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# INTERNATIONAL BUSINESS IN THE CONTEXT OF WARTIME CHALLENGES: ADAPTATION, RISKS, AND DEVELOPMENT PROSPECTS

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The current stage of global economic development is characterized by an increasing level of geopolitical instability, the intensification of regional conflicts, the transformation of international supply chains, and growing uncertainty in the business environment. Military conflicts are increasingly becoming one of the key factors affecting the functioning of international business, altering the conditions of international trade, investment activity, logistics, and the management of global production networks. This issue has gained particular significance following the full-scale invasion of Ukraine by the Russian Federation in 2022, which caused substantial changes not only in the Ukrainian economy but also in the global business environment. Under wartime conditions, enterprises face a wide range of risks, including disruptions of logistics routes, destruction of infrastructure, limited access to resources, financial instability, exchange rate fluctuations, cybersecurity threats, and changes in the regulatory environment. At the same time, international business demonstrates a considerable capacity for adaptation through supplier diversification, digitalization of business processes, relocation of production facilities, expansion into new markets, and the implementation of innovative risk-management approaches. The experience of recent years indicates that companies capable of responding rapidly to changes in the external environment and implementing resilience mechanisms gain competitive advantages even under crisis conditions. Particular importance is attached to ensuring business continuity, establishing alternative supply chains, developing digital management platforms, and increasing organizational flexibility. Wartime challenges force international companies to reconsider traditional business models and adopt new strategies for adapting to an unstable environment. For Ukraine, the issue of international business adaptation is of particular importance. Despite difficult operating conditions, a significant number of Ukrainian enterprises have maintained their export activities, continued cooperation with foreign partners, and remained integrated into international economic processes. Digital technologies, international financial support, business relocation, and the active implementation of anti-crisis management mechanisms have played a significant role in this process.

Under these circumstances, there is a need for a comprehensive study of the functioning of international business under the influence of wartime challenges, the

identification of major risks, adaptation mechanisms, and the prospects for the development of international entrepreneurial activity in conditions of growing geopolitical uncertainty.

The issue of international business operations under conditions of military conflicts, geopolitical instability, and global crises has become one of the leading areas of scientific research in recent years. It has gained particular significance since the outbreak of the full-scale war in Ukraine, which has had a substantial impact not only on the national economy but also on international markets, logistics networks, and global value chains. Academic literature increasingly focuses on the adaptation of enterprises to wartime risks, ensuring business continuity, supply chain management, and the use of digital technologies as a tool for enhancing business resilience.

In particular, the study by Prygara and Yarosh-Dmytrenko (2023) is devoted to the analysis of adaptation strategies employed by Ukrainian enterprises operating under wartime conditions. The authors demonstrate that the key factors ensuring business resilience include market diversification, relocation of production facilities, digitalization of business processes, and the development of international partnerships (Prygara & Yarosh-Dmytrenko, 2023). At the same time, the researchers primarily focus on internal adaptation mechanisms, leaving insufficiently explored the issue of the long-term integration of Ukrainian companies into global value chains after the end of hostilities.

An important contribution to the study of the transformation of the international business environment was made by Thakur-Weigold and Miroudot (2024), who analyzed the impact of the war in Ukraine and other global crises on international supply chains. The scholars concluded that modern companies are increasingly abandoning traditional globalization models in favor of regionalization and supplier diversification. This approach reduces dependence on individual countries and enhances resilience to external shocks (Thakur-Weigold & Miroudot, 2024). However, the long-term economic consequences of such transformations for international business still require further investigation.

Considerable attention to the issue of digital transformation during wartime is paid by Polishchuk, Gernego, and Horbov (2025). In their study, the authors argue that digitalization has become one of the most important factors in maintaining the competitiveness of relocated enterprises. The use of cloud technologies, e-commerce, and digital platforms enables companies to sustain operations despite significant limitations in physical infrastructure (Polishchuk et al., 2025). Nevertheless, the impact of digital innovations on the international expansion of Ukrainian companies in the post-war period remains insufficiently explored.

