



UDC 338.1:005.336.4:383.2

## Trends in the development of Ukrainian agribusiness in the conditions of martial law

**Yuliia Biliavska\***

PhD in Economics, Associate Professor  
State University of Trade and Economics  
02156, 19 Kyoto Str., Kyiv, Ukraine  
<https://orcid.org/0000-0002-8183-4036>

**Yurii Umantsiv**

Doctor of Economics, Professor  
State University of Trade and Economics  
02156, 19 Kyoto Str., Kyiv, Ukraine  
<https://orcid.org/0000-0003-0788-7110>

**Valerii Osetsyki**

Doctor of Economics, Professor  
Taras Shevchenko National University of Kyiv  
03022, 90-a Vasylykivska Str., Kyiv, Ukraine  
<https://orcid.org/0000-0001-5104-1070>

**Volodymyr Mamchur**

Doctor of Economics, Senior Researcher  
National Scientific Centre "Institute of Agrarian Economy"  
03127, 10 Heroiv Oborony Str., Kyiv, Ukraine  
<https://orcid.org/0000-0003-1300-3633>

► **Abstract.** This study presented a comprehensive bibliometric analysis of the impact of the Russian-Ukrainian war on agribusiness management. Drawing on a dataset of 742 academic publications from the Scopus database (2014-2024), the study tracked how business-related themes have evolved during the war, shedding light on the broader socio-economic context in which these themes are embedded. The analysis highlighted the interconnected nature of research across disciplines, illustrating how broader studies on geopolitical conflict, trade disruptions, and humanitarian issues serve as a backdrop for more focused inquiries into agribusiness management. This layered approach allowed for a clearer understanding of the war's influence on firms' operational environments, the challenges posed to continuity, and the adaptive responses undertaken by companies within and beyond the conflict zone. The results of the study identified seven key areas of agribusiness management affected by the war: retention of personnel and workforce safety, market diversification, business relocation, the launch of new business lines, ensuring functionality under force majeure conditions, maintaining and protecting sales markets, and strengthening information protection and cybersecurity. By synthesising prior inquiries, this analysis underscored common themes, highlighted key research gaps, and suggested future directions for research and practice. A paradigm for the formation of an agri-startup that will contribute to increasing economic stability and the development of agribusiness has been proposed

► **Keywords:** war; startup; management; economics; personnel

### ► Introduction

Ukraine's agricultural sector is not merely a business enterprise but a pivotal factor in the country's economic

stability. Despite the ongoing war, blockades and global crises, agribusiness continues to supply food to the world

► **Suggested Citation:** Biliavska, Yu., Umantsiv, Yu., Osetsyki, V., & Mamchur, V. (2025). Trends in the development of Ukrainian agribusiness in the conditions of martial law. *Ekonomika APK*, 32(5), 48-62. doi: 10.32317/ekon.apk/5.2025.48.

\*Corresponding author



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

whilst supporting the national economy. The study of wars and conflicts represents a timeless topic of academic enquiry, and it is therefore unsurprising that numerous contemporary scientific investigations are devoted to brutal military conflicts occurring worldwide. These include the war in Yemen, as examined by A. Mukashov *et al.* (2022), clashes between Hamas and Israel, as examined by H. Mahmoud & S. Abuzerr (2023), and mass protests against governments in Haiti, Georgia and Kyrgyzstan, analysed by E.G. Rød (2019). Further scholarly attention has been directed towards the civil war in Ethiopia by B.A. Nigatu (2023), as well as protests against the regime in Iran (Amini *et al.*, 2024). A distinctive feature of present-day wars is that they encompass not only armed conflicts but also information wars, trade wars, and confrontations with bacteriological threats (Chen *et al.*, 2023; Ju *et al.*, 2024). In such situations, meaningful conclusions from scientific enquiries tend to be derived from investigating the peculiarities of people's daily lives, shedding light on which aspects of socio-economic structures have changed, where deterioration trends are occurring, and at what stage the country's life cycle stands. After all, all wars end sooner or later, and socio-economic structures will need to be revived and renewed. These socio-economic processes are closely interconnected with business activity, shaping the micro- and macroeconomic indicators of organisational environments. The key challenges faced by agribusinesses in the war context are related to ensuring uninterrupted operations, securing short-term profit and achieving long-term business longevity.

The focal war, lasting over a decade now and culminating in the massive Russian invasion in February 2022, brings to life major challenges for businesses in different industries and across different countries way beyond the East European region. This context provides a fertile ground for the growing stream of rigorous studies investigating, e.g., the impact of war on business and society, the global impact of sanctions imposed on the aggressor, the disruptive global impact of war on global supply chains, and the market impact of the war on European listed banks (Klose, 2024; Tsang *et al.*, 2024). Yet, of course, the primary focus of the emerging management literature on the Ukrainian-Russian war is on Ukrainian business management itself, which has faced many challenges during the study period. The coronavirus pandemic has led to a large-scale reduction in production and operations redesign, and companies have suffered significant material losses. The full-scale Russian invasion of 2022 has harmed business for years to come due to the destruction of critical industrial infrastructure, economic collapse, and labour shortages. An exemplary investigation of this issue was presented by K. Obłój & R. Voronovska (2024), who demonstrated how large Ukrainian companies respond to the war-induced crisis through the mechanisms of threat-rigidity and contingency perspectives (in the initial and later stages, respectively).

Importantly, in the face of negative trends, the socio-economic structures underpinning the key challenges faced by agribusinesses enterprises in Ukraine might undergo both negative and positive changes, and transformation processes might lead to the construction of new innovative structures. Tracking these changes was

the primary motivation for the current study. Concentrating on the most vivid ongoing military conflict in Europe, the Ukrainian-Russian war, the present study aimed to analyse the trends in the key challenges faced by agribusinesses management in times of war through bibliometric analysis of academic publications from 2014 to 2024. Based on this purpose, the study solved the following tasks: conducting a bibliometric review of literary sources to identify key clusters and scientific directions regarding the negative impact of war on agribusiness; analysing the impact of war on key areas of agribusiness; justify the paradigm of agribusiness development through the implementation of a startup.

### ► Literature review

The importance of studying the war context is underscored in the case study by W.M. Lim *et al.* (2022), who evaluated the impacts of the Ukraine-Russia war on business and society. Their analysis highlighted the multi-dimensional effects of war, which include societal disruptions both within and outside the conflict zone, such as limited access to necessities, increased unemployment changes in the labour market, and inflation. For businesses, the war poses threats such as cyberattacks, disruptions to digital and sustainable growth, and challenges to business ethics and brand management. These insights emphasise the need for a more comprehensive approach to understanding the impacts of the war, which is precisely the aim of the current bibliometric analysis.

In addition to the described above case-based exploration of the implications of the Ukraine-Russia war on business and society, a set of recent empirical papers highlight the global importance of this context from the perspective of different management disciplines. For example, in finance, A. Soliman & E. Le Saout (2024) revealed the impact of the war on idiosyncratic risk, market portfolio volatility, and the relationship between them within the European economies. The results of the study showed that there was an increase in market portfolio volatility and idiosyncratic risk on the whole continent after the military outbreak. Similarly, E. Keleş (2023) demonstrated the heterogeneity of the adverse reaction of stock markets to the war. In terms of global finance, the war may have created an unexpected ripple effect on blockchain and FinTech stocks (Abakah *et al.*, 2023). The impact of war-caused geopolitical risks on foreign exchange markets through fluctuations in foreign exchange rates was presented in A.T. Hosain *et al.* (2024). This adverse impact of geopolitical risks is more pronounced in countries with high dependence on Russian energy, countries with high levels of economic policy uncertainty, and countries with geographical proximity to Russia and Ukraine. Moreover, evidence from the war in Ukraine suggests that, for diversification purposes, gold and bitcoin are complements, not substitutes, in times of crisis. However, during wartime, the gold/bitcoin ratio tends to decline (Oosterlinck *et al.*, 2023). Similarly, the war has had a significant impact on international business: export and import operations, global food supply, and green innovations (Ahn *et al.*, 2023; Rose *et al.*, 2023; Zhu *et al.*, 2024). As such, there is a vibrant and growing body of conceptual and empirical literature that explores different aspects and impacts of the Russian-Ukrainian

war on business management, underscoring its global economic fallout that extends well beyond the immediate regions involved (Russia, Ukraine and Eastern Europe).

