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Identification and assessment of external strategic risks for Ukrainian enterprises during martial law

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Abstract. Understanding regional differentiation in business risks and their impact on enterprise operations is essential for effective strategic planning and risk management in uncertain environments. The purpose of the article is to identify and assess external business risks affecting food industry enterprises across different regions of Ukraine. The research employed a qualitative, expert-based approach using in-depth interviews. External risks were identified and assessed on a scale from 0 to 1, while their impact was evaluated using coefficients ranging from -1 (threat) to $+1$ (opportunity). The level of agreement among experts was measured using Kendall's coefficient of concordance (W), and group evaluations were calculated as arithmetic means. The sample consisted of 74 respondents, including food industry professionals, academic staff, logistics specialists, and representatives of related sectors. Experts assessed regional business risk levels, the probability of specific risks, and the impact of external environmental events on food industry enterprises. The developed regional risk matrix enables the prioritization of risks and supports the formulation of targeted risk-mitigation measures. The study contributes by providing a structured tool for assessing external risks under conditions of high uncertainty and by demonstrating how elevated risk levels significantly shorten enterprise planning horizons and influence confidence in strategic decision-making.

Keywords: risks, strategy, risk events, strategic risks, expert evaluation, martial law.

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1. INTRODUCTION

The unpredictability of changes in the external environment necessitates strategic flexibility and adaptive risk management. In this context, the effectiveness of risk management determines the ability to achieve two contradictory outcomes: seizing opportunities (positive chances) or mitigating catastrophic risk losses (Zwikaël & Ahn, 2010). Negative consequences can be avoided by implementing an effective risk management strategy that aligns with the organization's long-term goals. The absence of a risk management strategy may lead to decreased competitiveness, market share, and financial instability (Han et al., 2024). Empirical evidence also indicates that embedding risk management practices into strategic processes is positively associated with organizational performance (Adda, 2024). Therefore, significant attention should be paid to strategic risk management during the planning and execution of strategies. As stated by Kardos et al. (2024), strategic risk management enables enterprises to align risk appetites with strategic objectives, allowing them to assume an appropriate level of risk without compromising competitiveness while preserving operational efficiency. It empowers companies to evaluate the effectiveness of strategic decisions by assessing the impact of potential risks on their ability to execute those decisions.

Defining a risk appetite is crucial and strategically oriented, as it ensures effective strategy formulation and implementation. It can be viewed as the initial stage of risk response or risk management before considering other risk response options (Dhlamini, 2022). Implementing strategic risk management may be defined as an ongoing proactive process that allows companies to identify issues, assess the vulnerability of their strategy, mitigate threats by reducing risks, and capitalize on opportunities to take risks. The external environment's variability defines opportunities for enterprise development. These opportunities evolve continuously in response to changes in the external environment (Kryvoviazuk, 2023).

Risk acceptance in the strategic management process often remains limited to strategy implementation. As declared by Verbovskii (2024), at the core of effective strategy implementation is the ability of the company's management to respond flexibly to changes in the external environment and quickly adapt to them. At the same time, enterprise adaptability is defined as the ability of a business entity, regarded as an open system, to adjust to internal and external changes to ensure the expected efficiency of its operations and strategic management in the context of risk and uncertainty.

At the same time, the success of modern enterprises greatly depends on the quality of forecasting and strategy flexibility. Strategic flexibility involves effectively managing strategic risks during the strategy formulation and implementation. With this approach, strategic risk is viewed as the probability that the enterprise's development strategy does not align with the overall business goals. The causes of strategic risks may include inaccurate assessments of opportunities, a deviation from utilizing acquired management skills, misalignment of organizational values, and ethical or reputational issues.

The authors' research aims to assess the probability of occurrence, the degree of impact from hazardous situations, and the external risks that must be considered when developing and implementing strategies for the food industry enterprises. The purpose of the research is to assess the probability of occurrence, the degree of impact from hazardous situations, and the external risks that must be considered when developing and implementing strategies for the food industry enterprises.

Although strategic risk management has been widely examined, existing studies predominantly focus on stable or moderately volatile environments and provide limited insight into enterprises operating under extreme uncertainty. There is a lack of region-specific assessments of external risks within countries affected by armed conflict, particularly in the food industry. Prior research rarely integrates structured expert judgment with quantified probability, impact, and consensus measures to support strategic decision-making. Moreover, empirical evidence on how differentiated regional risks constrain strategic planning horizons and risk prioritization remains scarce. This gap limits the applicability of strategic risk management frameworks in highly volatile and security-sensitive environments.

2. LITERATURE REVIEW

The identification and assessment of external strategic risks have become a central concern in contemporary management research as enterprises increasingly operate in environments characterized by high uncertainty, volatility, and structural disruption. Strategic risks differ fundamentally from operational or financial risks because they originate outside the firm and directly affect the viability of long-term objectives, business models, and competitive positions (Jimenez et al., 2024). Erzurumlu et al. (2025) claim, that external strategic risks are closely linked to macroeconomic instability, political and regulatory changes, security conditions, technological disruptions, and socio-demographic dynamics. In extreme contexts, such as periods of martial law, these risks are amplified and interconnected, creating a complex risk landscape that challenges traditional strategic planning approaches. Classical strategic management theory assumes a relatively stable external environment in which firms can forecast trends, allocate resources efficiently, and implement long-term strategies. However, when external conditions become unstable or hostile, these assumptions no longer hold. Enterprises must operate with limited information, shortened planning horizons, and constrained strategic choices (Petrooulos et al., 2026). In such contexts, the external environment becomes the dominant source of uncertainty, and strategic risk management shifts from optimizing performance to ensuring continuity, resilience, and adaptability. This transformation necessitates a reconceptualization of strategic risk as a dynamic and context-dependent phenomenon rather than a static probability-based construct.

External strategic risks are inherently multidimensional. Political and institutional instability can disrupt legal frameworks, undermine contract enforcement, and alter the rules of competition with little warning (Shen et al., 2025). Regulatory unpredictability increases compliance costs and reduces investment incentives, while inconsistent policy implementation weakens trust in formal institutions. Security-related risks, particularly in environments affected by military conflict, directly threaten physical assets, human capital, and supply chain integrity (Ahn et al., 2025; Kuzior et al., 2026). These risks extend beyond immediate physical damage and include disruptions to logistics networks, energy supply, and communications infrastructure, all of which are critical for enterprise operations (Y. Vovk et al., 2025). Economic and financial risks further intensify strategic uncertainty during periods of martial law. Inflationary pressures, currency volatility, restricted access to finance, and declining consumer purchasing power affect both demand and cost structures (Hamdaoui et al., 2025). Enterprises face increased difficulty in forecasting cash flows, maintaining liquidity, and securing external funding. At the same time, heightened financial risk interacts with other external threats, such as logistical disruptions or labor shortages, compounding their strategic impact. As a result, financial instability becomes not only a monetary issue but also a strategic constraint shaping firms' growth and survival strategies. Socio-demographic risks represent another crucial dimension of the external strategic environment. Population displacement, labor migration, demographic imbalances, and changes in workforce availability significantly affect enterprises' operational capacity and long-term development potential. Human capital losses due to migration or mobilization reduce organizational knowledge and weaken firms' ability to innovate or expand (Grebeniyk et al., 2022; Chugaievskia & Wisla, 2023; Mishchuk et al., 2024). As stated by Mennekes and Schramm-Klein (2025), changes in consumer behavior, driven by uncertainty, declining incomes, or shifting priorities, further alter market structures and demand patterns. These socio-demographic dynamics introduce long-term strategic challenges that extend beyond the immediate crisis period.

The food industry occupies a particularly sensitive position within this risk landscape due to its strategic importance for national security, social stability, and economic resilience. Enterprises operating in this sector are exposed simultaneously to political, security, logistical, financial, and social risks (Stashkevych, 2025). Disruptions in agricultural production, transportation networks, or distribution channels can quickly translate into shortages, price instability, and social tension. Consequently, the ability of food industry enterprises to identify, assess, and prioritize external risks is not only a matter of firm-level performance but also of broader societal significance.

In high-risk environments, traditional quantitative risk assessment methods often prove insufficient due to data limitations, rapid environmental changes, and the unprecedented nature of many risk events. As a result, expert judgment and qualitative assessment methods gain particular relevance (Burstein & Zuckerman, 2025). Expert-based approaches allow for the incorporation of tacit knowledge, professional experience, and contextual understanding that are difficult to capture through purely statistical models. These methods enable a more nuanced evaluation of both the probability of risk occurrence and the magnitude of its potential impact on strategic objectives. An important theoretical challenge lies in reconciling the subjective nature of expert assessments with the need for systematic and comparable risk evaluations. Structured qualitative frameworks, confidence-based assessments, and consensus measurement techniques provide a means to reduce bias and enhance the reliability of expert judgments. By translating qualitative insights into scaled evaluations, enterprises can better integrate external risk considerations into strategic planning and decision-making processes (Burstein & Zuckerman, 2025). This approach is particularly valuable in environments where uncertainty is high and historical data offer limited guidance.

