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THE COMPETITIVENESS AND ECONOMIC SECURITY OF CONSTRUCTION ENTERPRISES DURING WAR: THE IMPACT OF MIGRATION AND CORPORATE SOCIAL RESPONSIBILITY

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Abstract. The relevance of the study is determined by the need to identify the factors affecting the functioning of construction enterprises during wartime, which is characterised by increased economic risks, a reduction in labor potential, and disruptions to production and logistics processes. Large-scale migration processes, particularly internal displacement and the outflow of skilled labour, are transforming the competitive environment of the construction industry and directly affecting the level of economic security of enterprises. Concurrently, the significance of corporate social responsibility is rising as a mechanism for workforce stabilisation and enhancing business resilience. The objective of this study is to ascertain the impact of labour migration and corporate social responsibility on the competitiveness and economic security of construction enterprises during wartime. The study focuses on the activities of construction enterprises operating in conditions of military and economic instability. It examines the economic and socio-managerial factors that influence their competitive position and operational security. To achieve the stated objective, the relationships between economic security and competitiveness were analysed using both a systems approach and a structural-functional approach. Methods of analysis and synthesis were employed to generalise theoretical provisions. A survey of construction industry professionals was conducted to identify the factors influencing the performance, competitiveness and economic security of construction enterprises. A comparative analysis was then applied to examine management approaches to ensuring economic security in both stable and crisis conditions. The study identified three key areas that influence the competitiveness of construction enterprises: market conditions, adaptability and internal potential. The impact of migration processes on construction enterprises was determined across three dimensions: workforce stability, production capacity and competitive adaptability. Additionally, key corporate social responsibility measures in the context of migration processes were identified. Implementing these measures contributes to reducing socio-economic risks and enhancing the level of economic security. The practical significance of the results lies in their applicability in the development of anti-crisis strategies, personnel management programmes, and systems for ensuring the economic security of enterprises under wartime conditions.

Keywords: competitiveness, economic security, financial stability, enterprise, migration, migration flows, human capital competitiveness, corporate social responsibility.

JEL Classification: J21, J61, M14, M21

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1. Introduction

The military aggression against Ukraine has triggered a series of adaptive changes that have resulted in profound transformational processes in the economy, which have been particularly evident in the functioning of the construction sector. The construction industry is a fundamental component of the economic system, with a role in the recovery of infrastructure, the generation of a multiplier effect in related sectors, and a key role in the post-war reconstruction of the country. At the same time, enterprises in the sector face increased risks during periods of armed conflict that significantly complicate the maintenance of their competitiveness and economic security. These risks include the destruction of production facilities and the disruption of logistics chains, as well as shortages of material and technical resources and significant fluctuations in domestic demand.

Migration processes have been identified as a particularly significant factor determining the intensity and nature of transformations in the construction sector. The large-scale outflow of labour abroad, internal displacement of the population, and changes in the spatial distribution of labour potential lead to a shortage of skilled personnel, reshape the labour market, and intensify workforce-related threats to the economic security of enterprises.

Studies on migration processes during wartime (UNDP et al., 2024) suggest that there has been a significant reduction in labour resources in Ukraine, as well as a transformation in the employment structure. Haman (2023) shows that migration causes a shortage of skilled labour, increased competition for human resources and rising labour costs in the construction sector. Therefore, migration is one of the key factors affecting the competitiveness and resilience of enterprises, although models that integrate and assess its impact are still in their infancy.

In times of war and economic instability, the availability of labour resources and their skills, as well as enterprises' ability to retain key employees, become critical factors in achieving sustainable performance. In this context, corporate social responsibility (CSR) is becoming increasingly important as a tool for ensuring social stability, strengthening reputational capital and building long-term stakeholder trust.

The implementation of CSR initiatives, including employee support, participation in humanitarian projects, engagement with local communities and measures related to social protection, inclusiveness, occupational health and safety, acquires a functional dimension aimed at enhancing the resilience of corporate systems in times of crisis. For construction enterprises operating in areas directly affected by war, where they often face immediate physical threats, CSR becomes a vital component of strategic survival, not merely a reputational tool. It ensures competitive advantages and helps to retain and protect key personnel.

