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Economic Resilience to External and Internal Shocks in the Context of Globalization

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Abstract: The aim of the article is to address the issue of the resilience of the economic system to contemporary global challenges under the influence of external and internal shocks; to identify the theoretical foundations of external factors that may have a shock impact on the economic system; and to highlight the impact of shocks on the international economic system in the context of the globalization process. Globalization is based on the development of global markets for goods, services, labour and capital. The globalization process is characterized by an increase in financial flows in interested sectors of the national economy, the rapid development of financial markets, which generates strong financial flows, and the intensification of the creation, development and dissemination of innovative processes in financial markets. According to the article, adaptation is a process that produces changes in both quant ity and fitness, which enables a system to operate optimally under changing conditions, while resilience implies the ability of the system to react quickly to changes in its operating conditions during its operation. The article also analyzes and studies the content of external and internal shocks, their transmission to national economic systems and the spread of financial crises. External shocks in the context of globalization are the most visible and important manifestation of the impact of exogenous factors on national economic systems, and the systemic role of external shocks lies in the fact that they are one of the components of the mechanism of the spread of global financial instability.

Keywords: Economic Resilience; Globalization; Economic Shocks; Sustainability of National Economies

1. Literature Review

In the context of globalization, economic resilience has become an important indicator of a country's ability to cope with external and internal shocks. Globalization has not only facilitated the acceleration of international trade and capital flows, but has also made national economies more closely interconnected, thus increasing the scope and depth of the impact of external shocks on the global economy. External shocks include, but are not limited to, financial crises, changes in trade policies, technological revolutions, natural disasters, etc., which often have a significant impact on economic stability and growth potential.

At present, the conceptual definition and theoretical research on economic resilience have made some progress. Foreign countries have made an early start and rapid development in the study of economic resilience, involving a variety of fields such as development economics, regional economics and macroeconomics. In recent years, with the acceleration of globalization, the importance of economic resilience has become more and more prominent, and scholars have begun to pay more attention to the ability of economies to adapt to changes and keep transforming in a complex environment. In addition, research on the resilience of China's economic development has achieved remarkable results, proposing a theoretical model of the resilience of China's economic development and conducting in-depth research in four key areas: basic resilience, structural resilience, innovation resilience and institutional resilience.

Second, external shocks in the context of globalization have posed new challenges to economic resilience. Issues such as supply chain disruptions due to the technological revolution, changes in consumer behaviour, the climate crisis, geopolitical disruptions and other factors have had a serious impact on the proper functioning and efficiency of economic systems. These external shocks not only affect the day-to-day operations of companies, but also have far-reaching implications for the global economy. Therefore, research on how to improve the adaptability and resilience of the economic system in order to effectively respond to these shocks has become the focus of current research. Internal shocks cannot be ignored either, such as natural disasters and technological changes that can have a significant impact on the economy. In this case, economic resilience is demonstrated by the ability to quickly adjust the economic structure and utilize internal resources for self-repair and growth.

It should be noted that empirical analyses occupy an important position in the study of economic resilience. Although theoretical research has yielded rich results, there are relatively few empirical analyses around economic resilience. Through empirical research, the influencing factors and functioning mechanisms of economic resilience can be better understood, providing a scientific basis for policy formulation. For example, the impact of external shocks on countries' macro-economies has been studied through the establishment of an external shock index.

The current state of research on economic resilience against external and internal shocks in the context of globalization shows that, while theoretical research has yielded certain results, there is still much room for development in terms of empirical analysis and policy application. Future research should further deepen the theoretical understanding of economic resilience, strengthen empirical analysis, and explore effective policy measures to improve the adaptability and resilience of economies and effectively respond to various shocks in the context of globalization.

On this basis, this paper analyses the research background and current situation of economic resilience against external and internal shocks in the context of globalization, combines domestic and international literature on economic resilience against shocks, and adds COVID-19 pandemic case study to conduct an in-depth discussion on the resilience of economic resilience against shocks in terms of the overview of the development of the global economy, the conceptual and theoretical framework of resilience, the types of shocks, resilience analysis, and case study, and so on. In-depth discussion.

2. Introduction

A major feature of the modern world economy is its exposure to global crises, each of which affects a growing number of countries. Globalization means that economies are becoming increasingly interconnected and interdependent, which brings long-term benefits for trade, development and employment, while at the same time creating risks and challenges for the economy. One of the major challenges posed by globalization is the increased exposure of national economies to risks arising from largely uncontrollable external and internal shocks, which occur in one part of the world, in one industry or in one market, and which can quickly spread to entire regions, countries and even the world, including economic shocks.

