationality should not be interpreted as irrational or chaotic behavior. On the contrary, adaptive strategic responses often demonstrate internal contextual coherence despite deviating from classical optimization criteria. This distinction is critically important because it allows adaptive rationality to be interpreted not as a rejection of rationality itself, but as its transformation under conditions of radical uncertainty.

Therefore, the transition from formal optimization to adaptive responsiveness may be interpreted as a broader transformation of the mechanisms that ensure strategic viability within contemporary economic systems. In times of systemic instability, organizations increasingly sustain competitiveness not through the maximization of static efficiency but through their ability to reconfigure behavioral patterns and maintain strategic flexibility rapidly.

The identified transformation of adaptive strategic behavior is systematized in Table 1.

As shown in Table 1, a significant share of strategic responses that appear suboptimal within the framework of classical efficiency-oriented management may become important mechanisms for preserving resilience under instability. Consequently, adaptive rationality increasingly functions not as a deviation from effective strategic management but as a key mechanism ensuring strategic viability in environments characterized by radical uncertainty.

Table 1. Transformation of strategic behavior under conditions of systemic instability

Behavioral response	Classical optimization logic	Adaptive rationality logic
Reserve inventories	excessive costs	resilience reserve
Supply chain diversification	operational inefficiency	risk distribution
Alternative logistics	Redundancy	continuity assurance
Staged investments	delayed optimization	strategic optionality
Rapid restructuring	organizational instability	adaptive flexibility
Experimental projects	increasing uncertainty	adaptive learning

Source: developed by the author.

3. Towards a post-rational development paradigm

The results indicate that contemporary instability gradually transforms not only managerial decision-making mechanisms but also the broader logic of socio-economic system development. Under conditions of systemic turbulence, strategic effectiveness increasingly depends on organizations' ability to preserve adaptive flexibility, strategic optionality, and responsiveness in the face of uncertainty rather than to maintain analytically optimized trajectories.

This transformation may be interpreted as the emergence of a post-rational paradigm for the development of socio-economic systems. Within the classical paradigm, development was associated with predictability, optimization, and consistency in long-term planning. However, the growing frequency of systemic shocks, geopolitical disruptions, and technological turbulence substantially weakens the viability of such logic. Under radical uncertainty, excessive optimization may increase strategic fragility rather than strengthen competitiveness, as increasingly emphasized in contemporary uncertainty and resilience research (Kay & King, 2020; Taleb, 2007; Duchek, 2020).

These findings support the assumption that instability transforms the role of rationality within development processes. Under such conditions, rationality increasingly acquires adaptive and contextual characteristics rather than remaining exclusively analytical and optimization-oriented. In this sense, adaptive rationality should be understood not as a deviation from effective management but rather as a mechanism that supports strategic continuity under radical uncertainty. Accordingly, strategy increasingly functions not as a rigid long-term plan, but as a process of adaptive navigation enabling organizations to preserve continuity despite environmental discontinuity. Similar shifts are reflected in contemporary approaches to adaptive leadership, complexity management, and dynamic capabilities, which emphasize flexibility, behavioral responsiveness, and continuous organizational reconfiguration (Heifetz et al., 2009; Snowden & Boone, 2007; Teece, 2007).

At the same time, the obtained results demonstrate that post-rational development does not imply rejection of rationality altogether. Rather, it reflects the transformation of rationality under conditions where classical assumptions of predictability and stable optimization lose practical relevance. Under such conditions, resilience, optionality, adaptive coordination, and behavioral flexibility become central mechanisms supporting development and competitiveness.

The identified transformation of development logic is systematized in Figure 2.