Thus, it is particularly relevant to conduct a comprehensive study of the relationship between the competitiveness and economic security of construction enterprises, and migration processes and corporate social responsibility. This study provides the theoretical and methodological foundations for developing effective mechanisms to manage enterprise resilience in extreme conditions, and contributes to the development of strategic directions for industry growth during wartime and post-war recovery.

2. Literature Review

The competitiveness and economic security of construction enterprises in wartime encompasses a wide range of factors, from industry transformation and business resilience to migration and corporate social responsibility. Contemporary studies suggest that war can have a significant impact on the structure, operating conditions and strategic priorities of construction companies.

The functioning of the construction sector in the context of war is examined in the works of Emmanuel et al. (2025), who analyse key factors such as infrastructure destruction, disruptions in logistics chains, and the financial instability of enterprises. The strategic role of the sector in post-war economic recovery is highlighted in the study by Greits and Liventsov (2025), which emphasises the need for rapid adaptation to changing conditions and the adoption of innovative technologies.

According to the CES (2024) analytical report, a significant barrier to recovery is the sector's insufficient readiness to implement large-scale reconstruction projects. This requires investment, as well as the strengthening of institutional capacity. Similar conclusions are presented in the study by Ivanova et al. (2024), which emphasises that the industry is undergoing transformation under pressure from new socio-economic realities, characterised by a substantial decline in the economic security of all entities.

The exploration of issues pertaining to the economic security of construction enterprises in a martial law context is a subject that has been the focus of scholarly attention in Ukraine. In particular, Fenyuk et al. (2024) focus on threats to financial stability, insufficient reserve funds, and the increasing risks of disruptions in business relations. As demonstrated in the work of Koba (2022), analogous findings are presented, which show that the primary threats are driven by increasing uncertainty and infrastructure destruction.

Kocheharov (2025) emphasises the importance of developing a comprehensive economic security system that considers the unique features of wartime conditions, from risk assessment to the development of institutional resilience mechanisms. In a subsequent

study, the same author substantiates the idea that, for small and medium-sized construction enterprises, institutional capacity and the ability to integrate into post-war reconstruction programmes are key factors of economic security.

The work of Bielienkova (2020) presents fundamental theoretical approaches to assessing competitiveness, defining sustainable development as a prerequisite for long-term competitive success. Further research conducted during wartime, particularly by Hoiko et al. (2023), provides empirical evidence on the assessment of competitiveness in the elite residential construction sector. This research highlights the importance of organisational adaptability and the speed of decision-making.

Palamarchuk and Petryshyna (2023) summarise the factors that influence companies' competitive positions in times of crisis, with innovation, project management efficiency, environmental sustainability and digitalisation playing a dominant role. Lopatka (2023) proposes a methodological approach to strengthening competitive positions in the context of sustainable development, emphasising the need to consider economic, social, and environmental aspects simultaneously.

A global perspective reveals that the key drivers of competitiveness for construction companies are technological innovation, human resource management and organisational flexibility, as demonstrated by the systematic review by Al-Kayed et al. (2024).

The role of corporate social responsibility (CSR) in shaping competitive advantages has been analysed in a number of international studies. In particular, Hui and Meng (2024) emphasise that CSR contributes to strengthening corporate reputation and building trust among stakeholders, especially under conditions of increased social risks. Shu and Duan's (2023) study provides evidence of a positive correlation between the implementation of CSR practices and the overall competitiveness of construction companies.

The study by Ma et al. (2024) establishes that CSR is an important factor in organisational resilience, as it contributes to the development of internal capabilities, partnership networks, and investment attraction. Xuetong et al. (2024) confirm that corporate reputation acts as a mediator between CSR and sustainable competitive advantages. The review by Chen et al. (2024) demonstrates that, in the context of international practice, CSR is progressively evolving into an institutional norm within the construction sector.