The concept of strategic flexibility is closely intertwined with external risk assessment. Strategic flexibility refers to an enterprise's ability to adjust its objectives, resource allocation, and operational configurations in response to external changes. In conditions of martial law, flexibility becomes a survival

mechanism rather than a competitive advantage. Enterprises must continuously reassess their strategic priorities, abandon previously viable growth strategies, and focus on maintaining core operations (Chernysh et al., 2023; Marynenko et al., 2024; I. Vovk et al., 2025). External risk assessment plays a critical role in enabling such flexibility by identifying which risks are most likely to materialize and which pose the greatest threat to strategic continuity. Another key theoretical issue concerns the temporal dimension of strategic risk. High levels of external uncertainty significantly reduce planning horizons, forcing enterprises to shift from long-term strategic planning to short- and medium-term scenario-based approaches. This shift alters the nature of strategic decision-making, emphasizing resilience, redundancy, and adaptability over efficiency and optimization (Gjinovci & Gjinovci, 2025). Understanding how external risks constrain planning horizons is therefore essential for developing realistic and implementable strategies in crisis environments. Despite growing recognition of the importance of external strategic risks, existing research remains limited in its treatment of regionally differentiated risk environments within a single country. In contexts affected by armed conflict, risk intensity and structure may vary significantly across regions depending on proximity to hostilities, infrastructure conditions, and institutional capacity (Peng et al., 2025). Enterprises operating in relatively safer regions face different strategic challenges than those located near active conflict zones. Capturing these spatial differences is essential for accurate risk assessment and effective strategic response.

The Ukrainian context under martial law provides a unique setting for advancing theoretical understanding of external strategic risk. Enterprises must navigate an environment characterized by simultaneous exposure to security threats, regulatory uncertainty, economic instability, and social disruption (Pikulina et al., 2025; Vojtekova et al., 2025). These conditions challenge conventional strategic management frameworks and highlight the need for adaptive, context-sensitive risk assessment models. Studying external strategic risks in such an environment contributes to the broader literature by extending risk management theory beyond stable institutional settings and demonstrating its applicability under extreme uncertainty.

In this regard, the theoretical and research background underscores the necessity of integrated approaches to external strategic risk identification and assessment. Such approaches must account for the multidimensional, dynamic, and region-specific nature of risk, as well as the limitations of traditional forecasting methods in crisis contexts. By emphasizing expert judgment, confidence-based evaluation, and strategic relevance, contemporary research can provide enterprises with practical tools for navigating uncertainty and sustaining operations during periods of martial law.

3. METHODOLOGY

The research was conducted using a qualitative analysis method based on in-depth interviews. Food processing specialists from various regions of Ukraine and scientific staff from the National University of Food Technologies, Taras Shevchenko National University of Kyiv, and the National University of Life and Environmental Sciences of Ukraine were invited to participate in the survey. They were asked to complete the questionnaires (Assessment of the impact; Assessment of the probability; Classification of Ukrainian), developed by the authors. The questionnaires outline the adverse events of the external environment and the types of risks. The respondents' answers to the survey were based on their experiences and understanding of strategic risk management processes. The respondents were asked to evaluate the following indicators using expert judgment: the distribution of Ukrainian regions by the level of business risk (Classification of Ukrainian); the likelihood of a specific type of risk occurring in various areas of the country (Assessment of the probability); and the extent to which external environmental events and hazards impact the operations of food industry enterprises in different regions (Assessment of the impact). The likelihood of a risk situation occurring is represented as unit fractions ranging from 0 (no risk) to 1 (specific risk situation), with a step size of 0.25.

Experts evaluated the influence of external environmental factors on the business entity using confidence coefficients ranging from -1 to +1. According to the proposed methodology, positive signs (+) were applied to identify favorable opportunities in the external environment for enterprise development. Conversely, negative signs (-) indicate threats: -1 represents the maximum degree of negative impact a defined factor can have on the enterprise's activities, +1 implies the maximum degree of positive impact, and 0 suggests neutral or uncertain implications. Intermediate assessment options illustrate varying intensity levels regarding the effects of external factors on the business entity. The consensus of expert opinions was evaluated using Kendall's coefficient of concordance (W). The group evaluations were determined by the arithmetic mean of the expert assessments.

The significance of risk and its probability of occurrence were identified using a scale to rank likelihood and a system to assess the degree of impact on enterprise activities. The final risk assessment was conducted using traditional risk analysis, which considers both the likelihood of the risk event occurring and the magnitude (degree) of its impact on the enterprise operations. The ranking of external risk types was determined based on selected scales, with the maximum total risk score for each type (risk level) set at 25 points. The ranking ranged from 1, indicating the highest risk (the highest score), to 5, representing the lowest risk (the lowest score).

Different types of external risks have varying probabilities of occurrence and differing impacts on the operational efficiency of enterprises across various regions. Consequently, the final assessment must prioritize risk management, indicating that the risk with the highest total score requires immediate attention, management, and financial measures to neutralize or minimize it. A risk matrix has been created to visualize the risk ranking process. The X-axis (horizontal) denotes the probability of risk occurrence, while the Y-axis (vertical) represents the degree of impact

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. The importance of strategic risk management

Strategic risk management is essential for an organization's success and growth in a complex and unpredictable business environment. Effective strategic risk management allows organizations to maintain resilience, ensure business stability, and adapt to both external and internal changes. It enhances decision-making by providing management with a clear view of potential threats and opportunities, empowering managers to make informed strategic decisions. Additionally, it increases competitiveness by adjusting strategies to market changes, thereby gaining an advantage over competitors. The risk management practices of various business entities are essential topics for discussion and research. Thus, McConnell P. J. (McConnell, 2012) explores strategic risk management in the banking system, while Kedarya, T., et al. (Kedarya et al., 2023) focus on financial institutions.

The article examines the definition of socio-economic strategic risks in mining industry operations (Nieto and Medina, 2020). The authors (Sievidova et al., 2021) examine the role of economic risks in the strategic management of potential agricultural resource enterprises. Furthermore, the article explores the impact of strategic risk management on the resilience of small and medium-sized enterprises across economic, social, and environmental dimensions (Mohammed and Sykes, 2012). Additionally, the authors examine risk management for sustainable development, the influence of long-term risks on strategy formulation and implementation, the management of risks affecting the value proposition, and the risks associated with human talent management. The article examines how strategic risks affect China's economic opportunities (Freedenberg, 2005).

The authors explore business resilience and adaptability in response to uncertainty (Frigo and Anderson, 2011; Slagmulder and Devoldere, 2018). They emphasize the necessity of purposeful risk integration into the strategy formulation process, shifting the focus of strategic risk management from strategy implementation to proactive risk management and investigate the impact of strategic risk management on enterprises' competitive advantages and their capacity to anticipate and respond to economic, political, and social crises (Freedenberg, 2005).

Marchetti (2011) studies strategic risk management, methods for classifying and assessing enterprise risks, definitions of risk categories (financial, operational, reputational, and strategic), the development of risk management systems, and monitoring and assessment processes. The articles by Jiménez (2024), Dhlamini (2022), and McConnell (2015) present strategic risk classification (Table 1).

Table 1

Strategic risk classification	
Author, source	Strategic risks
Jiménez et al. (2024)	Human talent management risk Regulatory risk Competition risk Supplier dependence risk Technological risk Ungovernability risk Liquidity risk Risk of change in customer preferences Strategy formulation missteps/mistakes
Dhlamini (2022)	Regulatory and compliance risks Competitor risks Economic risks Political risks Technology risks Partnership and/or collaboration risks
McConnell (2015)	Strategic Positioning Risks: Is the firm going in the right direction? Strategic Execution Risks: Is the plan still on track, and are the strategic objectives still meaningful?

Source: summarized by the authors based on the sources (Dhlamini, 2022; Jiménez et al., 2024; McConnell, 2015)

According to the authors, effective strategy planning and implementation require a clear distinction between external and internal strategic risks. Internal strategic risks arise within the organization and may impact its ability to achieve strategic goals. They can relate to various aspects of company operations, such as management processes, corporate culture, resources, and technologies. The primary characteristic of internal risks is their manageability or subjectivity, stemming from ineffective crisis management and associated with the enterprise's technical and technological conditions or errors committed by decision-makers. In contrast, external risks at the meso and macro levels are beyond the control of enterprise management. These external risks must be considered during strategic planning, and through effective risk management, their negative impact should be minimized (by leveraging existing opportunities), or the company's strategic objectives should be revised.