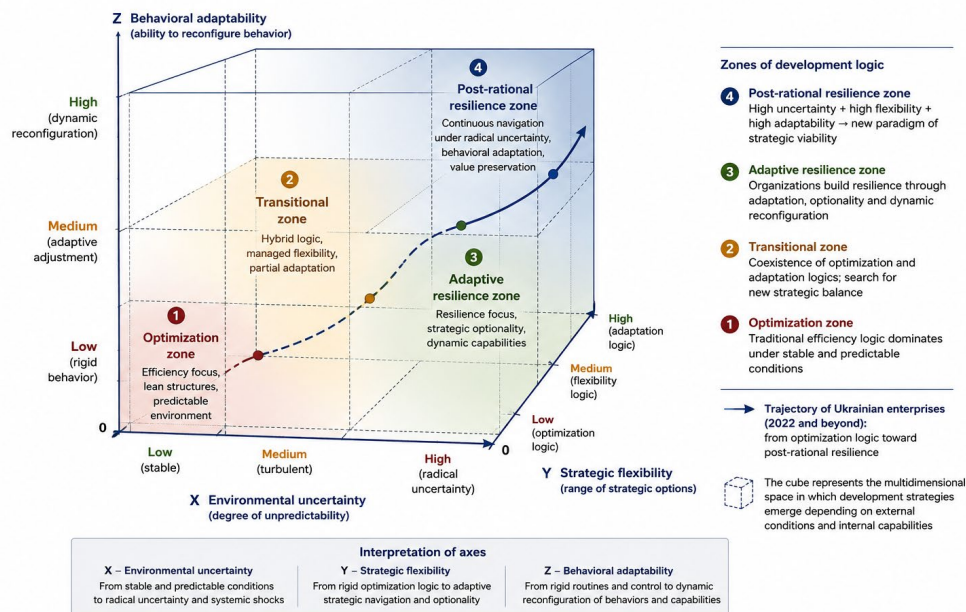


Figure 2. Multidimensional Space of the Emerging Post-Rational Development Paradigm of Socio-Economic Systems under Conditions of Systemic Instability

Source: developed by the author.

As illustrated in Figure 2, systemic instability gradually shifts economic systems from an optimization-centered development logic toward adaptive, resilience-oriented models of strategic behavior. Under such conditions, development increasingly depends not on maintaining static optimality, but on the capacity to continuously reconstruct organizational behavior and preserve strategic viability under radical uncertainty.

The Concept of the Multidimensional Space of Post-Rational Development. The model proposed in Fig. 2 assumes that, under conditions of systemic instability, the development of economic systems cannot be adequately explained by a single dominant dimension, such as efficiency or optimization. Instead, development unfolds within a multidimensional space formed through the interaction of three key projections: environmental uncertainty, strategic flexibility, and behavioral adaptability.

The first axis — environmental uncertainty — reflects the transition from relatively stable, predictable conditions to radical uncertainty, where future environmental states cannot be reliably forecast or reduced to probabilistic models. This logic corresponds with the approaches of Kay and King (2020) and Taleb (2007), who emphasize the limitations of forecasting and optimization under highly unstable conditions.

The second axis — strategic flexibility — characterizes an organization's ability to preserve alternative courses of action, maintain optionality, and reconfigure strategic trajectories in response to changing conditions. This perspective is grounded in the logic of dynamic capabilities (Teece, 2007) and real options theory, according to which strategic value depends not only on expected efficiency, but also on the capacity to adapt investments and managerial decisions under uncertainty.

The third axis — behavioral adaptability — reflects an organization's ability to transform the behavioral patterns underlying managerial decision-making processes. This includes rapid restructuring of coordination mechanisms, modification of planning horizons, decentralized decision-making, and context-sensitive adaptation under incomplete information. Such interpretation corresponds with the concept of adaptive heuristics proposed by Gigerenzer (2008) and with contemporary approaches emphasizing adaptive strategic behavior under instability (Hrebeshkova & Horin, 2025).

The interaction of these three projections enables the distinction of several development zones, ranging from optimization-oriented models under relatively stable conditions to resilience-oriented and post-rational forms of development under radical uncertainty. In the post-rational resilience zone, organizational viability depends not on maintaining static optimality but on navigating instability through continuously adaptive behavioral and strategic reconfiguration.

Accordingly, the proposed multidimensional model performs not only an illustrative, but also a conceptual function. It explains why, under conditions of global instability, classical optimization logic is increasingly replaced by adaptive rationality, strategic optionality, and resilience-oriented behavior as the key mechanisms ensuring long-term development and competitiveness of economic systems.

Discussion

The obtained results support the growing academic discussion regarding the transformation of strategic management under conditions of systemic instability and radical uncertainty. Unlike traditional approaches that continue to interpret instability primarily as a temporary deviation from equilibrium, this study's findings suggest that uncertainty increasingly functions as a structural characteristic of contemporary socio-economic systems. In such environments, the effectiveness of strategic management depends less on optimization consistency and more on organizations' ability to preserve adaptive flexibility, strategic optionality, and behavioral responsiveness.