Recent studies on resilience frameworks (Akimova et al., 2025; Chavez et al., 2025; Li et al., 2024) emphasise that the resilience of construction enterprises depends not only on economic factors but also on their ability to interact with communities and adapt to new conditions. Innovative approaches to reconstruction are explored in the work of Zhyhlo et al. (2024), which provides a detailed analysis of the role of digital technologies in post-war recovery. Concurrently, Panchal (2020) and Zungu and Laryea (2024) emphasise that corporate resilience is formed through strategic planning and the development of risk management competencies.

A review of the extant literature indicates that the issues of competitiveness and economic security of construction enterprises under wartime conditions have been the subject of study in a fragmented manner.

A substantial number of studies concentrate on individual aspects, including the state of the industry, enterprise resilience, or the impact of CSR and migration. However, integrated models that comprehensively account for the interaction between economic security, migration processes, and corporate social responsibility in the context of competitiveness remain insufficiently developed, which determines the relevance of further research.

3. Methodology

The present study aims to analyse the impact of wartime conditions and migration processes on the competitiveness and economic security of construction enterprises. In addition, it seeks to identify the role of corporate social responsibility (CSR) in enhancing their resilience. Despite the plethora of publications addressing the functioning of business during crises, there remains a paucity of comprehensive studies examining the interaction of construction enterprises, migration flows and CSR practices during the war period. In this regard, the research methodology was constructed in such a manner as to combine quantitative and qualitative approaches and ensure a structured comparison of data in dynamics.

In order to collect empirical data, a standardised questionnaire was developed and administered to managers at various levels, as well as to engineering and technical personnel of construction enterprises. The questionnaire included the following sections:

(1) The impact of war on operational and production processes;

(2) changes in the structure of labor resources;

(3) enterprise adaptation mechanisms;

(4) the application of corporate social responsibility instruments;

(5) the assessment of competitiveness and economic security levels.

The survey was conducted in three stages, each corresponding to a different phase of wartime dynamics and the economic adaptation of the sector. In order to ensure representativeness, respondents were selected using a purposive sampling approach, which included enterprises of different sizes (small, medium, and large) and from various regions. This approach enabled the

consideration of market territorial asymmetries and the varying degrees of impact of migration.

To minimise sampling bias, some of the questionnaires were distributed via professional networks (including members of the Academy of Construction and research institutions), and the respondents were not informed of the specific research hypotheses. This approach helped avoid socially desirable responses and ensured the assessments were objective.

During the initial phase of the study, responses were collected from 38 enterprises; in the subsequent phase, from 46 enterprises; and in the final phase, from 44 enterprises. The questionnaire structure and data collection logic were consistent, thus ensuring the comparability of results across different time periods.

The collected data were processed using a range of analytical methods, including descriptive statistics, comparative analysis, factor-based interpretation, and risk matrix construction. In order to ascertain the impact of CSR on competitiveness, correlation analysis and expert evaluation methods were applied. This made it possible to determine the key determinants of the adaptive resilience of enterprises during wartime.

4. The Impact of the War on the Operation of Enterprises

The results of the survey, summarised in Table 1 and Figures 1–2, indicate a significant and multidimensional impact of wartime conditions on the activities of construction companies. The indicators obtained demonstrate consistently high average values across all key dimensions of the study, suggesting the systemic nature of transformation processes in the industry under the influence of full-scale war.

As illustrated in Figure 1, the most significant impact was observed in the complexity of medium-term planning (mean = 4.41), the increase in economic security risks (mean = 4.31), as well as changes in work volumes and logistical constraints. The lowest recorded score was for competitiveness (mean = 3.49).

Figure 2 corroborates these trends, with over 70% of enterprises assigning high scores (4–5 points) to the following indicators: planning complexity (80.4%), increased risks (77.7%), and the impact of war on work volumes, project deadlines, and logistical resources.

Firstly, a considerable negative effect of the war on production volumes and planning capabilities was identified. The respondents evaluated the decline in work volumes at 4.28 on a five-point scale, while the intricacy of medium-term planning was appraised at 4.41, denoting the highest value among all the characteristics examined. Approximately two-thirds of respondents reported project suspensions and financing delays, indicating significant disruptions to the investment cycle and project dynamics.