Against the backdrop of globalization, an increasingly dynamic external environment and the presence of a large number of uncertainties, socio-economic development depends on the ability of the economy to adapt to change. However, the impact of external shocks and innovations on the development of national economies is evident but difficult to assess. National economies are integrated into the global production system and are within the scope of global processes. As the disruption of economic linkages can destabilize business and ultimately affect national income levels, one of the most pressing issues facing economies is the transition to a new economic model that improves their resilience to changing conditions and external shocks of all kinds.

3. Overview of Global Economic Developments

In today's economic system, business cycles and fluctuations in market factors are becoming increasingly difficult to predict. A basic theoretical analysis of the processes of today's global economic system leads us to the conclusion that globalization is a special stage in the development of today's world, which has arisen as a result of the excesses of some of the world's major Powers towards a post-industrial stage of development. Objectively, globalization is the result of the deepening of the international division of labour and the intensification of inter-State interaction and cooperation, and it is a natural process of forming a single global political, economic, social and cultural space. Subjective globalization is the asymmetrical development of the world economy, the result of the unilateral appropriation and enjoyment of the fruits of the international division of labour by international organizations, transnational corporations and developed countries. In other words, the peculiarities of globalization are that it unfolds through multiple processes and aspects, namely internationalization, regionalization, localization and the integration and fragmentation of the world. At the same time, the process of economic globalization is organically linked to major changes in various aspects of the economic structure (e.g. sectoral, regional, technological, economic and institutional). This is due to the systemic nature of globalization, which, as an active and important component, can assist in the establishment of a qualitatively more efficient way of organizing the social economy.

According to the forecasts of the major international financial institutions, the global economic environment continues to be characterized by signs of recession, a high degree of uncertainty about the outlook and macroeconomic instability. At the current stage of global economic development, the level of public debt in developed countries is unusually high, measures to prevent crises from occurring through stringent financial and fiscal regulation, mainly adopted by developed countries affected by debt crises, are losing their effectiveness, a longer period of time and a broader and stronger global coordination are needed to fundamentally resolve the debt problem, and without structural reforms and resilient monetary policies, fiscal consolidation Without structural reforms and resilient monetary policies, fiscal consolidation will not have the desired effect . At the same time, developing countries have become significantly more resilient to global crises , owing to the improving quality of their economic policies and their relatively low frequency of exposure to internal and external shocks. The economic downturn, especially in industrialized countries, has been accompanied by a strong shift in trade flows to developing countries, and in fact the growth of import demand in developing countries has been the most important factor in saving the global economy and trade from falling into a deeper recession, in addition to the fact that globalization, as a major trend in global economic development, poses the risk of external shocks and a downturn in economic growth for developing countries.

4. Discussion on the Conceptual and Theoretical Framework of Resilience

The concept of “resilience” originated in physics, engineering, ecology and other disciplines, and usually refers to the ability of a system to maintain its own stability and restore its original state after being subjected to external shocks. Economic resilience mainly refers to the ability of an economy to cope with external disturbances, withstand risky shocks and achieve sustainable development.

According to systems theory, the term “resilience” is considered to be the ability of a system to acquire a state to which it can adapt under a variety of possible impacts, determined primarily by the type and degree of impact. Essentially, the term is associated with invariance, equilibrium and order. In the natural sciences, “resilience” refers to a stable state, capable of lasting for a long period of time. Related terminology has also been developed in the discipline of mathematics, where different types of toughness are distinguished, including statistical toughness, dynamic toughness, trajectory toughness, initial position toughness, invariant set toughness, attractor resilience, and so on. However, it is not possible to use a specific type of resilience in the context of the economy, which is a complex system of heterogeneous elements and linkages containing multiple developmental variants. In economic theory, “resilience” is considered as a concept in economic equilibrium, i.e., economic entities endeavouring to bring the economic system to an equilibrium and optimal state, which is related to the definition of “resilience”. According to this approach, achieving a state of economic equilibrium is one of the main macro- and micro-tasks.