The study extends behavioral strategy research by demonstrating that adaptive behavior under instability should be interpreted not only as an individual managerial

characteristic but also as a systemic mechanism ensuring organizational viability. Previous studies have mainly focused on heuristics, bounded rationality, and cognitive limitations that affect strategic decision-making (Powell et al., 2011; Foss et al., 2024). The results of this study also indicate that, under conditions of radical uncertainty, adaptive rationality increasingly becomes a broader organizational capability, associated with the continuous reconfiguration of behavioral and strategic trajectories.

The findings also contribute to resilience-oriented management research, which emphasizes the preservation of continuity through adaptive coordination and resource reconfiguration under instability (Duchek, 2020; Hillmann & Guenther, 2021). The proposed post-rational perspective broadens this interpretation by suggesting that reserve capacities, diversification, redundancy, and staged investments increasingly function not as inefficiencies but as mechanisms supporting long-term strategic viability.

The study also contributes to discussions on radical uncertainty and adaptive strategic navigation by supporting the assumption that under instability, organizations increasingly shift from forecasting-oriented management toward adaptive coordination and strategic navigation (Kay & King, 2020; Taleb, 2007).

An important contribution of the study lies in integrating behavioral strategy, resilience-oriented management, dynamic capabilities, and complexity-oriented approaches into a unified conceptual framework explaining the emergence of a post-rational paradigm of socio-economic systems development. Existing studies usually examine adaptive behavior, resilience, or strategic flexibility separately. In contrast, the proposed multidimensional model interprets these phenomena as interconnected dimensions of a broader transformation of development logic under instability. From this perspective, strategic viability emerges from the interaction among environmental uncertainty, strategic flexibility, and behavioral adaptability rather than from isolated optimization mechanisms.

At the same time, the study has several limitations. First, the empirical component is exploratory in nature and relies primarily on qualitative interpretation of adaptive strategic behavior. Second, the pharmaceutical sector was selected as an illustrative environment due to its high sensitivity to systemic instability, which may limit the generalizability of specific behavioral patterns. Third, the proposed multidimensional model remains conceptual and therefore requires further empirical operationalization and comparative testing across different industries and economic contexts.

These limitations define promising directions for future research. Further studies may focus on developing quantitative indicators of adaptive rationality and post-rational strategic adaptability, comparative analysis of resilience trajectories across industries and countries, and investigation of the influence of digital transformation and AI-supported decision-making on organizational resilience under radical uncertainty.

The findings suggest that strategic viability in contemporary economic systems increasingly emerges through adaptive navigation under instability rather than through preservation of static optimization logic.

Conclusions

The results of the study confirm that contemporary systemic instability gradually transforms both strategic management mechanisms and the broader logic of economic development. Under conditions of geopolitical turbulence, technological disruption, and radical uncertainty, the practical relevance of the classical optimization paradigm, grounded in predictability and analytical forecasting, is increasingly limited.

The study substantiates that under conditions of radical uncertainty, strategic effectiveness increasingly depends not on the level of static optimization, but on the ability of economic systems to maintain adaptive flexibility, behavioral responsiveness, and strategic optionality. On this basis, adaptive rationality is interpreted as a context-sensitive form of strategic behavior that ensures organizational viability by enabling rapid reconfiguration of resources, behavioral models, and coordination mechanisms in the face of systemic disruptions.

The paper demonstrates that managerial decisions traditionally interpreted as inefficient within the framework of classical optimization logic may serve as mechanisms that preserve resilience in the face of instability. In particular, relocation of operations, reserve capacity formation, and diversification of supply chains enabled Ukrainian enterprises, especially within the pharmaceutical sector after 2022, to maintain operational continuity despite increased short-term costs.

The key result of the study is the substantiation of the emergence of a post-rational paradigm of socio-economic systems development, according to which the development of economic systems under contemporary conditions increasingly depends not on maintaining static optimality, but on organizations' adaptive capacity to navigate uncertainty. On this basis, the study develops an original model of the multidimensional space of post-rational socio-economic systems development constructed through the interaction of three projections: environmental uncertainty, strategic flexibility, and behavioral adaptability. The proposed approach explains the mechanisms that ensure the competitiveness and viability of economic systems under conditions of systemic instability.

The study contributes to strategic management research by conceptualizing post-rational development as a framework explaining organizational viability through adaptive rationality, strategic flexibility, and behavioral responsiveness under instability. The practical significance of the proposed approach lies in its potential application for designing adaptive development strategies and supporting managerial decision-making in turbulent environments.

Future research may focus on empirically operationalizing adaptive rationality and on the role of digital transformation and AI-supported decision-making in strengthening organizational resilience under radical uncertainty.