The human resources sector also experienced significant strain. Enterprises reported a considerable level of staff turnover, with an average value of 3.88. The most prevalent reasons for staff losses were external migration and mobilisation. However, enterprises are actively attempting to compensate for this deficit: more than two-thirds of respondents reported employing internally displaced persons, and the average intensity of training and adaptation of new employees was rated at 3.67. This finding suggests that enterprises are becoming more agile in their response to labour market fluctuations and imbalances in the workforce.

It was evident that logistical and resource constraints were also key factors in the manifestation of operational vulnerability. The respondents allocated a mean rating

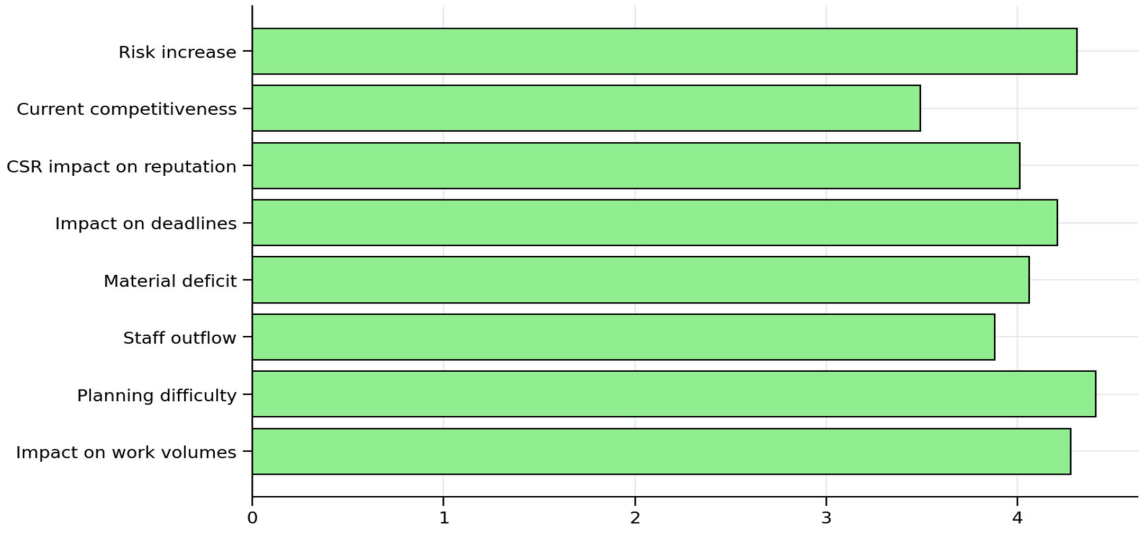

Figure 1. Average values of factors influencing the activities of construction enterprises according to survey results

Table 1
Generalized results of the survey of construction companies (n = 112)

Direction	Indicator	Mean	SD	% of values 4–5 points
Impact of War	Overall impact on scope of work	4.28	0.92	74.1%
	Planning complexity (3–12 months)	4.41	0.87	80.4%
	Project freezes	–	–	61.6%
	Lack of funding	–	–	55.4%
Human Resources	Outflow of personnel	3.88	1.03	58.0%
	Employment, war veterans, IDPs	–	–	68.7%
	Need for adaptation and training	3.67	1.05	50.9%
	Reason for outflow: migration	–	–	53.6%
	Reason for outflow: mobilisation	–	–	46.4%
Logistics and Resources	Deficit of material and technical resources	4.06	0.88	65.2%
	Most frequent deficit: imported materials	–	–	59.8%
	Impact of war on deadlines	4.21	0.87	71.4%
CSR Practices	Number of CSR initiatives implemented	3.05	1.18	–
	Impact of CSR on reputation	4.01	0.96	66.1%
	Impact of CSR on staff retention	3.76	1.08	55.4%
Competitiveness	Competitiveness	3.49	1.07	39.3%
	Most important factor: human resources	–	–	64.3%
	Most important factor: adaptability	–	–	70.5%
Risks	Security	4.39	0.89	77.7%
	Biggest risk: logistical	–	–	58.0%
	Biggest risk: war	–	–	72.3%