In systems theory, the systemic resilience of the economy is an extremely important point in determining the state of the economy. The capacity for systemic resilience may be driven by the need to protect the system from external shocks, that is, shocks originating outside the system. Through interventions such as building up reserves and buffers, the economy can protect itself in a limited part of the system to prevent problems in other parts of the system. In addition, policies need to be put in place that, by design, lead the economic system to self-organize in order to achieve the desired objectives. However, interventions bring lasting benefits along with limitations: the costs of interventions may exceed the ability or willingness of the government or the market to sustain the debt incurred; and the success of intervention policies depends on the contextual environment and the precise identification of the timing of the intervention. The wrong intervention may have undesirable stimulative consequences and even inhibit job creation, sectoral growth, and the long-term sustainability of international trade.

Taking together the above conceptual and theoretical foundations, this paper will discuss specific types of shocks and analyse specific cases of economic resilience against shocks based on systems theory.

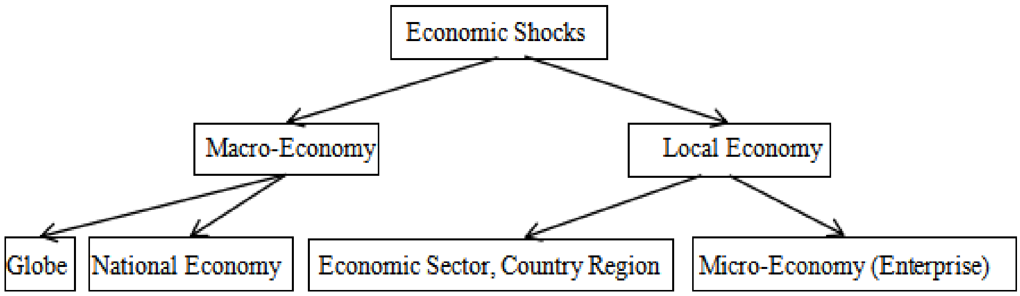
5. Specific Discussion of Types of Shocks

"Shocks" are an integral part of economic dynamics. Shocks that lead to economic crises take many forms and are diverse in nature, ranging from natural and man-made disasters, global economic changes, political decisions, rapid technological change, and so on. The concept of "shocks" is not new to economic research. In economic research, shocks were initially viewed as drivers of the business cycle, i.e., basic macroeconomic fundamental variables or changes that have a significant impact on macroeconomic indicators. In other words, global shocks are typical of macroeconomic systems, where shocks create conditions for drastic changes in the economic system and lead to its instability.

It is worth noting that, despite the lack of consensus in the scientific community on the concept of "shocks", they have been characterized as being weakly predictable, unpredictable, sudden and large in scale of action, and the 2008 financial crisis was one such example. An example of the impact of a "shock" is the 2008 financial crisis, which originated in the United States of America and evolved into a global crisis affecting virtually all international economic situations in the world. Shocks can also be non-economic, as in the case of the COVID-19 epidemic, which led to disruptions in global supply chains, a sharp drop in business activity, investor fears about declining corporate profitability, and declines in stock market indices.2022 The impact of energy and food shocks is increasingly visible, mainly in the form of changes in the prices of derivatives.

In addition, the recognized factors affecting the formation of economic shocks are demand-side shocks and supply-side shocks, which can be categorized according to their origin within a particular economic sector or their impact on that sector. Since markets and industries in an economy are interconnected, changes in supply and demand in any sector of the economy can have far-reaching macroeconomic implications. Therefore, “economic shocks” can be defined as sudden, physical changes in the business environment that lead to the destabilizing development of an economic entity. Depending on the scale of the consequences of economic shocks, they can be classified as local economic shocks, which are disruptions to the development of major firms, markets, economic sectors or regions, or macroeconomic shocks, which are those that lead to the destabilisation of the development of a single country, a group of countries or the world as a whole (Figure 1).

Figure 1: Types of economic shocks by level of consequences



According to the classification of macroeconomic shocks, shocks can be classified as internal or external according to their source. External shocks occur outside a country’s territory and include external demand shocks, resource price shocks in world markets, terms of trade shocks, world interest rate shocks, world capital flow shocks, etc. These shocks affect both the cash and capital accounts of the balance of payments. In particular, negative external shocks lead to a decrease in the account balance, which is associated with a decline in export earnings, an increase in import expenditures, and factor payments to non-residents. Conversely, the capital account shrinks as capital flows out of the country. Ultimately, these factors can lead to a deterioration in the balance of payments and to instability in the economic system as a whole.