Issues related to the adaptation of enterprises to wartime risks are also examined in the work of Tsymbalenko and Tarasenko (2025). The authors identify the main mechanisms for increasing the resilience of trading enterprises, among which the diversification of logistics routes, the creation of backup supply channels, and the development of risk-management systems are of particular importance (Tsymbalenko

& Tarasenko, 2025). At the same time, insufficient attention is devoted to the specific features of international companies operating in different sectors of the economy.

The peculiarities of international business relations and the conclusion of foreign economic contracts during wartime were investigated by Romashchenko, Romashchenko, and Tsokalo (2025). The researchers emphasize the growing importance of legal protection of contracts, risk-insurance mechanisms, and digital tools for conducting negotiations. They argue that wartime instability significantly changes the nature of international cooperation and requires the implementation of new approaches to managing foreign economic activities (Romashchenko et al., 2025).

Bochok (2025) examined the specifics of risk management in international supply chains under conditions of geopolitical instability. The author demonstrates that modern companies are compelled to shift from a cost-minimization model to a resilience-oriented model, which involves the creation of reserve capacities, alternative transportation routes, and early-warning risk-management systems (Bochok, 2025).

The issue of transforming the production systems of Ukrainian enterprises under wartime challenges is addressed by Loza (2025). The researcher notes that enterprises are actively implementing flexible production models, automating processes, and diversifying production locations in order to reduce the risk of losing production capacity (Loza, 2025).

International studies of geopolitical risks are also of considerable interest. For example, Chang et al. (2025) analyzed the impact of geopolitical instability on the resilience of global supply chains and demonstrated that increasing political risks directly affect companies' investment activity and force businesses to revise their international strategies (Chang et al., 2025).

A separate area of scientific research concerns the financial resilience of enterprises during wartime. In particular, Hernandez Romero and Coenders (2025) examined the functioning of agri-food companies under war conditions and concluded that the key determinants of resilience are the diversification of financing sources, the flexibility of business models, and effective risk management (Hernandez Romero & Coenders, 2025).

Therefore, the analysis of contemporary scientific research demonstrates considerable scholarly attention to the functioning of international business under wartime challenges. The primary focus is placed on risk management, digital transformation, supply chain adaptation, financial resilience, and the development of crisis-management mechanisms. At the same time, insufficiently explored issues include the formation of comprehensive adaptation strategies for international business under prolonged military conflicts, the integration of digital technologies into risk-management systems, and the assessment of the long-term consequences of wartime challenges for the global competitiveness of enterprises. These gaps determine the necessity for further research in this area.

The purpose of this article is to examine the specific features of international business operations under wartime challenges, identify the key risks faced by enterprises, analyze the mechanisms of business adaptation to crisis conditions, and

substantiate the prospects for the development of international entrepreneurial activity in an environment of increasing geopolitical instability.

Wars have always been among the most complex challenges for the development of international business; however, in today's globalized economy, their impact has reached an unprecedented scale. Global production networks, international supply chains, digital platforms, and the high degree of interdependence among national economies mean that military conflicts in specific regions can have significant consequences for companies worldwide. The full-scale war in Ukraine has become one of the most illustrative examples of the impact of wartime risks on international business, as its consequences have affected financial markets, the energy sector, transport infrastructure, international trade, and investment activities.

Table 1 Major wartime risks for international business

Type of risk	Description	Possible business consequences
Logistics	Disruption of transport routes, port blockades, infrastructure destruction	Delivery delays, increased costs, product shortages
Financial	Currency fluctuations, inflation, limited access to capital	Reduced profitability, declining investments
Political	Regulatory changes, sanctions, trade restrictions	Loss of markets, complications in international operations
Human Resource	Population migration, mobilization, labor shortages	Lower productivity, shortage of specialists
Cybersecurity	Cyberattacks and information leaks	Data loss, financial losses, reputational damage
Reputational	Negative perception of company activities in certain markets	Loss of customers and business partners
Energy	Interruptions in energy supply	Production stoppages, increased operating costs
Investment	Increased uncertainty and business environment risks	Reduced investment activity

Under wartime conditions, international business operates in an environment of heightened uncertainty. One of the most serious challenges is the disruption of international supply chains. The destruction of transport infrastructure, blockades of seaports, restrictions on air transportation, and complications in border-crossing procedures lead to increased logistics costs, longer delivery times, and shortages of certain products. For many multinational corporations, this means the need to revise established supply models and search for alternative transportation routes. As shown in Table 1, logistics risks remain among the most significant threats to business continuity because they directly affect production schedules, inventory management, and customer satisfaction. Delays in deliveries may result not only in financial losses

but also in the deterioration of long-term business relationships and reputational damage.