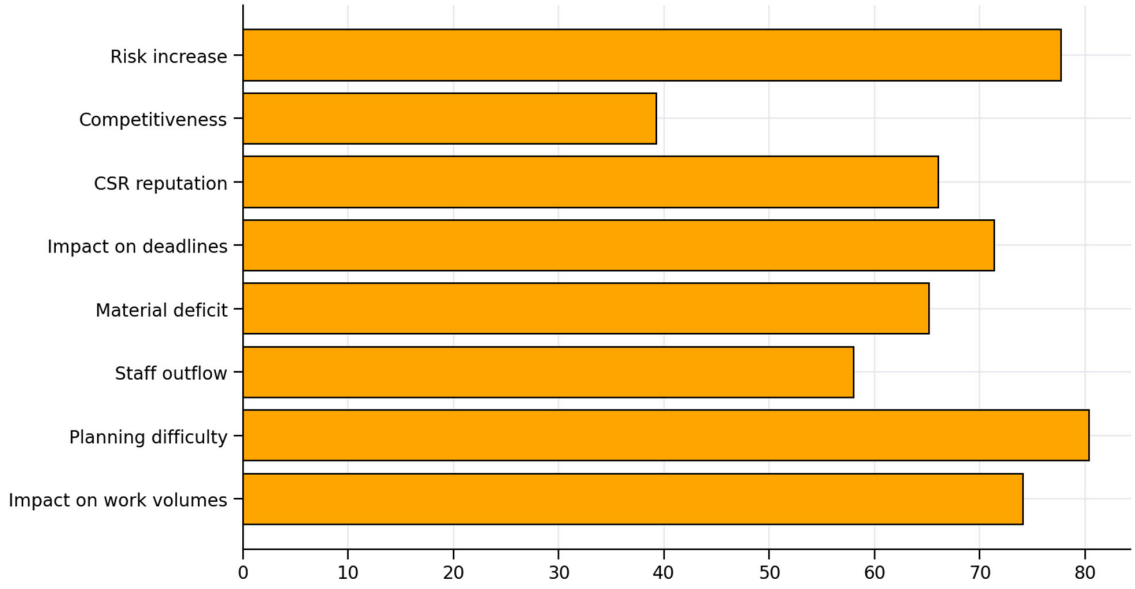

Figure 2. Percentage of above-average ratings (4–5 points) for factors influencing economic security and competitiveness, based on survey results

of 4.06 to the shortage of construction materials and equipment, with more than 65% of enterprises reporting recurring supply disruptions, particularly regarding imported materials. The increase in project completion times was rated at 4.21, a figure that correlates with high levels of logistical pressure and instability of supply chains.

A substantial proportion of the study's attention was dedicated to the issue of corporate social responsibility (CSR). Enterprises demonstrate active engagement in this area: the average number of implemented social initiatives is 3.05, while their impact on corporate reputation was rated at 4.01. The positive effect of CSR on staff retention was also confirmed, which has become particularly important under conditions of labor shortages. This underscores the strategic significance of socially responsible practices as a mechanism for sustaining internal

stability and augmenting long-term market attractiveness.

An assessment of enterprise competitiveness under wartime conditions showed an average value of 3.49. While this figure is lower than others, it reflects the ability of some enterprises to adapt to the new economic reality. The most important sources of competitive advantage were found to be adaptability and human resources, suggesting a shift in focus from traditional resource-based factors to managerial and organisational competencies.

Finally, economic security risks were among the highest across all indicators, with an average score of 4.39. According to respondents, the most critical risks were military and logistical, reflecting the objective conditions under which enterprises operate in areas of active hostilities or under threat of missile attack.