Harvey et al. (2021) analyze defensive strategies, risk control measures, and reduction strategies for financial institutions, along with cost estimation methods to safeguard against market fluctuations and downturns. Ansyari (2024) discusses the risks of implementing strategic management and assessment methods Hopkins's paper (2013) emphasizes the importance of aligning risk management with the enterprise business processes model. The author defines strategic, tactical, and operational risks, outlines the key elements of the risk management process, and discusses approaches to risk assessment.

Several approaches exist for defining strategic risks. Allan and Beer (2006) describe strategic risks as those threats and opportunities that materially affect the ability of an organization to survive. McConnell (2015) defines strategic risks as the risks that would affect the achievement of business objectives. An interesting approach is presented in the article (Emblemsvåg and Kjølstad, 2002), where the authors define strategic risk as a formula:

$$\text{strategic risk} = \text{possibility} \cdot \text{impact on business objectives} \quad (1)$$

Thus, strategic risk involves evaluating different possibilities and their impact on the business objectives. Strategic risks refer to those that arise during the strategy development process and those that occur during its implementation (Jiménez et al., 2024).

4.2. Strategic risk identification

To strengthen an organization's resilience and agility in today's turbulent times, a more strategic approach to risk management is needed. We present strategic risk management (SRM) as an organizational capability to manage deep uncertainty in the context of strategy formulation (Slagmulder and Devoldere, 2018). Strategic risks that arise during strategy formulation include technical and technological risks, marketing risks such as errors in market segmentation, consumer preferences, and product launch timing, organizational risks like mistakes in evaluating strategic alternatives, and informational risks. Strategic risks during strategy implementation include managerial risks (errors in management decision-making), political and legal risks (shifts in political landscapes and regulatory restrictions), and supply chain risks (issues related to the selection of supplier partners, price volatility, and challenges in changing suppliers).

Moreover, the risks encountered while formulating a strategy can also arise during its implementation, albeit in a different context. For instance, marketing risks may arise from unexpected changes in pricing strategies, competitive actions, and the execution of distribution and promotional activity strategies. Strategic risk management involves identifying, assessing, and managing risks and uncertainties affected by internal and external events or scenarios, that could inhibit an organization's ability to achieve its strategy and strategic objectives with the ultimate goal of creating and protecting shareholder and stakeholder value (Frigo and Anderson, 2011). Thus, risk management serves as a tool to protect organizational value and embodies a proactive approach that fosters the achievement of long-term strategic goals (Ansary, 2024). Strategic risk management enhances enterprise resilience and flexibility in decision-making and can be integrated into strategy formulation.

From the perspective of potential consequences of strategic risks, enterprises should develop and implement measures to mitigate those risks while seizing opportunities to achieve their strategic goals. Strategic risk management should be regarded as a comprehensive, systematically organized, and continuous process that includes a set of resources, procedures, and management practices integrated into the overall system to ensure the achievement of the enterprise's strategic objectives.

Strategic risk management is increasingly considered a core competency at management and board levels (Frigo and Anderson, 2011). Risk management in strategic planning includes several tasks that need to be addressed: establishing prerequisites for proactive risk management; accepting risks that align with the business strategy; enhancing the ability to anticipate risks; implementing appropriate and effective risk response tools; and achieving a balance between strategic goals and enterprise sustainability.

In strategic risk management, various tools are employed to identify, assess, and control risks (risk matrix, scenario planning, SWOT analysis, risk prioritization, balancing risks with opportunities, etc.); see Table 2. Each tool has strengths and weaknesses and should be applied according to the organization's goals and needs. These tools can be used individually or in combination to achieve significant results in strategic risk management.

Table 2

Toolkit for identifying and prioritizing strategic risks

Characteristics	Purpose	Advantages	Disadvantages
Risk matrix			
A risk matrix is a graphical representation of risks that helps in their classification and management assessment. The matrix consists of two principal axes: the likelihood of risk occurrence and the potential impact of that risk. Risks are classified from "Low" to "High" for each parameter to identify critical risk factors.	Risk identification and prioritization: evaluate the probability and potential impact of risks to establish priorities for risk management efforts.	A straightforward and visual tool for quick assessment and risk prioritization, serving as an accessible resource for different levels of management.	The limited detail, which does not account for complex risk interactions, poses a challenge in assessing uncertainty or lesser-known risks.
Scenario planning			
Scenario planning involves creating comprehensive narratives about potential conditions to assess their impact on the organization's strategic objectives. An optimistic scenario, a pessimistic scenario, and a baseline scenario are typically considered. This approach helps to identify alternative development narratives, outlines a range of options, and evaluates potential outcomes in the decision-making process. Updating the scenario is also possible by identifying specific information while managing uncertainty in decision-making.	Develop strategies and adapt to changes by using scenario-based approaches for assessment.	A comprehensive strategic tool that enables organizations to assess both external and internal factors. It ensures flexibility in adapting the strategy to market changes and enhances strategic planning thinking.	It is often inaccurate due to high uncertainty, is time-consuming, and requires significant resources to develop various scenarios.
SWOT analysis			
It helps identify opportunities and threats related to organizational risks while emphasizing strengths and weaknesses.	Evaluating an organization's strategic position involves identifying its internal strengths and weaknesses, as well as external opportunities and threats.	A straightforward tool for assessing internal and external factors while identifying key opportunities to reduce risks.	It may lead to a superficial analysis that does not provide actionable recommendations for risk management. This process involves subjective evaluation, which might impact the accuracy of the results.
Risk prioritization			
Risk prioritization ranks risks based on their likelihood of occurrence and impact on the business. This emphasizes the importance of focusing on the most critical risks and enables greater management efficiency. Typically, risks are classified as high, medium, or low.	To identify potential threats and critical risks that could cause damage.	It helps identify the most significant risks that need to be addressed quickly and clearly understands which risks require immediate attention.	Sometimes, it is challenging to assess the impact and likelihood of a risk occurring accurately; some risks can be overlooked.
Balancing risks and opportunities			
This concept involves evaluating the organization's threats and opportunities concerning risk situations. It helps identify risks that can be mitigated and those that can be accepted to capitalize on opportunities. This supports the selection of a strategy that maximizes gains while minimizing losses.	Designing an effective company development strategy requires balancing risk mitigation with leveraging strategic growth opportunities.	Encourages the organization to take advantage of opportunities by implementing a more balanced strategic policy.	The complexity of opportunity recognition requires substantial data to evaluate risks and opportunities.

Source: systematized by the authors

The authors consider strategic risk management to be a systematic and ongoing process that involves various resources and procedures (AIRMIC, 2023; Slagmulder and Devoldere, 2018). The risk management model developed by COSO is based, among other factors, on the principle that enterprise risk management should align with strategies and objectives (COSO, 2017). The main strategies for responding to risks are risk reduction, risk transfer, risk avoidance, risk retention, seeking additional information, and scenario planning (Andersen and Sax, 2019; Francis, 2019; Hillson, 2001).

Strategic risk management is viewed as both reactive and proactive (preventive). Failing to manage strategic risks can reduce profitability and threaten a business enterprise's commercial, market, and financial stability. Such outcomes are typical of reactive risk management. In contrast, implementing preventive strategic risk management minimizes the likelihood of risk events and potential losses to the enterprise. Strategic risk management involves qualitative and quantitative analyses of possible risks and threats. To ensure high-quality strategic foresight and enterprise development management in modern conditions, it is essential to forecast and consider both internal and external strategic risks. A specialized structural unit or a risk management team manager can identify and assess internal strategic risks. On the other hand, evaluating external risks, those that reflect the context within the country, region, or industry and impact individual companies, is more complex.

4.3. The importance of risk assessment

In this regard, risk assessment plays a crucial role in strategic risk management. This involves analyzing various potential risks, their likelihood of occurrence, and their possible impact on the organization. A risk assessment helps organizations gain a deeper understanding of the risks they face, allowing them to prioritize resources and develop effective risk mitigation strategies (Ramos, 2024).

Various qualitative and quantitative risk assessment methods can be categorized into three groups based on their focus: consequence analysis, consideration of causes and sources of risk, and analysis of specific tasks to identify risks (Table 3).