Financial risks pose an equally serious challenge. Military conflicts are typically accompanied by currency instability, inflationary pressures, declining investment activity, and rising borrowing costs. For international companies, these developments create additional difficulties in implementing long-term projects and planning financial activities. At the same time, the growing level of geopolitical risk significantly influences investors' decisions regarding capital allocation and investment priorities. Uncertainty concerning future market conditions often forces companies to postpone investment projects, reduce expansion plans, and focus on preserving liquidity. Financial and investment risks are closely interconnected and may substantially affect both corporate profitability and overall economic growth.

Human resource risks also deserve special attention. Large-scale population displacement, employee mobilization, demographic deterioration, and the psychological pressure associated with military events can lead to shortages of qualified personnel. In many sectors, the lack of skilled workers has become one of the key constraints on business development. Consequently, international companies increasingly rely on remote work arrangements, invest in employee training programs, and implement new talent retention mechanisms. Furthermore, organizations are paying greater attention to employee well-being, mental health support, and flexible work arrangements to maintain productivity and organizational resilience. Human capital has become a strategic resource whose preservation is essential for maintaining competitiveness during prolonged periods of instability.

The importance of cybersecurity has also increased substantially. In wartime conditions, cyberspace becomes one of the principal arenas of confrontation. Cyberattacks targeting financial institutions, industrial enterprises, transportation systems, and digital platforms can cause significant economic damage. Data breaches, disruptions of information systems, and ransomware attacks threaten not only operational continuity but also corporate reputation and customer trust. Therefore, modern international companies are investing heavily in cybersecurity infrastructure, employee awareness programs, and business continuity systems designed to protect digital assets and ensure uninterrupted operations. Cyber risks have become a critical component of overall corporate risk management strategies.

Despite numerous risks, international business demonstrates a high level of adaptability to wartime challenges. One of the most common adaptation strategies is the diversification of supply chains. Companies are increasingly moving away from dependence on a single supplier or region and are building networks of alternative partners. Such an approach helps reduce the risks of supply disruptions and ensures the stability of production processes. The growing emphasis on resilience rather than purely cost minimization reflects a broader transformation of international business strategies. Companies are recognizing that flexibility and redundancy may provide greater long-term value than short-term efficiency gains.

Digital transformation has become another essential adaptation tool. The implementation of digital technologies enables companies to maintain business continuity even under severe physical constraints. Cloud computing, electronic document management systems, enterprise resource planning (ERP) solutions, remote communication platforms, and artificial intelligence tools support efficient business operations regardless of the geographical location of employees and partners. Digital technologies also facilitate real-time monitoring of supply chains, financial performance, and operational risks, allowing managers to respond more quickly to changing circumstances. Moreover, digitalization enhances organizational agility and enables businesses to continue serving customers even when traditional channels are disrupted.

The relocation of production facilities has also become particularly relevant. Many enterprises operating in high-risk areas have transferred production capacities to safer regions or even to other countries. This strategy helps minimize the risk of asset loss and ensures operational continuity. However, relocation requires substantial financial resources and often involves adaptation to new regulatory, cultural, and market conditions. Companies must establish new supplier relationships, recruit and train employees, and integrate operations into unfamiliar business environments. Despite these challenges, relocation has proven to be an effective mechanism for preserving productive capacity and sustaining international business activities during periods of conflict.