Overall, the results suggest that construction companies are operating in a state of multidimensional instability, affecting areas such as investment, human resources, logistics and security. At the same time, however, enterprises demonstrate their ability to adapt by actively implementing CSR practices, developing personnel training programmes and increasing organisational flexibility. These mechanisms help to maintain the industry's competitive position in the face of large-scale external shocks. Migration flows during wartime affect enterprise competitiveness through three key channels (Figure 3):

1. Potential (changes in workforce composition, qualifications, and resource base).
2. Market (shifts in demand, market conditions, and the emergence of new market segments).
3. Adaptability (the ability to rapidly reorganize production, logistics, and business models).

Enterprises that successfully integrate new labour resources, respond to market changes and adapt operational processes flexibly demonstrate significantly higher competitiveness, even in times of crisis.

Construction contracting enterprises must consider the range of factors shown in Figure 3, which significantly influence the achievement of long-term competitiveness in wartime economic restructuring conditions.

Migration flows – both internal (within the country) and external (emigration abroad) – can substantially reshape the available workforce, consequently affecting enterprise competitiveness. The outflow of skilled workers can lead to labour shortages, reducing enterprises' ability to maintain adequate production levels. At the same time, internal migration can partially offset labour losses by employing displaced persons or temporary workers. However, this often requires additional resources for accommodation, adaptation and training. Intensifying competition for labour is forcing enterprises to offer improved working conditions, social guarantees and flexible work arrangements. This directly impacts their financial stability. Therefore, changes in the structure of the labour market directly affect enterprises' ability to fulfil their contractual obligations and remain competitive.

Migration significantly affects both demand and the structure of sales markets. The depopulation of certain territories reduces local consumption, which has a negative impact on enterprise revenues and reduces market share. Conversely, regions with a high concentration of displaced people can create new opportunities for market expansion and the development of adapted products and services, such as modular housing and storage facilities.

Enterprises that can respond quickly to changes in demand and the movement of target groups gain a strategic advantage over competitors that are less flexible. In this way, migration flows become an important driver of market transformation, as well as an indicator of competitive dynamics. Furthermore, migration affects the logistics and production processes of enterprises.

At the beginning of the war, the change in the security situation often forced companies to relocate production assets, warehouses and equipment to safer regions. This led to increased transportation, rental and living expenses for employees. At the same time, the ability to quickly reorganise production under new conditions determines their operational stability and ability to maintain their market position. Therefore, the adaptability of logistics and production systems is essential for enterprises to function effectively in a crisis.

In this context, corporate social responsibility (CSR) assumes particular significance for construction companies, as the company's capacity to demonstrate social responsibility exerts a direct influence on its market reputation, customer trust, and interaction with state and public institutions. In the context of war and large-scale migration flows, CSR evolves from being an element of business ethics to a potent instrument for enhancing competitiveness (see Table 2).

People who are displaced and change their place of residence, either temporarily or permanently, create new social and economic needs, which shape changes in local markets. Companies that actively integrate socially responsible practices, such as providing jobs for internally displaced persons, organising training and advanced training for new employees, supporting humanitarian initiatives or providing affordable housing, not only meet social needs, but also strengthen their own human resources. This reduces the risk of a shortage of qualified workers and increases the organisation's internal flexibility.

Customers and real estate buyers often prefer contractors who demonstrate a responsible attitude towards society and can address social challenges. In times of crisis, such companies appear more reliable, which increases their chances of winning tenders and