To systematically capture and synthesise the existing body of knowledge, a bibliometric analysis emerges as a particularly suitable methodology. N. Donthu *et al.* (2021) argued that bibliometric analysis allows for identification of key themes, trends, and research gaps across large bodies of literature. In this context, bibliometric analysis offers unique insights into how business management scholarship has engaged with the war, revealing patterns of inquiry, emerging areas of interest, and interdisciplinary linkages. By generalising and expanding upon prior inquiries, this approach highlights shared themes and recurring issues, thereby creating a more holistic understanding of how the war has influenced business management. While there have been informative bibliometric reviews of the broader societal impacts of the Russian-Ukrainian war, a noticeable research gap exists regarding business management specifically. Previous bibliometric studies have examined the war's effects on global food systems, as demonstrated by T. Ben Hassen & H. El Bilali (2022), H. Gheibdoust *et al.* (2023), and P.R. Chowdhury *et al.* (2023). Further scholarly attention has been directed towards humanitarian law by E. Orzhynska *et al.* (2024), public health by A.A. Sokan-Adeaga *et al.* (2023), and international trade (Paryan & Al Hashfi, 2023). However, bibliometric studies focused on the specific topic of business management remain notably absent from the existing literature. An exploration of the available bibliometric reviews related to the Russian-Ukrainian war reveals that, to date, there is absence of works that explicitly analyse the business management domain. The current study addressed this gap by focusing specifically on the role of the war in shaping business management discourse, offering an original contribution to the field. In the sections that follow, a systematic bibliometric analysis was presented to summarise the body of distinct literature on business management, focusing on the Russian-Ukrainian war. This analysis builds on prior bibliometric methodologies, as suggested by O. Ellegaard & J.A. Wallin (2015), M. Aria & S. Cuccurullo (2017), to identify emerging common themes, highlight research gaps, and suggest future research directions. The approach allows for tracing of interdisciplinary links between various scientific research fields, further advancing the understanding of how the war has shaped business management thought and practice.

### ► Materials and methods

The methodological basis of the study was represented by general and special scientific approaches and methods. The dialectical approach allowed to formulate the philosophical aspects, factors and conditions of business management in wartime. Based on the critical (evaluative) approach, contradictions, critical aspects and paradoxes during the war were identified that affect not only the economy of a particular country but also the world. The general scientific approach was the basis for the formation of prerequisites, trends, patterns and trends in the sustainable development of enterprises during and after war. The application of systemic and synergistic approaches allowed for forming a holistic view of

entrepreneurship in war and international activities, as well as to form a mechanism of development based on self-organisation and emergent behaviour.

This study's methodology was based on a comprehensive bibliometric analysis of academic publications spanning from 2014 to 2024, which are related to the impact of the Russian-Ukrainian war on socio-economic and business management systems' dynamics. This period captures the war from its beginning to the phase of a full-scale invasion in 2022 and up to this date. The decision to utilise bibliometric analysis as the core methodological approach was underpinned by several key considerations and strengths inherent to bibliometric methodologies. Similarly to systematic literature review, like the one by M. Orra (2021), as a methodological framework, bibliometric analysis offers an objective and systematic means of reviewing and analysing scholarly publications. This approach is particularly advantageous for mapping out the evolution of research across different scientific fields and identifying the most influential works and authors (Broadus, 1987). In the context of this study, such an analysis allowed for a detailed examination of the breadth and depth of research concerning the socio-economic impacts of the Russian-Ukrainian war, highlighting how these impacts are perceived and addressed across various disciplines. Another crucial strength of bibliometric analysis lies in its ability to provide a comprehensive overview of the research landscape. This is achieved through the evaluation of publication patterns, citation networks, and keyword frequencies, which together offer insights into prevailing research trends, emerging themes, and potential gaps in the literature (Ellegaard & Wallin, 2015). For a topic as multifaceted and dynamically evolving as the Russian-Ukrainian war, such a holistic view is invaluable for capturing the complex interplay between socio-economic factors and business management challenges. Furthermore, bibliometric analysis facilitates the identification of interdisciplinary research insights. Given the diverse implications of the war on society, economy, and the environment, understanding these impacts requires a cross-disciplinary perspective. By analysing citation networks and co-authorship patterns, this methodology uncovers the collaborative nature of research efforts and the integration of diverse scientific domains, underscoring the imperative for interdisciplinary approaches in addressing the war's consequences (Waltman, 2016).

The methodology's emphasis on quantitative evidence of research impact and collaboration adds another layer of depth to the analysis. Through the use of advanced bibliometric tools and software, such as Scopus for data retrieval and VOSviewer for data visualisation, the study not only identified the most influential publications and authors but also mapped out the geographical and institutional distribution of research activities. This quantitative dimension supports the identification of key research clusters and networks, offering insights into the global response to the socio-economic challenges posed by the war. In executing this bibliometric analysis, the authors relied on the Scopus publications and citations database to curate a dataset of academic studies in the focal area. The following sections provide the findings from this analysis, starting with the bibliometric

data on the Russian-Ukrainian war for all scientific fields and then delving into the focal area of business management in wartime.

### ► Results and Discussion

Ukraine is a developed industrial and agricultural country with a diversified agricultural sector. However, the full-scale invasion by the Russian Federation on 24 February 2022 had a profound impact on farmers. Accordingly, it also affected export potential and all established logistics routes for shipping and selling products. The full-scale

war has been a real test for Ukrainian farmers, as the invasion has destroyed processes and logistics chains that had been established over many years. A significant part of the cultivated land has been mined, and some of it is inaccessible, while equipment and production warehouses have been destroyed. Since the beginning of Russia's full-scale invasion of Ukraine, agri-food products have become a key export item and source of foreign exchange earnings for Ukraine, significantly surpassing the mining and metallurgical complex, which has traditionally been one of the largest sources of export revenues (Table 1).

**Table 1.** Structure of foreign exchange earnings by export group in Ukraine in 2021-2024, million USD

Names of groups of goods	2019	2020	2021	2022	2023	2024
Food products and raw materials for their production	22,123	22,161	27,687	23,380	22,001	24,665
Mineral products	4,405	4,963	7,874	4,109	2,262	3,137
Products of the chemical and related industries	2,171	2,308	3,173	1,668	1,329	1,508
Wood and wood products	1,780	1,758	2,491	2,118	1,719	1,660
Industrial products	697	722	946	569	557	577
Ferrous and non-ferrous metals and products made from them	9,994	8,782	15,719	5,881	3,888	4,420
Machinery, equipment, vehicles and appliances	3,426	3,390	3,819	2,281	2,150	2,012
Other	1,495	1,059	1,404	893	772	900

**Source:** compiled by the authors based on National Bank of Ukraine (n.d.)

Thus, at the end of 2021, the share of the agricultural sector in the structure of foreign exchange earnings was almost 44%, and in 2022 it grew to 57% and continues to grow, while the total volume of exports has decreased. The increase in agricultural exports was partly due to the sale of previously accumulated grain stocks. The increase in the share of the agricultural sector in total exports means that the economy is becoming more dependent on its condition and, therefore, on the risks that affect the stability of agricultural production and exports. Among the key threats, experts and market participants cited mined territories, complicated logistics, price volatility, and trade restrictions, which farmers have been facing for several years.

Most of Ukraine's territory is occupied by agricultural land at the beginning of 2020, it accounted for 68.5% of the country's total area. In addition to direct occupation (more than 18% of Ukraine's territory according to DeepState (n.d.) as of mid-March 2025), due to military actions, a significant part of Ukraine's territory up to 30%, especially in the south and east of Ukraine is mined, which is a significant challenge for agricultural production and logistics. The mined territory is not only an internal problem for Ukraine. It leads to increased risks for global food security. Before the full-scale invasion, Ukraine produced enough agri-food products to feed 400 million people worldwide per year. Prices for Ukrainian agricultural products, both on the domestic market and for export, depend on many factors, including the situation on global markets (supply and demand), harvest forecasts, weather conditions, military actions, currency fluctuations and the geopolitical situation, so they fluctuate quite significantly. Russia's attack on Ukraine in 2022 was a shocking event that drove up prices for agricultural products on the global market, although the situation on the markets eventually stabilised. For example, global prices for sunflower oil (Ukraine is the world leader in exports of this product)

rose in 2024 amid limited supply, while wheat prices fell to a four-year low as a result of increased global production.