Table 3

A typology of risk analysis methods

Analysis techniques	Assessing the potential magnitude of loss and the severity of the consequences	Assessing the likelihood of risk occurrence	Identifying risks
Primarily consequence analysis			
Method of Analogues			+
Preliminary Hazard Analysis (PHA)			+
Hazard and Operability Study (HAZOP)			+
Hazard Analysis and Critical Control Points (HACCP)			+
Structured what-if technique (SWIFT)			+
Scenario Analysis	+	+	+
Business Impact Analysis (BIA)	+	+	+
Failure Mode Effect Analysis (FMEA)	+	+	+
Cause-and-effect Analysis			+
Bow-tie Analysis			+
The primary consideration of the causes and sources of risk			
Root Cause Analysis (RCA), Root Cause Failure Analysis (RCFA)	+		+
Fault Tree Analysis (FTA)	+	+	+
Event Tree Analysis (ETA)	+	+	+
Cause and Effect Analysis			+
Decision Tree Analysis	+	+	+

Bayesian Analysis and Bayesian Networks	+	+	+
Analysis of specific tasks for identifying risks			
Probabilistic Risk Assessment	+	+	
Monte Carlo Simulation	+	+	
Brainstorming			+
Delphi Method	+	+	+
Cost-Effectiveness Analysis (cost-benefit analysis)	+	+	
Human Reliability Assessment (HRA)		+	+
Statistical methods	+	+	
Fuzzy Logic	+	+	+

Source: systematized by the authors based on (Curtis & Carey, 2012; DSTU ISO, 2018; IEC, 2019).

Each method has its advantages and disadvantages. By combining methods, the organization can mitigate the drawbacks of one approach while maximizing the strengths of others. We suggest merging probabilistic and expert methods to assess the primary risks in the external environment. This combination is a crucial strategy in risk management, as it enables the identification and evaluation of risks through expert experience and knowledge, particularly in scenarios where information is scarce. The expert assessment method was used to measure the impact of negative factors and types of risks and evaluate their probability of occurrence.

4.4. The impact of external environmental factors on the functioning of food processing enterprises

External risks were identified, including aspects of how food processing enterprises operate under current conditions. Experts analyzed the list of external and negative risk factors. By utilizing confidence coefficients, they assessed the probability of each risk occurring and the degree of its impact on the enterprise's operations. Threat and risk assessments identify potential risks that can impact various aspects of an organization's activities. Analyzing global practices and risk management standards has enabled the authors to develop an approach for identifying specific risks and assessing their impact on enterprises' business activities (DSTU EN, 2022; DSTU IEC, 2013; Ovander, 2021; Reznikova et al., 2020).

The table of the questionnaire lists external environmental factors and categories of risk as follows: security and military risks; political risk; administrative and legislative risks; socio-demographic risk; market risk; logistical risk; environmental and climate-related risks; production (technology) risk; and financial risk.

Specific risk situations (adverse events) are identified within each risk type, characterizing the riskiness of enterprise activities at national, regional, and industry levels. The level of risk associated with business operations in various regions of Ukraine primarily depends on specific characteristics, including safety levels, economic development, resource availability, infrastructure, and the impact of war. We believe that the regions of Ukraine can be categorized into four groups: regions that are relatively safe for business activities, regions with certain risks, frontline and high-risk regions, and regions located in areas of active combat operations or near the front line.

The survey was conducted, and respondents were asked to categorize the regions of Ukraine into specific groups (Classification of Ukrainian). The results are presented in Table 4.

Table 4

Distribution of Ukrainian regions based on enterprise-level risk

Group	Characteristic	List of regions*
Group 1	Regions that are considered relatively safe for business activities	Kyiv (city), Lviv Oblast, Ivano-Frankivsk Oblast, Volyn Oblast, Ternopil Oblast, Chernivtsi Oblast, Zakarpattia Oblast, Khmelnytskyi Oblast, Rivne Oblast
Group 2	Regions with certain risks	Vinnytsia Oblast, Kirovohrad Oblast, Cherkasy Oblast, Poltava Oblast, Zhytomyr Oblast, Kyiv Oblast
Group 3	Frontline and high-risk regions	Dnipropetrovsk Oblast, Chernihiv Oblast, Odesa Oblast, Mykolaiv Oblast
Group 4	Regions are located in areas of active combat operations or near the front line.	Donetsk Oblast, Kharkiv Oblast, Sumy Oblast, Zaporizhzhia Oblast, Kherson Oblast

Source: Authors' results. * The distribution does not account for territories that are partially under the temporary occupation of Russia.

Risk probability was measured in fractional units (ranging from 0 to 1): 0 – lack of risk; 0.25 – a risky situation is unlikely to happen; 0.5 – equal probability of occurrence or non-occurrence; 0.75 – a risky situation is likely to happen; 1 – very likely to happen.

The impact of external factors on enterprises was assessed using confidence coefficients ranging from -1 to +1 (Illyashenko, 2005).

According to the proposed methodology, the positive sign («+») indicates favorable opportunities in the external environment for enterprise development. In contrast, the negative sign («-») represents external threats. «-1» – the most significant negative impact of a particular factor; «+1» – the most significant positive impact on the enterprise's activities and development.

Intermediate assessment indicates the different intensities of external factors affecting an organization (Table 5).

Table 5

The impact of external factors on the business entity

Value	Level of influence	Influence of the factor
-1	Maximum detrimental impact	creates disastrous consequences that significantly hinder the enterprise's operations.
-0.8	Significant negative impact	significantly worsens the enterprise's position and could become critical if immediate action is not taken.
-0.6	Moderate negative impact	significantly complicates an enterprise's operations; however, adaptive measures can mitigate its effects.
-0.4	Sufficient negative impact	create noticeable obstacles that require extra efforts to overcome
-0.2	Minor negative impact	create minor complications; however, they are easy to eliminate.
0	Neutral or ambiguous impacts	characterize the lack of a significant impact from a specific factor, or its influence is unclear; the factor neither supports nor hinders the business activities of enterprises.
+0.2	Slightly positive impact	has a small positive effect, but can improve other advantageous features.
+0.4	Sufficient positive impact	provides a reasonable advantage or ensures the consistent operation of an enterprise.
+0.6	Moderate positive impact	promotes the enterprise's growth, but other factors can restrict its impact.
+0.8	Significant positive impact	significantly supports enterprise development but may have some limitations.
+1	Maximum positive impact	provides a competitive advantage for the enterprise.

Source: compiled by the authors

Kendall's coefficient of concordance (W) was used to estimate the degree of agreement among the experts' opinions (Gwet, 2021; Zaiontz, 2016). This coefficient assesses the level of agreement among several observers (experts) evaluating multiple objects on a specific scale. The concordance correlation coefficient measures the agreement between group evaluations and is a crucial tool for decision-making based on collective opinions or assessments. The total number of respondents who participated in the survey was 74. Included were specialists from various regions of the country involved in the food industry (36 individuals or 49% of all respondents), 25 academic and teaching staff from higher education institutions in the capital (34%), eight logistics specialists (11%), and five individuals (7%) from other fields and areas of expertise, including IT, auditing, and security sectors.

Table 6 provides a general expert assessment of the likelihood of occurrence and potential impact of various types of risks on the operations of food industry enterprises across different regions of Ukraine.

Table 6

General assessment of the probability of occurrence and the impact of various types of external risks on enterprise activities