Author Declarations

The author is responsible for all stages of the research, including conceptualization, methodology, analysis, and manuscript preparation.

Conflict of Interest

The author declares that there are no conflicts of interest regarding the publication of this paper.

Funding

The research received no external funding.

Data Availability

The theoretical and legal sources used in the study are publicly available and listed in the references.

Use of AI Tools

During the preparation of this manuscript, artificial intelligence tools (ChatGPT and Grammarly) were used for visualization and supportive language editing. The author reviewed all outputs and bears full responsibility for the scientific quality, accuracy, and academic integrity of the article.

References

- Adner, R., & Levinthal, D. (2004). What is not a real option: Considering boundaries for the application of real options to business strategy. *Academy of Management Review*, 29(1), 74–85. <https://doi.org/10.5465/amr.2004.11851715>
- Antonenko, K., & Tsitsilenko, N. (2025). Strategic development of an enterprise in the conditions of global instability. *Naukovo-vyrobnychi zhurnal «Biznes-navihator»*, 3(80), 399–403. <https://doi.org/10.32782/business-navigator.80-68> [in Ukrainian]
- Bastian, B., Acar, O. A., Boom, H., & Smits, J. (2025). Management decisions under radical uncertainty. *Management Decision*, 63(13), 714–729. <https://doi.org/10.1108/MD-01-2025-0079>
- Bingham, C. B., & Eisenhardt, K. M. (2011). Rational heuristics: The ‘simple rules’ that strategists learn from process experience. *Strategic Management Journal*, 32(13), 1437–1464. <https://doi.org/10.1002/smj.965>
- Cristofaro, M., Augier, M., Lovallo, D., Abatecola, G., & Leoni, L. (2025). Behavioral strategy in evolution: A review and conceptual framework. *European Management Journal*, 43, 914–932. <https://doi.org/10.1016/j.emj.2024.10.002>
- Darnitsa. (2026). Annual report and corporate communications. <https://darnytsia.ua/reports>
- Dligach, A., & Stavyt'skyi, A. (2024). Resilience Factors of Ukrainian Micro, Small, and Medium-Sized Businesses. *Economies*, 12(12), 319. <https://doi.org/10.3390/economies12120319>
- Duchek, S. (2020). Organizational resilience: A capability-based conceptualization. *Business Research*, 13, 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)
- Farmak. (2026). Annual report and corporate communications. <https://farmak.ua/regularna-informacia/>
- Foss, N. J. (2023). Knightian uncertainty and the limitations of the Savage Heuristic. *European Management Review*, 20(4), 626–631. <https://doi.org/10.1111/emre.12623>
- Foss, N. J., Mazzelli, A., & Weber, L. (2024). *Behavioral strategy: Exploring microfoundations of competitive advantage*. Cambridge University Press. <https://doi.org/10.1017/9781009566759>
- Gigerenzer, G. (2008). *Rationality for mortals: How people cope with uncertainty*. Oxford University Press. <https://psycnet.apa.org/record/2008-04868-000>
- Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press. <https://www.hks.harvard.edu/publications/practice-adaptive-leadership-tools-and-tactics-changing-your-organization-and-world#citation>