The war is putting extra pressure on Ukrainian businesses, which is affecting profitability – from direct shelling of farmland, businesses, and grain elevators to shortages of resources and human capital and higher logistics costs. Thus, in 2022, the production of major types of grain and oilseeds became unprofitable, but during 2023, the situation improved thanks to the resumption of exports from Ukrainian seaports, which reduced logistics costs and contributed to an increase in purchase prices on the domestic market. January 2025 began with rising prices for major types of grain crops both in Ukraine and abroad. On the one hand, Ukrainian suppliers shipped goods gradually, trying to sell their products on the most favourable terms. On the other hand, on 1 December 2024, the Cabinet of Ministers of Ukraine obliged the Ministry of Agrarian Policy to set minimum export prices for a specific list of agricultural products. In this way, the government plans to combat shadow exports and influence prices on the domestic market. Experts note that winter is traditionally a "high" season when prices for grain, for example, reach their highest levels. In its October report, the World Bank forecasts a 4% decline in global agricultural prices this year due to improved growing conditions and increased production in key regions. According to forecasts by the Institute of Agricultural Economics of Ukraine, the volume of agri-food production in Ukraine will grow in 2025, mainly due to grain and leguminous crops.

At the beginning of the full-scale invasion, Russia blocked the operation of Ukrainian ports, which led to a halt in exports through traditional channels. Restricted access to Black Sea ports forced producers to find alternative routes and pay extra for military risks. In particular, Ukrainian companies redirected exports through European ports, to which grain was delivered by rail or road. Ukraine is actively working to expand its export



**Table 2.** Formation of scientific clusters on the negative impact of war on agribusiness

Clusters	Keywords of the cluster	Cluster name
Cluster 1 (184 keywords)	resilience, sustainable development, analysis, bibliometric analysis, crisis, economic crisis, economic development, financial stability, financial market, import, export, development, optimisation, blockchain, crisis management, European integration	Resilience
Cluster 2 (131 keywords)	world war, army, civil war, collaboration, constitution, history, Cossacks, great patriotic war, autocephaly, historical memory	World war
Cluster 3 (99 keywords)	Ukraine, war, refugees, terrorism, mental health, child health, psychology, public health, risk factors	War in Ukraine
Cluster 4 (92 keywords)	Russia-Ukraine war, Covid-19, energy, bitcoin, oil and gas, energy security, TVP-VAR, SARS-CoV-2	Force majeure circumstances
Cluster 5 (79 keywords)	Russia, strategic autonomy, realism, Crimea, Black Sea, civilisation, strategic culture	Russian politics
Cluster 6 (72 keywords)	case study, cyber security, cyberspace, e-commerce, Facebook, Telegram, Twitter, information, mass media, news, Russia-Ukraine conflict, journalism	Cybersecurity and media
Cluster 7 (61 keywords)	NATO, China, Iran, Israel, Kyiv, Kharkiv, Japan, Eurasia, Egypt, Canada, Afghanistan	Geography
Cluster 8 (36 keywords)	EU law, global financial crisis, military equipment, drones, de-globalisation, crises, national security, theory, education system	Globalisation processes

Source: compiled by the authors

area. The Red Cluster 1 in Figure 1 and Table 2 indicates a cluster that contains 184 words, and the research area is related to development, commerce, and other management aspects. The illustrative works are A. Wylegała (2023) on international assistance to Ukrainians to resist the war, A. Pawłowska *et al.* (2023) on the protection and preservation of cultural heritage, A. Popova *et al.* (2023) on the development of technological knowledge during the war in Ukraine. An example of crisis management in a Ukrainian university is considered in I. Bohdanov *et al.* (2023). The Green Cluster 2 has 131 words and is related to geopolitical turmoil. The authors pay special attention to the description of the loss of resources and damage suffered by Ukraine during the war (Kussul *et al.*, 2023; Pawłowska *et al.*, 2023). The Blue Cluster 3, which has 99 words, can be clearly identified by the keyword “Ukraine”. It demonstrates the direction that combines political, economic and social issues of Ukraine as a country. T. Kuzio (2023) examines the historical aspects of the Russian invasion of Ukraine. Conservation policies and management in the Ukrainian Emerald Network have maintained reforestation rate despite the war are described in L. Shumilo *et al.* (2023). The impact of airborne anxiety on mental health, somatic symptoms, and well-being is described in S. Stieger *et al.* (2023). A number of papers present the

peculiarities of the treatment of opioid use disorders during Russia’s invasion of Ukraine (Bromberg *et al.*, 2023; Ivasiy *et al.*, 2023). V. Seleznova *et al.* (2023) draw attention to the mental health crisis and the economic aspects of mental health services. The Yellow Cluster 4 (92 words) draws attention to the description of the impact of force majeure during the war, namely changes in the oil market and the economy. The Purple Cluster 5 (79 words) combines research papers describing the peculiarities of Russia’s policy during the war, and the papers in the Orange Cluster 7 (61 words) are related to the geographical features and impact of the war on different countries and cities. The Lilac Cluster 8 (36 words) contains the keywords “child”, “pandemic”, “medical”. N. Tsybuliak *et al.* (2023) draw attention to the issues of education in Ukraine and professional burnout among Ukrainian teachers during the war, V. Pavlenko *et al.* (2023) discuss the impact of war on Ukrainian female students.

The publications from the bibliometric analysis related to the field of “Business, Management and Accounting” were selected for further review (n = 742). The authors’ team reviewed the titles, keywords and abstracts of each publication in this group in a search of common patterns. The results of this inductive analysis reveal seven broad groups, or business areas affected by the war (Table 3).

**Table 3.** Research on the impact of war on key areas of agribusiness

Study areas: Agribusiness aspects during the war	Trends within areas: Agribusiness during wartime	Interconnected fields	Sample/notable studies
Retention of personnel and ensuring the safety of personnel in war conditions	Protection of personnel at the workplace during air raids and shelling. Relocation of jobs and processes to safe regions of the country or abroad. Finding ways to minimise costs and payroll opportunities. Replacing the absence of personnel due to service in the Armed Forces or territorial defence. Trauma and psychological distress.	Arts and humanities, social sciences, psychology	V. Halushka <i>et al.</i> (2022) V. Pavlenko <i>et al.</i> (2023) V. Seleznova <i>et al.</i> (2023)
Search for new markets/ customers	Repurposing activities and flexibility to produce goods and services that are relevant in a time of war. Participation in volunteering and assistance to the army. Cooperation with international organisations.	Social sciences, economics and finance	M. Pellicelli (2023) J.N. Sheth & C. Usley (2023)

Table 3, Continued

Study areas: Agribusiness aspects during the war	Trends within areas: Agribusiness during wartime	Interconnected fields	Sample/notable studies
Relocation of agribusiness to another region of Ukraine or abroad	Selection of a location for the company's facilities. Transportation of equipment and setting up operations in the new region. Search for employees and adaptation of relocated employees. Establishing logistics processes, providing raw materials and finding a market. Reengineering of business processes.	Social sciences, economics and finance	C. Balbontin & D.A. Hensher (2019) V. Lazarenko (2020) R. Wehrle <i>et al.</i> (2023) V. Lavreniuk <i>et al.</i> (2023)
Opening new business lines	Reorientation of business to goods in times of war. Development of startups focused on small businesses. Formation of ecosystems in industry and trade.	Economics and finance	S. Steinbach (2023) K. Obłój & R. Voronovska (2024) Y. Biliavska <i>et al.</i> (2025)
Ensuring the functioning of the business in force majeure circumstances	Setting up operations taking into account air raids, power outages, and total resource savings.	Economics and finance	G. Liobikienė <i>et al.</i> (2023) M. Izzeldin <i>et al.</i> (2023)
Maintaining/protecting current sales markets	Maximum fulfilment of the terms of the concluded agreements. Cooperation with international organisations that can protect business in times of war. Search for investments and investors. Developing effective work plans and short-term strategies.	Economics and finance	I. Aviv & U. Ferri (2023) S. Devadoss & W. Ridley (2024) A. Kostruba (2025)
Information protection and cybersecurity	Compliance with fraud protection rules. Scan, classify, and organise monitoring of confidential information. Develop digital literacy skills. Monitor VPN and DNS connections and block malicious connections.	Social sciences, information technologies, cybersecurity	T. Serafin (2022) U. Song <i>et al.</i> (2024) Y. Biliavska <i>et al.</i> (2025)

Source: compiled by the authors

The presented areas and research papers identify the specifics of the war's impact on agribusiness and the changes that are taking place in it. These seven areas represent the key dimensions of agribusiness activity that have been reshaped by the war. Each area highlights the unique challenges posed by conflict and illustrates how agribusiness are responding to maintain operational continuity, adapt to new demands, and secure future growth opportunities.