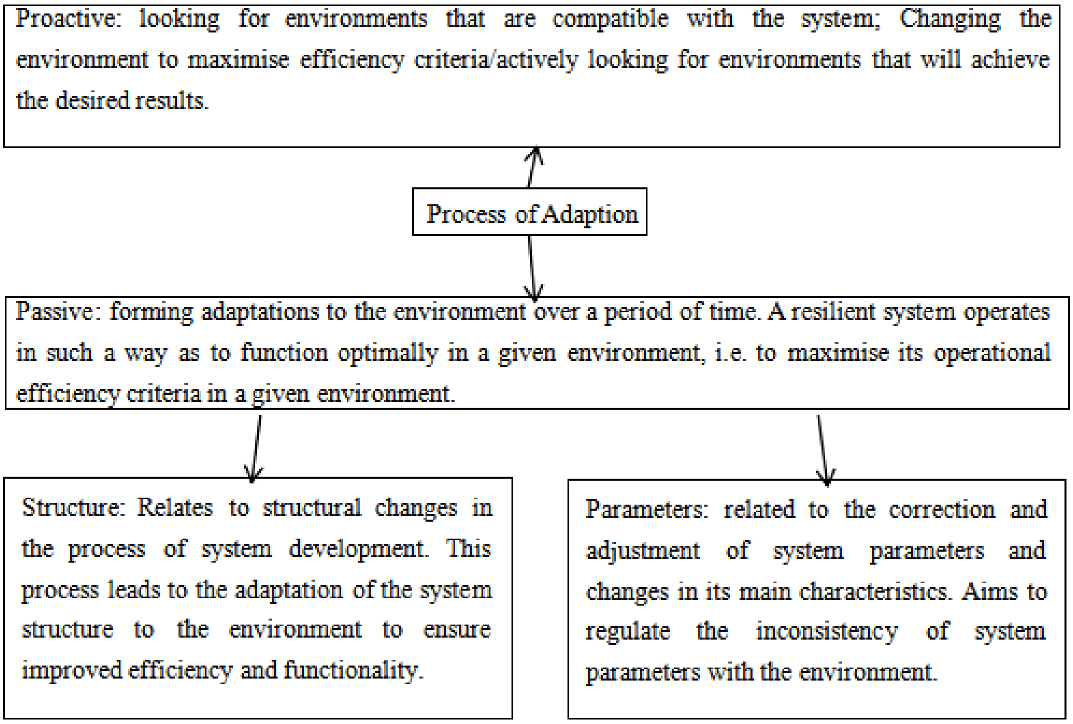
In summary, a large number of shocks affect both supply and demand in different markets, and thus the structure of the impact of shocks on the economy can be complex, with different effects on overall economic dynamics and different consequences in terms of nature and magnitude. Therefore, the formation of a national economic system that can adapt to external and internal disturbances is a major long-term task for countries. In order to mitigate negative shocks, any country’s economy must have certain adaptation mechanisms in place at the national and regional levels.

6. Specific Analyses of Economic Resilience

“Economic resilience” refers to the ability to adapt to changes in internal and external conditions, whether these changes occur unexpectedly, gradually or as a result of predictable trends. Adaptation is the purposeful alteration of one’s characteristics in response to changes in the environment, i.e. the process is a subjective modification of the object, which results in its constructive integration into the external environment. The speed of adaptation depends on the quality of the environment, management order and entrepreneurship.

Some researchers have identified the following types of adaptation (Figure 2). As can be seen from the figure, the process of adaptation of various systems to negative or positive changes in the external and internal environments can be divided into two types, i.e. passive and active adaptation (Figure 2).

Figure 2: Type of adaptation



Passive adaptation does not involve a fundamental change in the object of adaptation, but only a change in its function; active adaptation is divided into structural and functional adaptation. Parametric adaptation, on the other hand, is a more intensive process of change in the system under the influence of environmental factors, which is reflected in changes in the structure of the system or its parameters. Thus, adaptation is a complex and lengthy process.

Economic adaptation is a multifaceted process. One of these aspects is the adaptation of entrepreneurs to changing environmental conditions, such as financial crises, deterioration of market conditions, etc. At the same time, changes bring various risks to entrepreneurial activity, therefore, another aspect of resilience is the overcoming of various risks by economic agents.

The economic system is dynamic in nature and sometimes undergoes a series of significant changes triggered by economically determined internal factors and non-economic external factors. In this regard, the economic system is viewed from the perspective of its ability to withstand various negative factors and to cope with the imbalances brought about by new shocks by devising policy responses that further adapt to the environment and grow its potential.