Risks and unfavorable external events	Confidence (assessment of impact strength)				Probability evaluation			
	Regions grouping				Regions grouping			
	I	II	III	IV	I	II	III	IV
Security and military risks	-0.39	-0.55	-0.85	-0.94	0.37	0.46	0.68	0.86
Escalation of hostilities	-0.20	-0.46	-0.85	-0.93	0.24	0.32	0.62	0.84
Violation of territorial integrity (partially occupied territory)	-0.18	-0.45	-0.86	-0.94	0.23	0.31	0.55	0.87
Changes in the military situation	-0.27	-0.49	-0.80	-0.95	0.31	0.41	0.62	0.82
Hybrid threats	-0.63	-0.70	-0.81	-0.92	0.50	0.55	0.73	0.84
Infrastructure damage	-0.65	-0.67	-0.91	-0.97	0.59	0.69	0.86	0.92
Cybersecurity	-0.61	-0.67	-0.81	-0.93	0.69	0.69	0.77	0.81
Political risk	-0.54	-0.55	-0.59	-0.64	0.60	0.61	0.63	0.69
Political instability	-0.41	-0.45	-0.51	-0.63	0.47	0.50	0.58	0.71
Corruption index	-0.65	-0.63	-0.70	-0.70	0.64	0.69	0.68	0.69
The impact of elections on the political and economic situation in the region	-0.52	-0.52	-0.46	-0.54	0.63	0.63	0.62	0.68
Bureaucratic challenges	-0.60	-0.60	-0.67	-0.68	0.66	0.62	0.65	0.66
Administrative and legislative risks	-0.45	-0.46	-0.51	-0.55	0.53	0.54	0.55	0.58
Regulatory imperfections	-0.55	-0.56	-0.58	-0.59	0.51	0.47	0.48	0.56
Unpredictable tax policies	-0.59	-0.59	-0.59	-0.60	0.44	0.54	0.56	0.54
Restrictions on the use of intellectual property rights	-0.41	-0.41	-0.45	-0.38	0.51	0.46	0.53	0.59
Restrictions on transactions involving foreign currencies	-0.42	-0.43	-0.45	-0.52	0.47	0.51	0.56	0.57
The effects of regulation on the actions of food industry enterprises	-0.25	-0.29	-0.45	-0.45	0.51	0.51	0.54	0.56
Unlawful and erratic actions by government authorities and local self-government bodies regarding the activities of business entities	-0.59	-0.59	-0.63	-0.78	0.44	0.50	0.58	0.65
Effectiveness and intensity of reforms	-0.13	-0.15	-0.24	-0.35	0.63	0.62	0.52	0.49
Imperfect justice (unfair decision-making, pressure on justice, risks of corruption, etc.)	-0.66	-0.68	-0.70	-0.73	0.70	0.71	0.63	0.67
Socio-demographic risk	-0.21	-0.31	-0.57	-0.88	0.56	0.58	0.69	0.82
Migration (changes in population size and structure)	-0.18	-0.32	-0.72	-0.94	0.53	0.55	0.78	0.95

The condition of the regional labor market	-0.09	-0.26	-0.58	-0.92	0.52	0.55	0.65	0.81
Wage levels in industry and region	-0.12	-0.19	-0.50	-0.68	0.57	0.54	0.61	0.73
Employee reservation	-0.29	-0.36	-0.53	-0.91	0.57	0.55	0.65	0.71
Inequality and social instability, an increase in socially vulnerable populations	-0.26	-0.34	-0.43	-0.92	0.57	0.64	0.69	0.88
The mental health and psychological well-being of the population	-0.29	-0.38	-0.68	-0.93	0.60	0.65	0.76	0.86
Market risk	-0.10	-0.15	-0.27	-0.37	0.55	0.55	0.60	0.59
Market competition	0.02	-0.12	-0.21	-0.31	0.59	0.51	0.55	0.51
Demand fluctuations	-0.05	-0.18	-0.21	-0.34	0.53	0.56	0.58	0.60
Barriers to entry	0.09	0.01	-0.07	-0.20	0.53	0.53	0.50	0.52
The effect of imports on consumer demand	0.07	0.00	-0.09	-0.15	0.55	0.53	0.55	0.44
The seasonality of demand	0.09	0.10	-0.05	-0.14	0.52	0.53	0.58	0.53
Rejection of products received by supermarkets	-0.17	-0.04	-0.19	-0.30	0.44	0.45	0.52	0.50
The status of resource supply	-0.07	-0.16	-0.29	-0.42	0.52	0.56	0.65	0.65
Price competition	-0.08	-0.07	-0.20	-0.27	0.56	0.55	0.56	0.55
Raw material price fluctuations	-0.24	-0.23	-0.28	-0.30	0.56	0.58	0.64	0.68
Cost of electricity by source (electricity and gas)	-0.38	-0.40	-0.61	-0.63	0.67	0.68	0.71	0.73
Market capacity	-0.13	-0.30	-0.43	-0.56	0.53	0.53	0.61	0.62
Reduction in consumer purchasing power	-0.29	-0.45	-0.63	-0.80	0.63	0.64	0.72	0.78
Logistical risk	-0.24	-0.35	-0.64	-0.83	0.39	0.44	0.61	0.85
Commercial risks	-0.14	-0.21	-0.56	-0.68	0.40	0.41	0.55	0.75
Transportation risks	-0.12	-0.27	-0.66	-0.86	0.34	0.41	0.61	0.87
Disruption in logistics	-0.36	-0.42	-0.60	-0.81	0.40	0.46	0.62	0.87
Risks of losing property	-0.36	-0.48	-0.74	-0.95	0.40	0.48	0.67	0.92
Environmental and climate-related risks	-0.30	-0.34	-0.48	-0.64	0.44	0.43	0.58	0.69
Variability in legislation concerning environmental requirements, enhancement of ecological standards (importance of waste disposal and reduction of footprint)	-0.02	0.03	-0.04	-0.03	0.45	0.44	0.49	0.53
Emergencies, technological disasters	-0.26	-0.40	-0.61	-0.89	0.44	0.44	0.63	0.78
Unfavorable climatic factors affecting business include the impact on the quality, availability, and price of raw materials.	-0.41	-0.40	-0.57	-0.73	0.40	0.39	0.57	0.66
Environmental pollution and groundwater contamination.	-0.51	-0.60	-0.69	-0.90	0.46	0.45	0.64	0.77
Production (technology) risk	-0.07	-0.20	-0.44	-0.71	0.44	0.46	0.54	0.66
The resources of the food industry	-0.08	-0.20	-0.48	-0.80	0.42	0.40	0.54	0.66
The quality of raw materials	-0.14	-0.20	-0.37	-0.73	0.39	0.51	0.48	0.65
Energy supply (fuel and electricity shortages)	-0.37	-0.52	-0.82	-0.95	0.53	0.50	0.62	0.71
The technical and technological conditions of the food industry include innovations, energy-efficient practices, resource-saving methods, and zero-waste technologies.	0.31	0.13	-0.09	-0.36	0.43	0.43	0.53	0.63
Financial risk	-0.37	-0.42	-0.60	-0.85	0.59	0.61	0.69	0.78
Currency risk	-0.24	-0.44	-0.46	-0.88	0.56	0.58	0.63	0.68
Inflation risk	-0.67	-0.67	-0.69	-0.77	0.66	0.67	0.68	0.76
Credit risk	-0.31	-0.33	-0.61	-0.83	0.54	0.59	0.72	0.81
Investment risk	-0.24	-0.25	-0.62	-0.93	0.60	0.58	0.74	0.87

Source: calculated by the authors based on the expert assessment results.

The group ratings were established by calculating the arithmetic mean of the scores from the experts who participated in the evaluation. Risk significance and occurrence probability can be assessed using specific scales (Tables 7 and 8).

Table 7

Probability ranking scale for risk occurrence

Rating	Probability	Risk Level	Probability of an event occurring
1	0.00	The lack of risk	Very low
2	0.01 - 0.24	Low risk	Low
3	0.25 - 0.50	Medium risk	Medium
4	0.51 - 0.75	High risk	High
5	0.76 - 1.00	Extremely high risk	Very high

Source: compiled by the authors

Table 8

Ranking scale for the degree of risk impact on business operations

Rating	Confidence factors (by absolute value)	Degree of impact
1	0 - 0,19	Very low
2	0,2 - 0,39	Low
3	0,4 - 0,59	Medium
4	0,6 - 0,79	High
5	0,8 - 1	Very high

Source: compiled by the authors

The overall risk assessment is determined through traditional risk analysis, which considers the likelihood of risk occurrence and the extent of its impact on business operations. Quantitative risk assessment is calculated using a formula:

$$R = P \cdot D \quad (2)$$

where R is risk level; P is likelihood of risk occurrence (in points);

D is a degree of risk impact on business operations (in points).

Risk ranking assists organizations in identifying high-priority risks that require immediate action. This process facilitates effective resource allocation and reduces the likelihood of adverse business outcomes. Based on the scales, the assessment of external risks has been performed; the maximum value of the overall risk assessment (risk level) for each type can reach 25 points (Table 9). The ranking varies from 1 – the most significant (highest total score) to 5 – the least influential (minimum score).

Table 9

Ranking scale for external risks

Ranks	Overall Risk Assessment	Risk Level	Risk definition
5	0-5	Negligible (low)	Minor impact on business or a very low probability of occurrence. There is no need to pay significant attention to risks, but we should monitor them closely.
4	6-10	Moderate	A medium probability of occurrence and a moderate impact on the organization indicate that risks require attention and monitoring but do not necessitate immediate action.
3	11-15	High	There is a high probability of occurrence with a significant impact on the organization. Effective risk management reduces its effects on the business.
2	16-20	Critical	There is a very high probability of occurrence and a significant impact on the organization. Risks can lead to substantial financial or reputational losses, necessitating immediate managerial action to mitigate their effects on business operations.
1	21-25	Extreme (catastrophic)	There is a high probability of occurrence and a catastrophic impact on the organization. These risks can lead to irreparable losses or even the cessation of business. They require an immediate response and the development of measures to prevent or minimize negative consequences.