**1. Retention of personnel and ensuring safety.** The war has posed significant challenges to the retention and safety of personnel, especially in the face of air raids, workplace shelling, and the mobilisation of workers into the Ukrainian Armed Forces. Companies have had to relocate jobs to safer regions and explore cost-minimising strategies, including payroll adjustments. Measures for personnel well-being and psychological support have also gained attention. Notable studies in this area include V. Halushka *et al.* (2022), which addresses training and rotation of military personnel, and V. Pavlenko *et al.* (2023) and V. Seleznova *et al.* (2023), which discuss the psychological distress and mortality risks faced by Ukrainian medical workers.

**2. Search for new markets and customers.** The disruption of traditional markets has driven companies to repurpose operations and engage in the production of wartime-relevant goods and services. Agribusinesses have also engaged in voluntary support for the armed forces and sought partnerships with international organisations. Flexibility and agility have become essential for survival. M. Pellicelli (2023) addresses the digital transformation of supply chains. J. Sheth & C. Uslay (2023) discuss the B2B market shifts driven by conflict; this study stresses the need important to find new markets and consumers.

Ukraine has an export-oriented orientation in foreign markets. This means that the country exports mainly clean raw materials, such as grain, metals, and minerals. Therefore, the development of value-added sectors of the economy is one of Ukraine's priorities in the coming years.

**3. Relocation of agribusiness operations.** With the destruction of critical infrastructure, many businesses have had to relocate to safer regions within Ukraine or move operations abroad. This involves transporting equipment, establishing new logistics systems, and reengineering business processes. C. Balbontin & A. Hensher (2019) analyse firm-specific and location-specific relocation drivers, while R. Wehrle *et al.* (2023) focus on infrastructure availability's influence on relocation decisions. V. Lavreniuk *et al.* (2023) highlight how host region support plays a crucial role in successful business relocation.

**4. Opening new business lines.** The war has prompted the launch of new businesses, often cantered around wartime needs, such as clothing for soldiers, essential medical supplies, and drone production. Startups have seen a surge, with military-related small businesses gaining prominence. Studies like S. Steinbach (2023) highlight the redistribution of world trade due to the conflict, while K. Obłój & R. Voronovska (2024) explore how Ukrainian companies have pivoted to seize new business opportunities during the crisis.

**5. Ensuring business functionality under force majeure conditions.** Operating during force majeure requires companies to develop systems that can withstand air raids, power outages, and resource scarcity. Agribusinesses have been forced to reconfigure operational plans to maintain continuity. Studies by G. Liobikienė *et al.* (2023)

and M. Izzeldin *et al.* (2023) discuss strategies for ensuring business continuity amid war-related disruptions.

#### **6. Maintaining and protecting current sales markets.**

Maintaining existing sales markets has become a key strategic goal for Ukrainian agribusiness. This involves honouring contract obligations, fostering cooperation with international organisations, and securing investments to sustain production. Researchers such as I. Aviv & U. Ferri (2023) and S. Devadoss & W. Ridley (2024) explore these strategies, T. Czapla *et al.* (2023) discuss measures that allow managing foreign business operations in Ukraine in times of war and cross-cultural and marketing management in international markets. A really important study in this area is arguably A. Kostruba (2025), which examines the challenges and opportunities for managing foreign agribusiness operations in Ukraine amid the ongoing war. Using a combination of legal analysis and case studies, the article highlights the significant disruptions caused by the conflict, such as infrastructure damage, supply chain interruptions, and heightened security risks. The author emphasises the role of government policy, focusing on the introduction of e-residency as a strategic tool to attract foreign entrepreneurs. The e-residency program allows foreigners to establish and manage agribusiness in Ukraine remotely, thus mitigating the physical risks of operating in a conflict zone. The study further explores the legal frameworks governing foreign agribusiness operations, such as the establishment of limited liability companies (LLCs) and the regulation of foreign employment in Ukraine. A. Kostruba (2025) argues that while the war presents severe challenges, it also opens up possibilities for innovation and investment, particularly in areas like IT, energy, and construction, which are vital to Ukraine's post-war recovery. By outlining the regulatory environment, the study provides actionable insights for foreign investors and policymakers aiming to support Ukraine's economic stability and growth during the conflict.

**7. Information protection and cybersecurity.** The digital environment has become a battleground in itself, necessitating robust measures to protect information and cybersecurity infrastructure. Companies are compelled to secure digital assets, monitor VPN and DNS connections, and counter disinformation. Y. Biliavska *et al.* (2025) emphasise the importance of digital literacy in mitigating cybersecurity risks, while U. Song *et al.* (2024) explore how cyber resilience strategies are being developed. T. Serafin (2022) highlights the role of Ukraine's state-level initiatives to protect social media and counter disinformation in the early days of the war.

Generalising the results of the findings from Table 3, it can be concluded that agribusiness community in Ukraine have to overcome a number of difficulties and take certain measures, such as: (a) relocation – a significant number of small and medium-sized enterprises were moved to the central and western regions due to military operations; (b) adaptation of products and services to modern needs – companies have retrained for goods and services that are in great demand right now, for example, the production of long-term storage products, sewing clothes for soldiers, and the production of UAV (drones). The war that is taking place in Ukraine due to Russia's full-scale invasion has dealt a devastating blow to Ukrainian business;

thus, in this study, the authors focus on the impact of the war across industries and business functions. According to the study of the Kyiv School of Economics (2023), as of December 2022 (8 months of full-scale invasion), the total damage to Ukraine's economy was USD 138 billion, including USD 13 billion of direct losses to public and private enterprises. Of these, the share of losses incurred by large and medium-sized enterprises is USD 9 billion. At the same time, the total indirect losses amounted to USD 33.1 billion, while the amount needed to restore these damaged enterprises is USD 24.9 billion.

The IT sector is the best performer in wartime. None of the Ukrainian projects were closed, and hundreds of them received additional investments and were in great demand in the Ukrainian and international markets. These include Skyworker, Trinetix, and RevMyWork. During the war, there is a rapid development of startups and the translation of innovations into real life projects to support the country's economy (Fybish, 2024). The rapid development of veterans businesses has played a significant role in improving the country's economic condition. Veterans and their family members are starting many small and medium-sized enterprises of various profiles: agricultural, catering and coffee shops, small manufacturing companies producing various products. Analysts predict that veteran businesses will be the driving force behind the full recovery of Ukrainian business. According to a survey of the American Chamber of Commerce in Ukraine (2023), the main problems of doing and developing business in Ukraine are: missile attacks on business assets and critical infrastructure; health and mental state of employees; decline in economic and consumer activity; access to electricity, water and heat supply, mobile communications; attracting and retaining top talent; problems with transportation and logistics. Amidst this context, the findings of the current study have broad implications for understanding business management in the context of war. First, they highlight the necessity for businesses to develop contingency plans that account for geopolitical risks and the potential for sudden market and supply chain disruptions. The resilience shown by the Ukrainian IT sector, for example, underscores the importance of flexibility and the ability to pivot business models rapidly in response to external shocks. Furthermore, the research emphasises the interconnectedness of global markets, showing that conflicts in one region can have ripple effects across the globe, affecting economies and businesses far removed from the conflict zone. This global interconnectedness necessitates a more collaborative and coordinated international response to support affected businesses and economies. As such, the current study complement and expand the prior investigations of the business aspects of the war in Ukraine, like those by W.M. Lim *et al.* (2022), A. Kostruba (2025), providing a broader set of implications based on the summary of a major body of scientific literature.