In addition, companies are increasingly adopting comprehensive risk management systems that combine scenario planning, early warning mechanisms, crisis response protocols, and strategic reserves of critical resources. The experience of recent years has demonstrated that organizations capable of rapidly adapting to external shocks are more likely to maintain competitiveness and achieve sustainable development even under adverse circumstances. Consequently, wartime challenges are not only generating new risks but also stimulating innovation, organizational learning, and the transformation of traditional business models. International companies that successfully integrate resilience, digitalization, and flexibility into their strategies are better positioned to navigate uncertainty and capitalize on emerging opportunities in the evolving global business environment.

Modern companies are actively implementing comprehensive risk management systems. Risk management has become an integral component of the strategic management of international business. Enterprises continuously monitor the external environment, assess potential threats, and develop response scenarios for crisis situations. The use of predictive analytics, big data technologies, and artificial intelligence tools enables organizations to identify emerging risks at an early stage and minimize their negative consequences. In addition, advanced digital monitoring systems allow managers to evaluate geopolitical developments, market fluctuations, and supply chain vulnerabilities in real time, thereby improving the quality and speed of managerial decision-making.

As demonstrated in Table 2, international companies increasingly rely on a combination of adaptation strategies rather than a single response mechanism. The effectiveness of business continuity largely depends on the ability to integrate supply chain diversification, digital transformation, risk management, and workforce flexibility into a unified resilience framework. Such an approach enables organizations to maintain operational stability even under conditions of prolonged military conflict and geopolitical uncertainty.

Table 2 Main strategies for adapting international business to wartime challenges

Adaptation strategy	Content	Expected result
Supplier diversification	Establishment of alternative supply channels	Increased resilience of supply chains
Digitalization of business processes	Implementation of digital platforms and automation	Ensuring business continuity
Production relocation	Transfer of production facilities to safer regions	Preservation of assets and production capacity
Risk management	Identification, assessment, and mitigation of risks	Reduction of negative crisis impacts
Development of remote work	Use of digital collaboration tools	Retention of human capital
Cybersecurity enhancement	Strengthening information security systems	Protection of the company's digital resources
Market diversification	Expansion into new international markets	Reduced dependence on specific regions
Reserve formation	Creation of financial and material reserves	Increased organizational resilience

Therefore, under wartime challenges, the adaptation of international business becomes comprehensive in nature and encompasses virtually all areas of enterprise activity, ranging from supply chain management to cybersecurity enhancement and organizational transformation. The analysis of the presented strategies allows us to conclude that modern companies are gradually moving away from traditional management models focused primarily on cost minimization and are shifting toward resilience-, flexibility-, and business continuity-oriented approaches.

One of the most important adaptation strategies is supplier diversification. Military conflicts, sanctions, disruptions of transportation routes, and infrastructure destruction significantly increase the risks associated with dependence on particular suppliers or regions. Consequently, international companies actively establish alternative sourcing channels for raw materials, components, and supplies. Such an approach reduces the risk of production interruptions, ensures the fulfillment of contractual obligations, and enhances competitiveness in international markets.

Equally important is the digitalization of business processes, which has become one of the key instruments for maintaining operational activities during wartime. The implementation of digital platforms, cloud technologies, electronic document management systems, and automated management solutions enables companies to ensure business continuity even when production facilities or office infrastructure are physically

damaged. Moreover, digital technologies contribute to faster decision-making, cost optimization, and the expansion of opportunities for international cooperation.

Production relocation also occupies a significant place among adaptation mechanisms. The transfer of production facilities to safer regions or countries allows enterprises to preserve production capacity, avoid asset losses, and continue fulfilling international contracts. This strategy has become particularly relevant for Ukrainian companies since the outbreak of the full-scale war, when many enterprises were forced to relocate their operations from frontline territories to safer regions of Ukraine or abroad.

Special attention should be paid to risk management systems. Under conditions of high uncertainty, effective risk forecasting and assessment enable enterprises to respond promptly to changes in the external environment. Modern international companies actively implement risk-monitoring systems, scenario planning tools, and crisis-management mechanisms, which help reduce financial losses and strengthen organizational resilience.