Source: compiled by the authors

4.5. Risk matrix as an element of risk prioritization for food processing enterprises

To visualize the risk ranking process, we created a risk matrix with the X-axis (horizontal) representing the likelihood of an event occurring and the Y-axis (vertical) indicating the impact. All risks are allocated across the axis scales, allowing us to assess their relative priority (Table 10).

Table 10

Risk matrix

Impact	Likelihood				
	1 (very low)	2 (low)	3 (medium)	4 (high)	5 (very high)
1 (very low)	Low risk	Low risk	Low risk	Medium risk	Medium risk
2 (low)	Low risk	Low risk	Medium risk	Medium risk	High risk
3 (medium)	Low risk	Medium risk	Medium risk	High risk	Critical risk
4 (high)	Medium risk	Medium risk	High risk	Critical risk	Critical risk
5 (very high)	Medium risk	High risk	Critical risk	Critical risk	Extreme risk

Source: compiled by the authors

A risk matrix systematically identifies and prioritizes risks, helping to understand which ones require the most attention and resources. Low risk indicates minimal impact and requires ongoing monitoring; Medium risk refers to moderate impact and necessitates attention and appropriate actions. High risk signifies significant impact and demands active measures to mitigate risks. Critical risk indicates a potentially severe impact and calls for immediate action. Extreme (catastrophic) risk presents a disastrous impact. A crucial step is to neutralize and manage these risks.

The results of the risk assessment are presented in Table 11. A generalized ranking of risks across different regions is visualized. The ranking ranges from 1 – the most significant (highest overall risk point score) – to 5, the least impactful (minimum score).

Table 11

Risk assessment for food processing enterprises

Types of Risks	Regions							
	I		II		III		IV	
	Points	Rank	Points	Rank	Points	Rank	Points	Rank
Security and military risks	6	4	9	4	20	2	25	1
Political risk	12	3	12	3	12	3	12	3
Administrative and legislative risks	12	3	12	3	12	3	12	3
Socio-demographic risk	8	4	8	4	12	3	25	1
Market risk	4	5	4	5	8	4	8	4
Logistic risk	6	4	6	4	16	2	25	1
Environmental and climate-related risks	6	4	6	4	12	3	16	2
Production (technology) risk	3	5	3	5	12	3	16	2
Financial risk	8	4	12	3	12	3	25	1
Average risk assessment	7	4	8	4	13	3	18	2

Source: calculated by the authors

It is worth noting that different regions of Ukraine exhibit varying levels of security, military concerns, socio-demographic factors, environmental issues, and climate-related risks. According to expert assessments, political, administrative, and legislative risks remain equally high nationwide. The socio-demographic risk is moderate in relatively safe regions for business activities (Group I) and areas deemed to be at specific risk (Group II). The risk increases for high-risk and frontline regions (Group III). It escalates to high and becomes extreme for areas experiencing active combat operations or near the front line (Group IV).

Overall, business risks in Groups I and II are characterized as moderate. Generally, business risk escalates to a high level for enterprises operating in Group III areas, where security and logistical risks significantly affect operations. This regional pattern is consistent with evidence that transport corridors in the east of Ukraine lag far behind western ones because of hostilities and severe infrastructure damage (Y. Vovk et al., 2025). Regions in Group IV encounter substantial business risks, as security, logistical, socio-demographic, and financial challenges greatly influence organizations.

Considering the results obtained for the probability and level of strategic risks facing Ukrainian businesses under martial law, it can be concluded that a high level of external strategic risks complicates strategic planning. The increased likelihood of risk occurrence significantly narrows the planning horizon, particularly for enterprises operating in Groups III and IV regions.

Several factors influence the length of the strategic planning horizon, including the degree of external environmental uncertainty, market conditions, and the enterprise's financial stability.

This is also confirmed by a survey conducted by Gradus Research Company (2025). According to the study, the business planning horizon has significantly shortened during martial law. Thus, 71% of the surveyed companies plan their operations for a year or even less ahead.

Strategic actions to mitigate risks for food processing enterprises are crucial for ensuring stability, competitiveness, resilience, and long-term development. Enterprises face various external risks and must

adopt a comprehensive risk management approach. These actions aim to minimize the negative impact of factors beyond the organization's direct control that can affect its productivity operations

5. CONCLUSION

Managing risk prioritization is a key element of a threat mitigation strategy. Various methods are employed depending on the type of business, its needs, and the potential consequences of risks. It is crucial to adopt a systematic approach to assess the probability and impact of each risk, ensuring adequate resource allocation and protecting the organization from the most critical threats. The proposed methodology for managing risk prioritization consists of the following stages:

1. Qualitative risk analysis involves identifying risks related to business operations.
2. Key risk indicators should be established, including the probability of a risk occurring and the impact level of risks from business activities.
3. Calculate the overall score for each type of risk based on the defined indicators.
4. Determine the integral indicators by summing the overall significance for each type of risk according to the defined indicators.
5. Rank risks based on overall priority and identify those that require immediate action.
6. Develop recommendations for managing the various types of risk prioritization.

External strategic risk management for food industry enterprises requires a comprehensive approach that includes economic, technological, environmental, social, and legal adaptation processes. Diversifying the supply chain, investing in innovation, raising ecological awareness within enterprises, fostering cooperation between government authorities, and adapting to changing customer needs can help businesses mitigate the adverse effects of external risks and ensure sustainable development. External risk management is a crucial component of strategic planning for organizational success. External risks are adverse factors beyond the organization's control that can significantly affect its operations. Managing external risks is an ongoing process that requires adaptation and preparedness for change. External risks in the food industry in Ukraine arise from various factors, including fluctuations in raw material prices, changes in demand, market regulation, and financial conditions. Enterprises must continually monitor and assess these risks to achieve their organizational goals. Modern risk management methods include identifying and evaluating risks. A risk monitoring system aids in effective strategic planning and implementation, allows for forecasting potential risk events, and enables companies to capitalize on opportunities, ensure efficient resource allocation, enhance enterprise resilience, and improve competitiveness. Strategic risk management helps enterprise management forecast potential risks more accurately, mitigate their impact, avoid threats to business sustainability, and enhance decision-making.

Preventive risk management safeguards strategic goals and enterprise assets, enhances the company's positive image in the market, and helps mitigate reputational risks, among other benefits. This approach empowers the organization to achieve its strategic objectives and, if necessary, adapt the company's strategy. An audit of strategic risk management reveals the need for systematic improvements in the risk management process and highlights critical areas of strategic management. Based on this assessment, appropriate risk management measures are implemented. Enterprises must proactively anticipate external risks and develop strategies to mitigate their impact, such as diversifying suppliers, investing in energy-efficient technologies, or adapting to changing consumer habits. Evaluating the influence of external environmental factors, using confidence coefficients and considering both positive and negative impacts, will aid in establishing the confidence level for the successful (or unsuccessful) implementation of a specific strategy or development path for the enterprise. This methodology necessitates the integration of evaluations regarding the influence of both external and internal business environmental factors.

The findings of this study have significant practical implications for enterprise managers, policymakers, and industry stakeholders operating under conditions of heightened uncertainty and martial law. First, the proposed expert-based methodology for identifying, assessing, and prioritizing external strategic risks provides enterprises with a structured and adaptable decision-support tool. By combining probability assessments, impact coefficients, and confidence measures, managers can more accurately determine which external risks require immediate intervention and which can be monitored over time. This is particularly valuable in crisis environments where resources are limited and rapid decision-making is essential. Second, the regional differentiation of external risks enables enterprises to tailor their strategies to local conditions rather than relying on uniform, country-wide assumptions. For food industry enterprises, this allows for more effective supply chain configuration, logistics planning, workforce management, and investment decisions depending on regional risk exposure. The developed risk matrix can also support scenario planning and contingency strategy development, helping firms maintain operational continuity and food supply stability during periods of disruption. Finally, the research outcomes can be used by public authorities and sectoral organizations to design targeted support measures for enterprises operating in high-risk regions. Understanding the structure and intensity of external risks facilitates more effective coordination between businesses and government institutions in areas such as regulatory adaptation, infrastructure protection, and crisis response planning.