Paradigms for the development of agribusiness in wartime involve searching for alternative solutions that will help overcome the problems identified in the bibliometric review. One such solution is the introduction of startups. Agriculture has been transformed into a new industry called agribusiness. Agribusiness encompasses not only individuals who cultivate the land, but also people



during the war. Future research should explore the development of new human resource strategies aimed at mitigating risks related to worker displacement, psychological distress, and workforce mobilisation into the armed forces. Longitudinal studies on workforce adaptation could provide insights into how agribusinesses sustain employee morale and productivity under prolonged crisis conditions. Investigating how agribusinesses support employee mental health and well-being, especially in industries where trauma exposure is high, could offer valuable lessons for global crisis management frameworks.

**2. Exploring agribusiness relocation and supply chain adaptation.** Relocation of agribusiness operations, particularly for companies situated in conflict zones, is a multifaceted process that warrants further investigation. Future research could examine the decision-making criteria for site selection, the logistics of relocating equipment and personnel, and the role of host region support in facilitating smooth transitions. Comparative studies across industries could reveal sector-specific challenges and strategies for effective relocation. Additionally, the broader implications of supply chain reengineering during wartime – such as shifts in sourcing, supplier diversification, and nearshoring – merit further exploration, especially given the increasing complexity of global supply chains.

**3. Emerging opportunities for agribusiness diversification and new ventures.** The opening of new agribusiness lines in response to the war, such as the production of military-related equipment or consumer goods for displaced populations, represents a fertile ground for future research. Studies could investigate the drivers and barriers to innovation under crisis conditions, particularly the role of digital transformation and startup ecosystems. Further research could explore how war-affected agribusinesses leverage entrepreneurial opportunities, tap into emerging consumer needs, and engage with international development organisations to drive growth. Empirical studies of Ukrainian startups could reveal pathways for fostering entrepreneurial ecosystems in other conflict-affected regions.

**4. Digitalisation and cybersecurity resilience in wartime agribusiness management.** The digitalisation of agribusiness operations and the heightened need for cybersecurity during the war have brought new challenges and opportunities to the forefront. Future research could focus on how agribusinesses develop cybersecurity strategies to counter disinformation campaigns, manage VPN/DNS monitoring, and prevent data breaches. Studies on the role of government-led digitalisation initiatives, such as Ukraine's e-residency program, could offer important insights into how digital infrastructure supports business resilience. Comparative research on digital preparedness and cybersecurity measures in other crisis-affected countries could identify best practices for future application in volatile environments.

**5. Policy implications and governmental support for war-affected agribusinesses.** The role of public policy in supporting agribusiness continuity and growth during armed conflict is a vital area for future inquiry. Research could explore the effectiveness of policies such as financial subsidies, grants, and legal frameworks that facilitate the relocation of agribusinesses and protect foreign investments. Case studies on how different governments

have responded to agribusiness needs during crises could offer valuable policy insights. In particular, the impact of Ukraine's e-residency program on attracting foreign investment and supporting new ventures could serve as a case study for policy diffusion in other war-affected economies.

By addressing these key areas, future research can provide a more nuanced understanding of agribusiness management in war contexts. These efforts will contribute to the development of practical strategies that businesses, policymakers, and humanitarian organisations can adopt to ensure business continuity, resilience, and long-term recovery in conflict zones. Despite the comprehensive scope of this bibliometric analysis, there are several limitations that should be acknowledged. These limitations pertain to data coverage, methodological constraints, and generalisability of the findings. Addressing these limitations in future research can enhance the robustness and applicability of similar studies.

**Data source limitation.** The primary limitation of this study is its reliance on the Scopus database as the sole source for bibliometric data collection. While Scopus is a well-established and comprehensive database, it does not encompass all relevant academic publications. Articles from other influential databases, such as Web of Science, PubMed, OpenAlex, and Crossref, were not included. Consequently, the exclusion of these sources may have led to a partial representation of the literature on the impact of the Russian-Ukrainian war on agribusiness management. Incorporating additional databases in future analyses could improve the accuracy of research trend mapping and facilitate the identification of broader scientific clusters.

**Timeframe of data collection.** The study focused on bibliometric data from 2014 to 2024, capturing publications from the onset of Russian interference in Ukraine to the full-scale invasion and its aftermath. While this timeframe allows for a thorough examination of the war's business-related impact, it may not fully capture the rapidly evolving scholarly discourse on this topic. Given the ongoing nature of the conflict and the continuous emergence of new studies, the inclusion of more recent data in future bibliometric reviews will be essential for capturing dynamic changes and ensuring the study remains current.

**Language and regional bias.** The analysis included academic publications in various languages but may be subject to language and regional bias. Research articles written in less commonly used languages may be underrepresented, which could limit the study's capacity to identify insights from non-English-speaking academic communities. Additionally, a substantial portion of the literature in the Scopus database comes from Western, Ukrainian, and European research institutions, which could skew the thematic focus and perspectives represented in the analysis. Incorporating publications from additional linguistic and regional sources would provide a more diverse and global perspective on the impact of war on agribusiness management.

**Methodological constraints.** The methodological approach relies on the co-occurrence of keywords, citations, and the use of network analysis tools like VOSviewer. While these methods are standard in bibliometric research, they have limitations in terms of precision and depth. For instance, co-occurrence analysis is limited by the quality and

consistency of keywords assigned by authors and indexers, which may lead to inaccuracies in identifying key themes. Additionally, the use of automated clustering techniques to group articles into thematic areas may miss nuanced distinctions between related concepts. Future studies could employ a combination of manual qualitative coding and automated bibliometric techniques to achieve a more refined understanding of thematic interconnections.

By acknowledging these limitations, the authors of this study provide a transparent account of the study's boundaries and offer directions for future research. Addressing these challenges will strengthen the comprehensiveness, validity, and generalisability of future bibliometric reviews on agribusiness management amidst conflict and crisis scenarios.

### ► Conclusions

This study provided a comprehensive bibliometric analysis of the impact of the Russian-Ukrainian war on agribusiness management, offering valuable insights into how the conflict has reshaped management practices, organisational strategies, and operational resilience. By examining 742 publications from the Scopus database, the study identified key trends and thematic areas, including personnel retention and safety, agribusiness relocation, market diversification, digital transformation, and the protection of information assets. The seven identified agribusiness areas underscore the wide-ranging and profound effects of the war on agribusiness operations, from ensuring workforce stability to the development of cybersecurity frameworks. This analysis highlighted the dynamic responses of agribusinesses and contributes to a growing body of knowledge on strategic management in times of geopolitical crisis.

One of the most significant contributions of this study is its identification of the unique role played by Ukrainian firms in navigating extreme challenges posed by the war. Unlike typical crisis management scenarios,

agribusinesses in Ukraine face continuous disruptions from armed conflict, requiring them to adopt more agile, innovative, and risk-tolerant approaches. The analysis illustrated how companies have leveraged relocation strategies, market diversification, and technology adoption to ensure continuity and growth despite adverse conditions. The study also drew attention to the global ripple effects of the war on international supply chains, labour markets, and trade relations, suggesting that the implications of the war extend far beyond the immediate conflict zone.

Overall, this bibliometric review provided a valuable resource for scholars, policymakers, and agribusiness leaders seeking to understand how the war has transformed the agribusiness environment. The findings offer a roadmap for future research, emphasising the need for deeper inquiry into adaptive strategies, cross-sectoral collaboration, and the role of government support in sustaining agribusiness continuity during protracted conflicts. By mapping the literature on agribusiness management amidst the war, this study lays the groundwork for future studies that can offer actionable insights to agribusinesses operating in high-risk and crisis-prone environments. Ultimately, it calls for more collaborative research and policy development to build resilient agribusiness ecosystems that can withstand the shocks of modern geopolitical crises. The study identified the main stages of agricultural startups in Ukraine. It noted that the war has significantly complicated the opportunities for commercialising innovations and scaling up businesses.

### ► Acknowledgements

None.

### ► Funding

None.

### ► Conflict of Interest

The authors of this study declare no conflict of interest.