The development of remote work has also had a substantial impact on business adaptation. The use of digital communication tools, collaborative platforms, and remote workforce management systems allows companies to preserve human capital despite employee displacement, migration, or security-related restrictions. Remote employment not only ensures operational continuity but also expands opportunities for attracting highly qualified professionals regardless of their geographic location.

In contemporary conditions, strengthening cybersecurity has become particularly important. Military conflicts are often accompanied by a significant increase in cyberattacks targeting corporate networks, financial systems, and databases. Therefore, companies are compelled to invest considerable resources in improving information security systems, implementing multi-layered protection mechanisms, and training employees to respond effectively to cyber threats.

Market diversification is another important instrument for enhancing the resilience of international business. Expanding into new international markets enables companies to reduce dependence on individual regions, compensate for losses caused by declining demand in traditional markets, and create additional growth opportunities. This approach is especially valuable in an environment of geopolitical instability, where economic conditions in individual countries can change rapidly and unpredictably.

At the same time, the creation of financial and material reserves is a necessary prerequisite for ensuring the long-term stability of enterprises. The availability of reserve funds, inventories of raw materials, and alternative resources allows companies to maintain operations during crises, respond quickly to unforeseen circumstances, and minimize the negative consequences of external shocks.

Thus, the results of the analysis indicate that the effective adaptation of international business to wartime challenges is possible only through the integrated application of multiple strategies. The most successful companies are those that combine supplier and market diversification, business process digitalization, effective risk management, remote work development, and reserve creation. In the contemporary global environment, flexibility, innovation, and the ability to respond rapidly to change

have become the key determinants of competitiveness and the sustainable long-term development of international business.

The conducted study made it possible to substantiate that military conflicts in contemporary conditions represent not only a source of individual risks for international business but also a factor of systemic transformation of the global economic environment. It has been established that wartime challenges lead to the revision of traditional approaches to the organization of international business activities, supply chain management, market selection, and the implementation of investment strategies. The research demonstrates that under conditions of prolonged geopolitical instability, the competitiveness of international companies increasingly depends not on their ability to minimize costs, but on their capacity to withstand external shocks. In this regard, priority is given to supplier diversification, digital transformation of business processes, the development of risk-management systems, and the creation of backup production and logistics capacities. It has been determined that the continuation of military conflicts is likely to contribute to the further regionalization of international business, reducing excessive dependence on individual markets and fostering the development of more flexible models of international economic cooperation. Additional trends are expected to include the relocation of production facilities, the diversification of global supply chains, and increased investment in digital technologies, cybersecurity, and business-process automation. The study substantiates that one of the key directions for the future development of international business is the implementation of the concept of business resilience, which combines strategic flexibility, adaptability, and the ability to recover rapidly from crisis events. Such approaches enable enterprises not only to mitigate the negative effects of wartime risks but also to capitalize on new development opportunities in an unstable environment. For Ukrainian enterprises, particular importance is attached to integration into new international production and logistics networks, the expansion of cooperation with foreign partners, and the active implementation of innovative managerial solutions. These factors create favorable conditions for strengthening the position of Ukrainian businesses in international markets even under the prolonged persistence of wartime threats.

Future research should focus on assessing the long-term impact of military conflicts on the transformation of global value chains, evaluating the effectiveness of business resilience models, and examining the role of digital technologies and artificial intelligence in wartime risk management. Particular scientific interest lies in the development of comprehensive mechanisms for adapting international companies to prolonged geopolitical instability, as well as in assessing the prospects for post-war recovery and the integration of Ukrainian businesses into the global economy.

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## **МІЖНАРОДНИЙ ДОСВІД ДЕРЖАВНОГО СТРАХУВАННЯ ІНВЕСТИЦІЙНИХ РИЗИКІВ У ПРОМИСЛОВОМУ СЕКТОРІ**

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аспірант

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Залучення інвестицій у промисловий сектор є однією з ключових передумов забезпечення економічного зростання, модернізації виробництва та підвищення конкурентоспроможності національної економіки. Водночас інвестиційна діяльність завжди супроводжується певним рівнем ризику, який суттєво впливає на рішення інвесторів щодо розміщення капіталу. Особливо гостро ця проблема