From a theoretical perspective, this study contributes to the strategic risk management literature by extending its application to an extreme and underexplored context (enterprise operations under martial law). The research advances existing theory by conceptualizing external strategic risk as a multidimensional, region-specific, and dynamically evolving phenomenon rather than a static external constraint. By integrating expert judgment with confidence-based assessments and consensus measurement, the study offers a methodological contribution that bridges qualitative insights and structured strategic analysis. Moreover, the research enriches strategic management theory by demonstrating how external risks directly influence planning horizons, strategic flexibility, and risk appetite in crisis conditions. The focus on external risks as both threats and potential opportunities supports a more nuanced understanding of strategic adaptation under uncertainty. This contributes to the broader discourse on resilience, adaptability, and strategic decision-making in volatile environments.

Despite its contributions, this study has several limitations that should be acknowledged. The research relies on expert judgment, which, while appropriate in high-uncertainty contexts, inherently involves subjectivity. Although consensus measures were applied to enhance reliability, expert assessments may still reflect individual perceptions, experience, or informational asymmetries. Moreover, the study focuses primarily on external risks and does not provide a detailed quantitative integration of internal organizational factors, such as firm-specific capabilities, governance structures, or financial resilience. Additionally, the research is sector-specific, concentrating on food industry enterprises, which may limit the direct generalizability of the findings to other industries with different risk profiles. The cross-sectional nature of the study also constrains the ability to capture the dynamic evolution of risks over time, particularly in rapidly changing wartime conditions.

Future research could expand this study in several important directions. Longitudinal analyses would allow for the examination of how external strategic risks evolve over time and how enterprises adjust their strategies in response to changing risk configurations. Further studies could also integrate internal risk factors and organizational capabilities to develop more comprehensive strategic risk models that capture the interaction between external threats and internal resilience mechanisms. Comparative research across industries or countries experiencing different types or intensities of crises would provide valuable insights into the transferability of the proposed methodology. Finally, future research may explore the integration of expert-based qualitative assessments with quantitative data sources and digital risk-monitoring tools,

enhancing the predictive and adaptive capacity of strategic risk management systems in highly uncertain environments.

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REFERENCES

- Adda, G. (2024). Examining the relationship between procurement strategies and organizational performance of Ghanaian firms: How does strategic procurement drive organizational success?. *Economics, Management and Sustainability*, 9(2), 20-28.. <https://doi.org/10.14254/jems.2024.9-2.2>
- Ahn, J.K., Cho, K., Seo, K., Kim, H., & Kim, S. (2025). Comprehensive Analysis and Recommendation of Supply Chain Risk Management Framework for the Military Domain. *IEEE Access*, 13, 96813-96833. <https://doi.org/10.1109/ACCESS.2025.3573515>
- AIRMIC. (2023). Scenario analysis. A Practical Guide. (2023). Barnett Waddingham LLP. <https://www.airmic.com/system/files/technical-documents/Airmic-Scenario-Analysis-Guide.pdf>
- Allan, N., & Beer, L. (2006). Strategic risk – It's all in your head., University of Bath, School of Management, 2006.1. <http://www.bath.ac.uk/management/research/pdf/2006-01.pdf>
- Andersen, T. J., & Sax, J. (2019). Strategic Risk Management: A Research Overview, Routledge, London. <https://doi.org/10.4324/9780429456381>
- Ansyari, S. (2024). Implementation of risk management in strategic decision making. *Journal of Scientific Interdisciplinary*, 1, 35-44. <https://doi.org/10.62504/t7c2r379>
- Assessment of the impact level of external risks on enterprises in various regions of Ukraine: Survey questionnaire. <https://forms.gle/P1wSM4xetaN2LZmcA>
- Assessment of the probability of occurrence of external risks in various regions of Ukraine: Survey questionnaire. <https://forms.gle/mDuJhuUgFXzpa73Q6>
- Burstein, G., & Zuckerman, I. (2025). A Structured Causal Framework for Operational Risk Quantification: Bridging Subjective and Objective Uncertainty in Advanced Risk Models. *Mathematics*, 13(15), 2467. <https://doi.org/10.3390/math13152467>
- Chernysh, O., Kuryliuk, Yu., Kolomiets, V. , Tomchuk-Ponomarenko, N.,& Savchuk, A. (2023). Strategic priorities for the development of Ukraine's economy in wartime conditions: a response to modern challenges. *Financial and credit activity: problems of theory and practice*, 3(50), 282-297. <https://doi.org/10.55643/fcaptp.3.50.2023.4079>
- Chugaievskaya, S., & Wisla, R. (2023). A new wave of migration in Ukraine on the background of Russian invasion: Dynamics, challenges and risks. *Journal of International Studies*, 16(4), 220-244. doi:10.14254/2071-8330.2023/16-4/15
- Classification of Ukrainian regions by enterprise risk levels: Survey questionnaire. <https://forms.gle/i2GBY9GccRSxKbK96>
- COSO ERM. (2017). Enterprise risk management integrating with strategy and performance. Committee of Sponsoring Organizations of the Treadway Commission. <https://static.poder360.com.br/2023/09/Diretriz-Enterprise-Risk-Management-Coso-2017.pdf>
- Curtis, P., & Carey, M. (2012). Risk assessment in practice. *Committee of Sponsoring Organizations of the Treadway Commission. Deloitte & Touche LLP*. <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Governance-Risk-Compliance/dttl-grc-riskassessmentinpractice.pdf>
- Dhlamini, J. (2022). Strategic risk management: A systematic review from 2001 to 2020. *Journal of Contemporary Management*, 19, 212-237. <https://doi.org/10.35683/jcm22008.165>
- DSTU EN IEC 31010:2022. (2022). Risk management. Risk assessment techniques (EN IEC 31010:2019, IDT; IEC 31010:2019, IDT). https://online.budstandart.com/ua/catalog/doc-page.html?id_doc=100889

- DSTU IEC/ISO 31010:2013. (2013). Risk management: Risk assessment techniques (IEC/ISO 31010:2009, IDT). <https://khoda.gov.ua/image/catalog/files/dstu%2031010.pdf>
- DSTU ISO 31000:2018. (2018). Risk management. Principles and guidelines (ISO 31000:2018, IDT). https://online.budstandart.com/ua/catalog/doc-page.html?id_doc=80322
- Emblemsvåg J., & Kjølstad L.E. (2002). Strategic risk analysis – A field version. *Management Decision*, 40(9), 842-852. <https://doi.org/10.1108/00251740210441063>
- Erzurumlu, Y.O., Gozgor, G., Lau, C.K.M., Soliman, A.M., & Turkkan, M. (2025). The effects of geopolitical and political risks on corporate ESG practices. *Journal of Environmental Management*, 386, 125747. <https://doi.org/10.1016/j.jenvman.2025.125747>
- Francis, G. (2019). Enterprise Risk Management (ERM): Key Risks, Responses and Applications. Society of Actuaries. <https://www.soa.org/globalassets/assets/files/resources/essays-monographs/2019-erm-symposium/mono-2019-erm-francis.pdf>
- Freedenberg, P. (2005). Balancing economic opportunity and strategic risk in China. *American Machinist*, 149, 26. <https://www.proquest.com/trade-journals/balancing-economic-opportunity-strategic-risk/docview/194765405/se-2>
- Frigo, M.L., & Anderson, R.J. (2011). What is strategic risk management? *Strategic Finance*, 92, 21-22. http://www.markfrigo.org/What_is_Strategic_Risk_Management_-_Strategic_Finance_-_April_2011.pdf
- Gjinovci, A., & Gjinovci, D. (2025). Structural Barriers to Development: How Nepotism and Corruption Undermine Public Administration and Economic Growth. *Ekonomicko-manazerske spektrum*, 19(2), 125-135. <https://doi.org/10.26552/ems.2025.2.125-135>
- Gradus Research Company. (2025). Gradus. <https://gradus.app/en/open-reports/>
- Grebeniyk, A., Aleshkovski, I., & Maksimova, A. (2022). The Impact of Labor Migration on Human Capital Development. *Migraciones Internacionales*, 12, 2190. <https://doi.org/10.33679/rmi.v1i1.2190>
- Gwet, K. L. (2021), Handbook of Inter-Rater Reliability: The Definitive Guide to Measuring the Extent of Agreement Among Raters, Vol. 2: Analysis of Quantitative Ratings, AgreeStat Analytics.
- Hamdaoui, M., Mtiraoui, A., Aroussi, Z., & Smida, M. (2025). Understanding the dynamics of financial and economic crises: a comprehensive analysis. *Cogent Social Sciences*, 11(1). <https://doi.org/10.1080/23311886.2025.2454740>
- Han, X., Lin, T.X., & Wanf, X. (2024). Mitigate cross-market competition caused by the risk of uncertainty and improve firm performance through business intelligence. *Heliyon*, 10(14). e34542. <https://doi.org/10.1016/j.heliyon.2024.e34542>
- Harvey, C. R., Rattray, S., & Van Hemert, O. (2021). Strategic Risk Management: Designing Portfolios and Managing Risk. Wiley John Wiley & Sons, Ltd.
- Hillson, D. (2001). Effective strategies for exploiting opportunities. In Proceedings of the 32nd Annual Project Management Institute Seminars & Symposium, Nashville, USA. <https://www.pmi.org/learning/library/effective-strategies-exploiting-opportunities-7947>
- Hopkin, P. (2013). Risk Management (Strategic Success). Kogan Page.
- IEC 31010:2019. (2019). Risk management — Risk assessment techniques. International Organization for Standardization. <https://www.iso.org/ru/standard/72140.html>
- Illyashenko, S.M. (2005). Innovative Development Management: Problems, Concepts, Methods. University Book Publishing House, Sumy.
- Jiménez, A., Arrieta, Y., Nuñez, M. A., & Villanueva, E. (2024). Management of Strategic Risks for the Sustainability of SMEs in the Manufacturing Sector in Antioquia. *Sustainability*, 16(5), 2094. <https://doi.org/10.3390/su16052094>
- Kardos, P., Chmielová Dalajková, I., & Ahmad, N. (2024). Increasing the prevention of process failure and the overall resilience of businesses through the process risk assessment. *Journal of Business Sectors*, 2 (1), 68–78. <https://doi.org/10.62222/FWNR2982>
- Kedarya, T., Elalouf, A., & Cohen, R.S. (2023). Calculating strategic risk in financial institutions. *Global Journal of Flexible Systems Management*, 24, 361-372.