### ► References

- [1] Abakah, E.J.A., Adeabah, D., Tiwari, A.K., & Abdullah, M. (2023). Effect of Russia-Ukraine war sentiment on blockchain and FinTech stocks. *International Review of Financial Analysis*, 90, article number 102948. doi: 10.1016/j.irfa.2023.102948.
- [2] Ahn, S., Kim, D., & Steinbach, S. (2023). The impact of the Russian invasion of Ukraine on grain and oilseed trade. *Agribusiness*, 39(1), 291-299. doi: 10.1002/agr.21794.
- [3] American Chamber of Commerce in Ukraine. (2023). *Doing business in wartime Ukraine*. Retrieved from [https://chamber.ua/wp-content/uploads/2023/09/AmCham-Citi-Survey\\_Doing-Business-in-Wartime-Ukraine\\_EN.pdf](https://chamber.ua/wp-content/uploads/2023/09/AmCham-Citi-Survey_Doing-Business-in-Wartime-Ukraine_EN.pdf).
- [4] Amini, H., Solaymani-Dodaran, M., Ghanei, M., Abolghasemi, J., Salesi, M., & Sahebkar, A. (2024). Standardised mortality ratios in people exposed to sulphur mustard during the Iran-Iraq war: A retrospective study with 39-year follow-up. *Public health*, 227, 86-94. doi: 10.1016/j.puhe.2023.11.036.
- [5] Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. doi: 10.1016/j.joi.2017.08.007.
- [6] Aviv, I., & Ferri, U. (2023). Russian-Ukraine armed conflict: Lessons learned on the digital ecosystem. *International Journal of Critical Infrastructure Protection*, 43, article number 100637. doi: 10.1016/j.ijcip.2023.100637.
- [7] Balbontin, C., & Hensher, D.A. (2019). Firm-specific and location-specific drivers of business location and relocation decisions. *Transport Reviews*, 39(5), 569-588. doi: 10.1080/01441647.2018.1559254.
- [8] Bano, R. (2024). *Consumer trends and market analysis in agribusiness*. In S. Thakur, S.B. Wasnik, P. Sharma, B. Kush & R. Nelson (Eds.), *Agribusiness management* (pp. 152-161). London: Routledge.
- [9] Ben Hassen, T., & El Bilali, H. (2022). Impacts of the Russia-Ukraine war on global food security: Towards more sustainable and resilient food systems? *Foods*, 11(15), article number 2301. doi: 10.3390/foods11152301.
- [10] Biliavska, Y., Miroshnychenko, V., Sychova, N., Biliavskyi, V., Sapachuk, Y., & Mykytenko, N. (2025). Financial dimension of strategic development of nanotechnologies in industry. *Financial and Credit Activity Problems of Theory and Practice*, 1(60), 188-202. doi: 10.55643/fcaptp.1.60.2025.4558.

- [11] Bohdanov, I., Kovachov, S., Tsybuliak, N., Lopatina, H., Popova, A., & Suchikova, Y. (2023). Resilience in wartime research: Case of anticrisis management at a Ukrainian university. In *2023 IEEE 18<sup>th</sup> international conference on computer science and information technologies (CSIT)* (pp. 1-4). Lviv: IEEE. doi: [10.1109/CSIT61576.2023.10324134](https://doi.org/10.1109/CSIT61576.2023.10324134).
- [12] Broadus, R.N. (1987). Toward a definition of “bibliometrics”. *Scientometrics*, 12, 373-379. doi: [10.1007/BF02016680](https://doi.org/10.1007/BF02016680).
- [13] Bromberg, D.J., Madden, L.M., Meteliuk, A., Ivasiy, R., de Leon, S.J.G., Klyucharyov, K., & Altice, F.L. (2023). Medications for opioid use disorder during the war in Ukraine: A more comprehensive view on the government response – authors’ reply. *The Lancet Regional Health – Europe*, 26, article number 100583. doi: [10.1016/j.lanep.2023.100583](https://doi.org/10.1016/j.lanep.2023.100583).
- [14] Chen, Y., Fang, J., & Liu, D. (2023). The effects of Trump’s trade war on U.S. financial markets. *Journal of International Money and Finance*, 134, article number 102842. doi: [10.1016/j.jimonfin.2023.102842](https://doi.org/10.1016/j.jimonfin.2023.102842).
- [15] Chowdhury, P.R., Medhi, H., Bhattacharyya, K.G., & Hussain, C.M. (2023). Severe deterioration in food-energy-ecosystem nexus due to ongoing Russia-Ukraine war: A critical review. *Science of The Total Environment*, 902, article number 166131. doi: [10.1016/j.scitotenv.2023.166131](https://doi.org/10.1016/j.scitotenv.2023.166131).
- [16] Czapla, T., Glinkowska-Krauze, B., Chebotarov, V., & Chebotarov, I. (2023). Cross-cultural marketing management: Foundations of formation, content, and role in the development of the information economy. *Procedia Computer Science*, 225, 2845-2855. doi: [10.1016/j.procs.2023.10.277](https://doi.org/10.1016/j.procs.2023.10.277).
- [17] DeepState. (n.d.). *Map of the war in Ukraine*. Retrieved from <https://deepstatemap.live/en>.
- [18] Devadoss, S., & Ridley, W. (2024). Impacts of the Russian invasion of Ukraine on the global wheat market. *World Development*, 173, article number 106396. doi: [10.1016/j.worlddev.2023.106396](https://doi.org/10.1016/j.worlddev.2023.106396).
- [19] Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W.M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285-296. doi: [10.1016/j.jbusres.2021.04.070](https://doi.org/10.1016/j.jbusres.2021.04.070).
- [20] Ellegaard, O., & Wallin, J.A. (2015). The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, 105, 1809-1831. doi: [10.1007/s11192-015-1645-z](https://doi.org/10.1007/s11192-015-1645-z).
- [21] Fiore, M., Sauvée, L., & Wiśniewska-Paluszak, J. (2022). Opportunities and challenges of EU farm-to-fork strategy. *International Food and Agribusiness Management Review*, 25(5), 703-707. doi: [10.22434/IFAMR2022.x001](https://doi.org/10.22434/IFAMR2022.x001).
- [22] Fybish, A. (2024). *Top Ukrainian startups to watch in 2024*. Retrieved from: <https://surl.lu/yroboe>.
- [23] Gheibdoust, H., Gilaninia, S., & Taleghani, M. (2023). The impact of the Ukraine war on the global food supply chain security: A literature review. *International Journal of Logistics Economics and Globalisation*, 10(2), 186-208. doi: [10.1504/IJLEG.2023.10056759](https://doi.org/10.1504/IJLEG.2023.10056759).
- [24] Halushka, V., Tikhonov, H., Tikhonov, I., Mykolenko, Y., & Drok, L. (2022). Challenges of human resource management in the Armed Forces of Ukraine. *WSEAS Transactions on Business and Economics*, 19, 481-493. doi: [10.37394/23207.2022.19.44](https://doi.org/10.37394/23207.2022.19.44).
- [25] Hossain, A.T., Masum, A.A., & Saadi, S. (2024). The impact of geopolitical risks on foreign exchange markets: Evidence from the Russia-Ukraine war. *Finance Research Letters*, 59, article number 104750. doi: [10.1016/j.frl.2023.104750](https://doi.org/10.1016/j.frl.2023.104750).
- [26] Ivasiy, R., Galvez de Leon, S.J., Meteliuk, A., Fomenko, T., Pykalo, I., Bromberg, D.J., Madden, L.M., Farnum, S.O., Islam, Z., & Altice, F.L. (2023). Responding to health policy recommendations on managing opioid use disorder during Russia’s invasion of Ukraine: Divergent responses from the frontline to the west. *Frontiers in Public Health*, 10, article number 1044677. doi: [10.3389/fpubh.2022.1044677](https://doi.org/10.3389/fpubh.2022.1044677).
- [27] Izzeldin, M., Muradoğlu, Y.G., Pappas, V., Petropoulou, A., & Sivaprasad, S. (2023). The impact of the Russian-Ukrainian war on global financial markets. *International Review of Financial Analysis*, 87, article number 102598. doi: [10.1016/j.irfa.2023.102598](https://doi.org/10.1016/j.irfa.2023.102598).
- [28] Ju, J., Ma, H., Wang, Z., & Zhu, X. (2024). Trade wars and industrial policy competitions: Understanding the US-China economic conflicts. *Journal of Monetary Economics*, 141, 42-58. doi: [10.1016/j.jmoneco.2023.10.012](https://doi.org/10.1016/j.jmoneco.2023.10.012).
- [29] Kaewsuwan, N., & Kajornkasirat, S. (2023). Factors affecting success in information technology utilization in business operations of agri-tech startups in Southern Thailand. *International Journal of Innovative Research and Scientific Studies*, 6(3), 594-606. doi: [10.53894/ijirss.v6i3.1642](https://doi.org/10.53894/ijirss.v6i3.1642).
- [30] Keleş, E. (2023). Stock market response to the Russia-Ukraine war: Evidence from an emerging market. *Journal of East-West Business*, 29(3), 307-322. doi: [10.1080/10669868.2023.2210121](https://doi.org/10.1080/10669868.2023.2210121).
- [31] Klose, J. (2024). Empirical effects of sanctions and support measures on stock prices and exchange rates in the Russia-Ukraine war. *Global Finance Journal*, 59, article number 100925. doi: [10.1016/j.gfj.2023.100925](https://doi.org/10.1016/j.gfj.2023.100925).
- [32] Kostruba, A. (2025). Managing foreign business operations in Ukraine in the context of war. *Business Horizons*, 68(1), 67-81. doi: [10.1016/j.bushor.2024.01.003](https://doi.org/10.1016/j.bushor.2024.01.003).
- [33] Kussul, N., Drozd, S., Yailymova, H., Shelestov, A., Lemoine, G., & Deininger, K. (2023). Assessing damage to agricultural fields from military actions in Ukraine: An integrated approach using statistical indicators and machine learning. *International Journal of Applied Earth Observation and Geoinformation*, 125, article number 103562. doi: [10.1016/j.jag.2023.103562](https://doi.org/10.1016/j.jag.2023.103562).
- [34] Kuzio, T. (2024). Historical preparation and ideological legitimisation of the Russian invasion of Ukraine: A critical discourse. *Journal of Contemporary European Studies*, 32(3), 850-869. doi: [10.1080/14782804.2024.2310026](https://doi.org/10.1080/14782804.2024.2310026).
- [35] Kyiv School of Economics. (2023). *The total amount of damage caused to Ukraine’s infrastructure due to the war has increased to almost \$138 billion*. Retrieved from: <https://surl.li/xqsvkk>.
- [36] Lavreniuk, V., Polishchuk, Y., Kornyliuk, A., Horbov, V., & Ivashchenko, A. (2023). Government response on Russian war in Ukraine: Relocating business. *Problems and Perspectives in Management*, 21(4), 556-576. doi: [10.21511/ppm.21\(4\).2023.42](https://doi.org/10.21511/ppm.21(4).2023.42).