- Hillmann, J., & Guenther, E. (2021). Organizational resilience: A valuable construct for management research? *International Journal of Management Reviews*, 23(1), 7–44. <https://doi.org/10.1111/ijmr.12239>
- Hrebeshkova, O., & Horin, A. (2025). Parametric models of rationality and behavioral imbalance of enterprise economic behaviour under global challenges. *Scientific Notes*, 41(4), 169–188. https://doi.org/10.33111/vz_kneu.41.25.04.11.075.081
- Hrebeshkova, O., Kyzenko, O., & Grebeshkov, O. (2017). Strategic business performance metrics in a postindustrial economy. In M. Jabłoński (Ed.), *Strategic performance management: New concepts and contemporary trends* (pp. 451–470). Nova Science Publishers. <https://novapublishers.com/shop/strategic-performance-management-new-concepts-and-contemporary-trends/>
- Hrebeshkova, O., Kyzenko, O., & Verba, V. (2025). Emergent approach to business resilience: A study of Ukrainian enterprises. *Business: Theory and Practice*, 26(1), 212–222. <https://doi.org/10.3846/btp.2025.22798>
- Kay, J., & King, M. (2020). *Radical uncertainty: Decision-making beyond the numbers*. W. W. Norton & Company.
- Kundieieva H., Turchyna M., Tur O., Sheremetynska O., & Yasko Yu. (2023). Impact of globalization processes on the strategic planning of enterprises. *Naukovyi Visnyk Natsionalno Hirnychoho Universytetu*, (4), 173–180. <https://doi.org/10.33271/nvngu/2023-4/173>
- Kyzenko, O., Sitnicki, M. W., Zahorodnia, K., Hrebeshkova, O., & Verba, V. (2026). Ethical leadership and institutional convergence in European management consulting: A cluster-based comparative analysis. *Business Ethics and Leadership*, 10(1), 345–366. [https://doi.org/10.61093/bel.10\(1\).345-366.2026](https://doi.org/10.61093/bel.10(1).345-366.2026)
- Lengnick-Hall, C. A., Beck, T. E., & Lengnick-Hall, M. L. (2011). Developing a capacity for organizational resilience through strategic human resource management. *Human Resource Management Review*, 21(3), 243–255. <https://doi.org/10.1016/j.hrmr.2010.07.001>
- Levinthal, D. A. (2011). A behavioral approach to strategy—What’s the alternative? *Strategic Management Journal*, 32, 1517–1523. <https://doi.org/10.1002/smj.963>
- Nalyvaiko, A. P. (2001). Teoriia stratehii pidpryjemstva. Suchasnyi stan ta napriamky rozvytku. [Theory of Enterprise Strategy: Current State and Directions of Development]. KNEU. [in Ukrainian]
- Powell, T. C., Lovallo, D., & Fox, C. R. (2011). Behavioral strategy. *Strategic Management Journal*, 32(13), 1369–1386. <https://doi.org/10.1002/smj.968>
- Sakaki, S. (2023). The rationality of adaptive decision-making and the feasibility of optimal growth planning. *Humanities and Social Sciences Communications*, 10(1), 231. <https://doi.org/10.1057/s41599-023-01667-1>
- Snowden, D. J., & Boone, M. E. (2007). A leader’s framework for decision making. *Harvard Business Review*, 85(11). [Snowdon-and-Boone-A-Leader's-Framework-for-Decision-Making_0.pdf](https://doi.org/10.1002/smj.640)
- Taleb, N. N. (2007). *The black swan: The impact of the highly improbable*. Random House.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Trigeorgis, L. (1996). *Real options: Managerial flexibility and strategy in resource allocation*. MIT Press.
- Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, 18(4), 298–318. <https://doi.org/10.1016/j.leaqua.2007.04.002>
- Weick, K. E. (1995). *Sensemaking in organizations*. Sage Publications.

АДАПТИВНА РАЦІОНАЛЬНІСТЬ В ЕПОХУ ГЛОБАЛЬНОЇ НЕСТАБІЛЬНОСТІ: СТАНОВЛЕННЯ ПОСТРАЦІОНАЛЬНОЇ ПАРАДИГМИ РОЗВИТКУ СОЦІАЛЬНО-ЕКОНОМІЧНИХ СИСТЕМ

ГРЕБЕШКОВА Олена Миколаївна, <https://orcid.org/0000-0002-6896-3941>,
кандидат економічних наук, доцент, Київський національний економічний
університет імені Вадима Гетьмана, Київ, Україна, grebeshkova@kneu.edu.ua

Анотація. Зростання глобальної нестабільності дедалі більше підриває класичну логіку економічної раціональності, засновану на оптимізації, прогнозованості та довгостроковому плануванні. В умовах геополітичної турбулентності, технологічних змін, військових конфліктів і радикальної невизначеності традиційні підходи до стратегічного управління часто виявляються недостатніми для забезпечення стійкості економічних систем. Метою статті є концептуалізація адаптивної раціональності як контекстно чутливої форми стратегічної поведінки та обґрунтування формування постраціональної парадигми розвитку. Методологія дослідження поєднує поведінкову стратегію, теорію динамічних здібностей, resilience-oriented management і логіку реальних опціонів. На основі аналізу українських підприємств, зокрема фармацевтичного сектору, показано, що резервні потужності, диверсифікація ланцюгів постачання та стратегічна гнучкість дедалі більше виступають механізмами забезпечення стійкості в умовах радикальної невизначеності. Наукова новизна полягає у розробленні багатовимірної моделі постраціонального розвитку економічних систем.

Ключові слова: адаптивна раціональність; постраціональний розвиток; системна нестабільність; стратегічна гнучкість; поведінкова адаптивність; резильєнтність; радикальна невизначеність; динамічні здібності; стратегічна опціональність; розвиток соціально-економічних систем.