7. The case for economic resilience to shocks

Economic systems interact with a range of other systems in a network structure.The SARS-CoV-2 crisis illustrates how systems can change each other.The 2020 New Crown pandemic was exacerbated by the financial crisis of 2008, and more precisely by austerity measures that left many health systems short of basic resources such as protective clothing, masks, and so on to cope with a sudden, unexpected surge in patient numbers. Following government-ordered quarantines and closures, socio-economic activity dwindled, and the systemic damage spread beyond the realm of public health into the economic and financial spheres, and even more broadly into the political sphere. The loss of function triggered by this single disruption needed to be underpinned by strong resilience to minimize widespread or even permanent multi-system losses, but at the same time there was a need to ensure that a range of additional problems were not exacerbated if economic systems were not sufficiently resilient to withstand the negative impacts of the epidemic crisis.

In analyzing economic resilience to shocks, it is first necessary to understand how the way an economy reallocates resources after a shock affects workers and citizens. According to the World Health Organization, pandemics trigger high levels of stress and anxiety in societies as a result of blockades, quarantines, loss of daily work and unemployment. The frequency of drug abuse, alcoholism and violence has risen in tandem with unemployment. In this context, economic resilience is key to absorbing and adapting to social and economic shocks.

Take China as an example. The new crown epidemic has had far-reaching impacts on the global economy, including lower output, reduced consumption, lower investment, and restricted foreign trade. China, as one of the world’s largest manufacturing countries, demonstrated strong economic resilience during the epidemic. This resilience was mainly due to several aspects: firstly, the Chinese government swiftly adopted a series of effective preventive and control measures, which effectively controlled the spread of the epidemic; secondly, China has a complete industrial chain and a huge domestic demand market, which provided a solid foundation for the rapid recovery of the economy; and thirdly, the rapid development of the digital economy and new infrastructure projects injected new impetus into economic growth.

From the perspective of regional economic resilience, the Beijing-Tianjin-Hebei urban agglomeration showed different types of economic recovery during the epidemic, including cities with high resistance and resilience, high resistance but low resilience, low resistance but high resilience, and low resistance and resilience. This suggests that there are significant differences in economic resilience between regions even within the same country, and that these differences may be related to local factors such as industrial structure, government policies, and socio-economic conditions.

However, although China’s economy showed strong resilience during the epidemic, it also faced some challenges. For example, the impact of the epidemic on employment, domestic and external demand resulted in macroeconomic and sectoral output being affected; in addition, the epidemic exposed some governance shortcomings in China's employment policies, the development of micro, small and medium-sized enterprises (MSMEs), and financial reforms.

In addition, it was found that government regulation ability, industrial structure attributes and external dependence are important factors affecting regional economic resilience. For example, highly specialized and relevantly diversified industries contribute to regional economic resilience, while non-relevantly diversified industries may negatively affect it. Meanwhile, effective government regulation can significantly promote economic resilience.

8. Conclusion and Outlook

Economic growth and sustainable development cannot be achieved if economic systems and actors do not have sufficient capacity to cope with risk and uncertainty. The economy as a system must adapt to the external environment in order to function and develop. Adaptation requires internal unity, encompassing the functioning of economic agents, entrepreneurship and economic institutions. At the same time, the external environment of the economy includes not only the world economy and all its institutions and markets, but also the subsystems of society, i.e. the political, cultural and social environment. In general, shocks have different sources, and thus a distinction can be made between global shocks of economic origin and global shocks of non-economic origin, depending on the type of source. To mitigate the negative impact of shocks on national economic development in the process of globalization, it is important to do a good job of analyzing shocks to socio-economic development.

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Availability of Data and Materials

The materials on which the study based were accessed from relevant researches by some scholars in different countries and are available for downloading through following links:

https://www.nature.com/articles/s41567-022-01581-4

https://www.sciencedirect.com/science/article/pii/S2405844023082944

http://www.economy.nayka.com.ua/?op=1&z=2697

http://ekmair.ukma.edu.ua/bitstream/handle/123456789/13116/Zovnishni_shoky_kontseptualni_zasady_ta_osoblyvosti_vplyvu_na_ekonomiku_Ukrainy.pdf?sequence=1&isAllowed=y

Conflicts of Interest

The authors declare that they have no conflicts of interest to report regarding the present study.

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