- [37] Lazarenko, V. (2020). Mapping identities: Narratives of displacement in Ukraine. *Emotion, Space and Society*, 35, article number 100674. doi: [10.1016/j.emospa.2020.100674](https://doi.org/10.1016/j.emospa.2020.100674).
- [38] Lim, W.M., et al. (2022). What is at stake in a war? A prospective evaluation of the Ukraine and Russia conflict for business and society. *Global Business and Organizational Excellence*, 41(6), 23-36. doi: [10.1002/joe.22162](https://doi.org/10.1002/joe.22162).
- [39] Liobikienė, G., Matiuk, Y., & Krikštolaitis, R. (2023). The concern about main crises such as the Covid-19 pandemic, the war in Ukraine, and climate change's impact on energy-saving behavior. *Energy Policy*, 180, article number 113678. doi: [10.1016/j.enpol.2023.113678](https://doi.org/10.1016/j.enpol.2023.113678).
- [40] Mahmoud, H., & Abuzerr, S. (2023). State of the health-care system in Gaza during the Israel-Hamas war. *The Lancet*, 402(10419), article number 2294. doi: [10.1016/S0140-6736\(23\)02634-X](https://doi.org/10.1016/S0140-6736(23)02634-X).
- [41] Mukashov, A., Breisinger, C., Engelke, W., & Wiebelt, M. (2022). Modeling conflict impact and postconflict reconstruction: The case of Yemen. *Economic Systems*, 46(1), article number 100940. doi: [10.1016/j.ecosys.2022.100940](https://doi.org/10.1016/j.ecosys.2022.100940).
- [42] National Bank of Ukraine. (n.d.). *External sector statistics*. Retrieved from <https://bank.gov.ua/ua/statistic/sector-external>.
- [43] Nigatu, B.A. (2023). War on paper: A critical discourse analysis of war reporting in Ethiopia. *Heliyon*, 9(7), article number e17857. doi: [10.1016/j.heliyon.2023.e17857](https://doi.org/10.1016/j.heliyon.2023.e17857).
- [44] Oblój, K., & Voronovska, R. (2024). How business pivots during war: Lessons from Ukrainian companies' responses to crisis. *Business Horizons*, 67(1), 93-105. doi: [10.1016/j.bushor.2023.09.001](https://doi.org/10.1016/j.bushor.2023.09.001).
- [45] Oosterlinck, K., Reyns, A., & Szafarz, A. (2023). Gold, bitcoin, and portfolio diversification: Lessons from the Ukrainian war. *Resources Policy*, 83, article number 103710. doi: [10.1016/j.resourpol.2023.103710](https://doi.org/10.1016/j.resourpol.2023.103710).
- [46] Orra, M. (2021). The role of culture-specific relationships in international businesses: A systematic review and future directions. *Journal of East-West Business*, 27(2), 109-139. doi: [10.1080/10669868.2020.1830914](https://doi.org/10.1080/10669868.2020.1830914).
- [47] Orzhynska, E., Frolov, M., Haidak, O., Kamardina, Y., & Kochyn, V. (2024). International humanitarian law and the waging of war in Ukraine: Integrative review. *Futurity Economics & Law*, 4(4), 259-276. doi: [10.57125/FEL.2024.12.25.15](https://doi.org/10.57125/FEL.2024.12.25.15).
- [48] Paryan, P., & Al Hashfi, M.H. (2023). Unveiling the impacts of the Russia Ukraine war on international trade: A systematic literature review. *Jurnal Ilmiah Manajemen Kesatuan*, 11(2), 371-382. doi: [10.37641/jimkes.v11i2.2044](https://doi.org/10.37641/jimkes.v11i2.2044).
- [49] Pavlenko, V., Kurapov, A., Drozdov, A., Korchakova, N., Pavlova, I., Reznik, A., & Isralowitz, R. (2023). War impact on the well-being of Ukrainian female healthcare professionals. *Journal of Loss and Trauma*, 29(5), 600-604. doi: [10.1080/15325024.2023.2280603](https://doi.org/10.1080/15325024.2023.2280603).
- [50] Pawłowska, A., Pabich, M., Ivashko, O., Dmytrenko, A., Kozłowski, T., & Bigaj, P. (2023). Problems of preservation, protection and restoration of cultural heritage objects and museum collections in the conditions of war. *Muzeológia a Kultúrne Dedičstvo*, 11(2), 17-40. doi: [10.46284/mkd.2023.11.2.2](https://doi.org/10.46284/mkd.2023.11.2.2).
- [51] Pellicelli, M. (2023). War in Europe: Another blow to the global supply chains. In *The digital transformation of supply chain management* (pp. 213-226). Amsterdam: Elsevier. doi: [10.1016/B978-0-323-85532-7.00005-0](https://doi.org/10.1016/B978-0-323-85532-7.00005-0).
- [52] Popova, A., Kovachov, S., Lopatina, H., Tsybuliak, N., Suchikova, Y., & Bohdanov, I. (2023). High-quality digital bichronous education for nanoengineers during the war in Ukraine: Does technology knowledge matter? In *IEEE 5<sup>th</sup> international conference on modern electrical and energy system (MEES)* (pp. 1-5). Kremenchuk: IEEE. doi: [10.1109/MEES61502.2023.10402460](https://doi.org/10.1109/MEES61502.2023.10402460).
- [53] Rød, E.G. (2019). Fraud, grievances, and post-election protests in competitive authoritarian regimes. *Electoral Studies*, 58, 12-20. doi: [10.1016/j.electstud.2019.01.003](https://doi.org/10.1016/j.electstud.2019.01.003).
- [54] Rose, A., Chen, Z., & Wei, D. (2023). The economic impacts of Russia-Ukraine war export disruptions of grain commodities. *Applied Economic Perspectives and Policy*, 45(2), 645-665. doi: [10.1002/aep.13351](https://doi.org/10.1002/aep.13351).
- [55] Seleznova, V., Pinchuk, I., Feldman, I., Virchenko, V., Wang, B., & Skokauskas, N. (2023). The battle for mental well-being in Ukraine: Mental health crisis and economic aspects of mental health services in wartime. *International Journal of Mental Health Systems*, 17, article number 28. doi: [10.1186/s13033-023-00598-3](https://doi.org/10.1186/s13033-023-00598-3).
- [56] Serafin, T. (2022). Ukraine's President Zelensky takes the Russia/Ukraine war viral. *Orbis*, 66(4), 460-476. doi: [10.1016/j.orbis.2022.08.002](https://doi.org/10.1016/j.orbis.2022.08.002).
- [57] Sheth, J.N., & Uslay, C. (2023). The geopolitics of supply chains: Assessing the consequences of the Russo-Ukrainian war for B2B relationships. *Journal of Business Research*, 166, article number 114120. doi: [10.1016/j.jbusres.2023.114120](https://doi.org/10.1016/j.jbusres.2023.114120).
- [58] Shumilo, L., Skakun, S., Gore, M.L., Shelestov, A., Kussul, N., Hurtt, G., Karabchuk, D., & Yarotskiy, V. (2023). Conservation policies and management in the Ukrainian Emerald Network have maintained reforestation rate despite the war. *Communications Earth & Environment*, 4(1), article number 443. doi: [10.1038/s43247-023-01099-4](https://doi.org/10.1038/s43247-023-01099-4).
- [59] Sokan-Adeaga, A.A., Sokan-Adeaga, M.A., Esan, D.T., Sokan-Adeaga, E.D., Oparaji, A.N., Aledoh, M., Balogun, E.A., & Oyeyemi, T. (2023). Review of the Russia-Ukraine war and its impact on public health. *Iranian Journal of War and Public Health*, 15(3), 295-303. doi: [10.58209/ijwph.15.3.295](https://doi.org/10.58209/ijwph.15.3.295).
- [60] Soliman, A., & Le Saout, E. (2024). The impact of the war in Ukraine on the idiosyncratic risk and the market risk. *Finance Research Letters*, 60, article number 104895. doi: [10.1016/j.frl.2023.104895](https://doi.org/10.1016/j.frl.2023.104895).
- [61] Song, U., Hur, G., Lee, S., & Park, J. (2024). Unraveling the dynamics of the cyber threat landscape: Major shifts examined through the recent societal events. *Sustainable Cities and Society*, 103, article number 105265. doi: [10.1016/j.scs.2024.105265](https://doi.org/10.1016/j.scs.2024.105265).