- Kryvoviazziuk, B. I. (2023). Development strategies of business entities in the modern business environment. *Economic Sciences: Collection of Scientific Papers of Lutsk National Technical University. Series "Regional Economy"*, 20(79), 137-145. [https://doi.org/10.36910/2707-6296-2023-20\(79\)-18](https://doi.org/10.36910/2707-6296-2023-20(79)-18)
- Kuzior, A., Polishchuk, Ye., Zámek, D., & Kőmives, P. M. (2026). Wartime business relocation intentions and adaptive capacity in Ukraine: Evidence from multinomial logit and latent class analysis. *Economics and Sociology*, 19(2), 81-109. doi:10.14254/2071-789X.2026/19-2/4
- Marchetti, A.M. (2011). *Enterprise Risk Management Best Practices: From Assessment to Ongoing Compliance*. Wiley John Wiley & Sons, Ltd.
- Marynenko, N. & Ersteniuk, T. (2024). Functioning trends and development opportunities of domestic entrepreneurship under the marital state. *Socio-Economic Problems and the State*. 30(1), 152-168. <https://doi.org/10.33108/sepd2024.01.152>
- McConnell, P.J. (2012). The governance of strategic risks in systemically important banks. *Journal of Risk Management in Financial Institutions*, 5(2), 128-142.
- McConnell, P.J. (2015). Strategic risk management: A trail of two strategies. *Macquarie University Faculty of Business & Economics Research Paper*, 38, 2–29. <https://doi.org/10.2139/ssrn.3327988>
- Mennekes, T., & Schramm-Klein, H. (2025). Effects of crisis-induced inflation on purchasing and consumer behavior in Germany. *Journal of Retailing and Consumer Services*, 85, 104295. <https://doi.org/10.1016/j.jretconser.2025.104295>
- Mishchuk, H., Samoliuk, N., Krol, V., & Vasa, L. (2024). Social integration of internally displaced persons in Ukraine: Perceptions from IDPs vs. the host population. *Economics and Sociology*, 17(4), 61-81. doi:10.14254/2071-789X.2024/17-4/4
- Mohammed, A., & Sykes, R. (2012). Sharpening strategic risk management. Resilience: A Journal of Strategy & Risk. https://www.pwc.pl/pl/publikacje/pwc_resilience_winning_with_risk.pdf
- Nieto, A., & Medina, J.F. (2020). Development of a socio-economic strategic risk index as an aid for the feasibility assessment of mining projects and operations. *Journal of the Southern African Institute of Mining and Metallurgy*, 120(7), 433-450. <http://dx.doi.org/10.17159/2411-9717/711/2020>
- Nieto, A., & Medina, J.F. (2020). Development of a socio-economic strategic risk index as an aid for the feasibility assessment of mining projects and operations. *Journal of the Southern African Institute of Mining and Metallurgy*, 120.
- Ovander, N. (2021). Overview of international and Ukrainian risk management standards in the context of modern challenges and threats. *Economy and Society*, (27). <https://economyandsociety.in.ua/index.php/journal/article/view/441/423>
- Peng, G., Bang, K.E., & Markeset, T. (2024). Country risk mapping in a changing world – comparative survey on academic research and industrial practices. *International Journal of System Assurance Engineering and Management*, 16, 561-580. <https://doi.org/10.1007/s13198-024-02600-8>
- Petropoulos, F., Akkermans, H., Aksin, O. Z., Ali, I., Babai, M. Z., Barbosa-Povoa, A., ...& Zheng, T. (2026). Operations & supply chain management: principles and practice. *International Journal of Production Research*, 64(1), 330–513. <https://doi.org/10.1080/00207543.2025.2555531>
- Pikulina, O., & Charkina, T. (2025). Specifics of Ensuring Economic Security Under Martial Law. *Investments: practice and experience*, 22, 88-94. <https://doi.org/10.32702/2306-6814.2025.22.87>
- Ramos, C. (2024). Strategic risk management: Overview and guide, AuditBoard, <https://www.auditboard.com/blog/strategic-risk-management/>
- Reznikova, O.O., Voitovskyi, K.Ye., & Lepikhov, A.V. (2020). National risk and threat assessment systems: Global best practices and new opportunities for Ukraine. National Institute for Strategic Studies. <https://niss.gov.ua/sites/default/files/2020-07/dopovid.pdf>
- Shen, Y., Giroud, A., & Han, X. (2025). Navigating turbulent waters: A literature review of socio-political risks and multinational enterprises' nonmarket strategies. *International Business Review*, 34(6), 102498. <https://doi.org/10.1016/j.ibusrev.2025.102498>
- Sievidova, I., Pakhucha, E., Chumak, V., Shovkun, L., Novikov, A., Zakharov, I., & Skrypyuk, O. (2021). Assessment of economic risks in the context of strategic enterprise management. *European Journal of Sustainable Development*, 10(3), 231-252. <https://doi.org/10.14207/ejsd.2021.v10n3p231>

- Slagmulder, R., & Devoldere, B. (2018). Transforming under deep uncertainty: A strategic perspective on risk management. *Business Horizons*, 61(5), 733-743. <https://doi.org/10.1016/j.bushor.2018.05.001>
- Stashkevych, I. (2025). Analysis of food security in Ukraine: Current realities and future trends. *Economic Issues of Social Development*, 4. <https://doi.org/10.70651/3083-6018/2025.4.12>
- Verbovskii, I. (2024). Strategic management in the face of risk and uncertainty. *Economy. Management. Innovations*, 1(34). [https://doi.org/10.35433/ISSN2410-3748-2024-1\(34\)-8](https://doi.org/10.35433/ISSN2410-3748-2024-1(34)-8)
- Vojtekova, S., Miklusicakova, P., Krastev, V., & Durana, P. (2025). The effects of the COVID-19 pandemic on business activity indicators in the V4 region. *Journal of Business Sectors*, 3(1), 13–24. <https://doi.org/10.62222/AICG6810>
- Vovk, I., Vovk, O., Vovk, Y., & Palianytsia, V. (2025). Digital Twins in Hospitality Management: Simulation-Based Decision Models for Efficiency Optimization in Central Europe. *Ekonomicko-manazerske spektrum*, 19(2), 44-59. <https://doi.org/10.26552/ems.2025.2.44-59>
- Vovk, Y., Vovk, I., Plekan, U., Tson, O., & Oleksyuk, V. (2025). Sustainable and smart logistics centers: Challenges and opportunities for Ukraine's transport system. *Journal of Sustainable Development of Transport and Logistics*, 10(1), 116-124. <https://doi.org/10.14254/jsdtl.2025.10-1.8>
- Zaiontz, C. (2016). Kendall's coefficient of concordance (W). Real Statistics. <https://real-statistics.com/reliability/interrater-reliability/kendalls-w/>
- Zwikael, O., & Ahn, M. (2010). The Effectiveness of Risk Management: An Analysis of Project Risk Planning Across Industries and Countries. *Risk Analysis*, 31(1), 25-37. <https://doi.org/10.1111/j.1539-6924.2010.01470.x>