- [62] Steinbach, S. (2023). The Russia-Ukraine war and global trade reallocations. *Economics Letters*, 226, article number 111075. doi: [10.1016/j.econlet.2023.111075](https://doi.org/10.1016/j.econlet.2023.111075).
- [63] Stieger, S., Lewetz, D., Paschenko, S., & Kurapov, A. (2023). Examining terror management theory in Ukraine: Impact of air-raid alarms and explosions on mental health, somatic symptoms, and well-being. *Frontiers in Psychiatry*, 14, article number 1244335. doi: [10.3389/fpsy.2023.1244335](https://doi.org/10.3389/fpsy.2023.1244335).
- [64] Tsang, Y.P., Fan, Y., Feng, Z.P., & Li, Y. (2024). Examining supply chain vulnerability via an analysis of ESG-prioritized firms amid the Russian-Ukrainian conflict. *Journal of Cleaner Production*, 434, article number 139754. doi: [10.1016/j.jclepro.2023.139754](https://doi.org/10.1016/j.jclepro.2023.139754).
- [65] Tsybuliak, N., Suchikova, Y., Gurenko, O., Lopatina, H., Kovachov, S., & Bohdanov, I. (2023). Ukrainian universities at the time of war: From occupation to temporary relocation. *Torture Journal*, 33(3), 39-64. doi: [10.7146/torture.v33i3.136256](https://doi.org/10.7146/torture.v33i3.136256).
- [66] Waltman, L. (2016). A review of the literature on citation impact indicators. *Journal of Informetrics*, 10(2), 365-391. doi: [10.1016/j.joi.2016.02.007](https://doi.org/10.1016/j.joi.2016.02.007).
- [67] Wehrle, R., Gast, J., Wiens, M., & Schultmann, F. (2023). On the influence of infrastructure availability on companies decisions toward modal shift and relocation of facilities. *Transportation Research Interdisciplinary Perspectives*, 19, article number 100818. doi: [10.1016/j.trip.2023.100818](https://doi.org/10.1016/j.trip.2023.100818).
- [68] Wylegała, A. (2023). How family history helps Ukrainians face the war. *Current History*, 122(846), 249-254. doi: [10.1525/curh.2023.122.846.249](https://doi.org/10.1525/curh.2023.122.846.249).
- [69] Yeboah, B.A., Duodu, I., & Dornberger, U. (2024). Innovation process of AgriTech startups in Africa: Perspectives from startups in Ghana. In *IEEE international conference on engineering, technology, and innovation (ICE/ITMC)* (pp. 1-10). Funchal: IEEE. doi: [10.1109/ICE/ITMC61926.2024.10794374](https://doi.org/10.1109/ICE/ITMC61926.2024.10794374).
- [70] Zhu, Z., Zhao, J., & Liu, Y. (2024). The impact of energy imports on green innovation in the context of the Russia-Ukraine war. *Journal of Environmental Management*, 349, article number 119591. doi: [10.1016/j.jenvman.2023.119591](https://doi.org/10.1016/j.jenvman.2023.119591).

## Тенденції розвитку агробізнесу України в умовах воєнного стану

### Юлія Білявська

Кандидат економічних наук, доцент  
Державний торговельно-економічний університет  
02156, вул. Кіото, 19, м. Київ, Україна  
<https://orcid.org/0000-0002-8183-4036>

### Юрій Уманців

Доктор економічних наук, професор  
Державний торговельно-економічний університет  
02156, вул. Кіото, 19, м. Київ, Україна  
<https://orcid.org/0000-0003-0788-7110>

### Валерій Осецький

Доктор економічних наук, професор  
Київський національний університет імені Тараса Шевченка  
03022, вул. Васильківська, 90-а, м. Київ, Україна  
<https://orcid.org/0000-0001-5104-1070>

### Володимир Мамчур

Доктор економічних наук, старший дослідник  
Національний науковий центр «Інститут аграрної економіки»  
03127, вул. Героїв Оборони, 10, м. Київ, Україна  
<https://orcid.org/0000-0003-1300-3633>

► **Анотація.** Дослідження мало на меті провести комплексний бібліометричний аналіз впливу російсько-української війни на управління агробізнесом. На основі набору даних із 742 наукових публікацій із бази даних Scopus (2014-2024 рр.) у дослідженні простежено еволюцію тем, пов'язаних із бізнесом, під час війни, що проливає світло на ширший соціально-економічний контекст, в якому ці теми вбудовані. Аналіз підкреслив взаємопов'язаний характер досліджень у різних дисциплінах, ілюструючи, як більш широкі дослідження геополітичних конфліктів, перебоїв у торгівлі та гуманітарних питань слугують фоном для більш цілеспрямованих досліджень у сфері управління агробізнесом. Такий багаторівневий підхід дозволив чіткіше зрозуміти вплив війни на оперативне середовище підприємств, виклики, що стоять перед безперервністю діяльності, та адаптивні заходи, вжиті компаніями в зоні конфлікту та за її межами. Результати дослідження визначили сім ключових сфер управління агробізнесом, на які впливає війна: утримання персоналу та безпека робочої сили, диверсифікація ринку, перенесення бізнесу, запуск нових напрямів бізнесу, забезпечення функціональності в умовах форс-мажорних обставин, підтримка та захист ринків збуту, а також посилення захисту інформації та кібербезпеки. Узагальнюючи попередні наукові напрацювання, цей аналіз підкреслив спільні теми, висвітлив ключові прогалини у знаннях та запропонував майбутні напрями для досліджень і практики. Запропоновано парадигму формування агростартапу, який сприятиме підвищенню стійкості економіки та розвитку агробізнесу

► **Ключові слова:** війна; стартап; управління; економіка; персонал