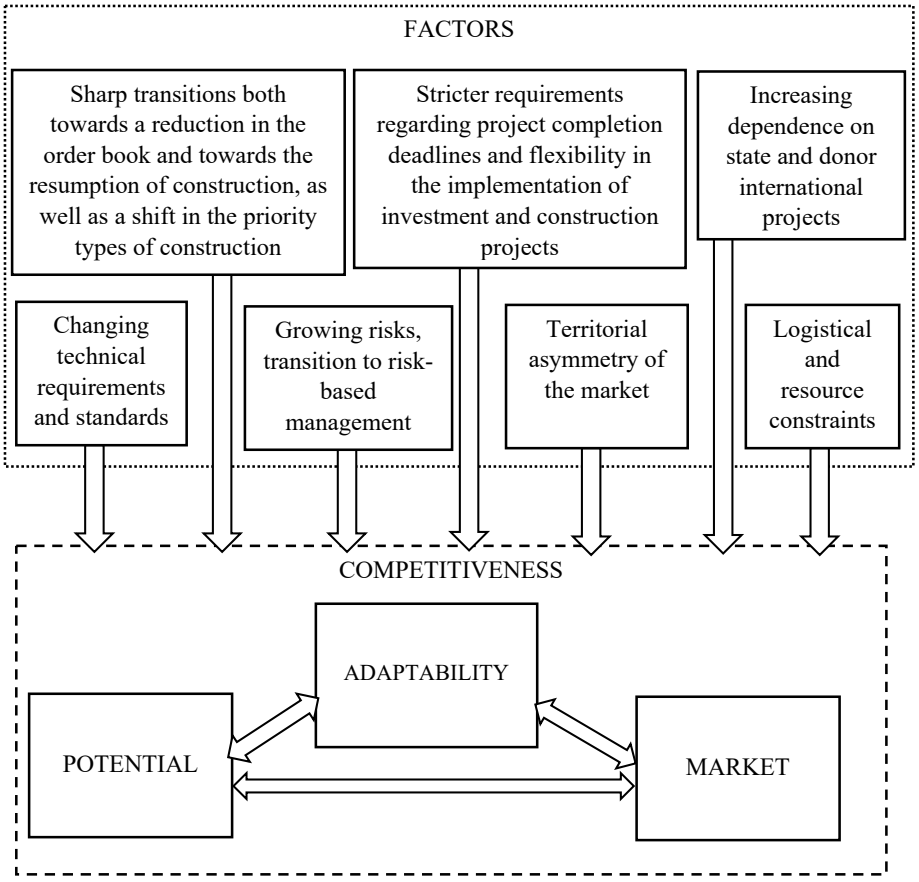

Figure 3. Factors of long-term competitiveness of construction contracting enterprises under wartime economic restructuring

strengthening long-term contracts. Additionally, CSR can contribute to forming a positive image in regions with a high concentration of internally displaced persons, opening up new sales markets and opportunities for expansion.

Another important aspect is the internal motivation of personnel. Employees who see that the company supports socially vulnerable groups and helps new starters settle in are more likely to be involved and loyal.

This reduces staff turnover and increases work efficiency. Thus, CSR directly impacts the key elements of competitiveness: the enterprise's potential and adaptability (Bielienkova et al., 2023; Stetsenko et al., 2021).

Therefore, in the context of migration induced by war, corporate social responsibility becomes a strategic resource for construction companies. It contributes to forming a positive image, strengthening stakeholder trust and increasing internal flexibility, human resources potential and the ability to respond quickly to market changes. Taken together, these factors significantly increase the company's competitiveness, making it more resilient in an unstable and turbulent environment.

5. Discussion

The results of the empirical study enable a more profound understanding of the transformation processes occurring in the construction industry of Ukraine in conditions of full-scale war, and the identification of factors that shape the competitiveness and economic security of enterprises in periods of high turbulence. The analysis of mean values and frequency indicators demonstrates that enterprises are under significant pressure from external factors. However, the analysis also demonstrates that enterprises possess adaptive response mechanisms characteristic of flexible organisational systems. It is imperative to underscore the manner in which the war disrupted the conventional cycles of planning and implementation of construction projects. The highest average values of indicators related to the complexity of medium-term planning and a decrease in the volume of work confirm that the industry has faced structural uncertainty. This finding aligns with the extant theoretical propositions that, in conditions of high volatility, enterprises are unable to utilise classical forecasting models and are compelled to adopt short-term planning horizons and scenario approaches. The study also revealed a high

Table 2

Possible CSR measures in the context of migration

No.	Direction	Effect	Impact	Activities
1	Providing jobs for war veterans, internally displaced persons	Attracting new staff, supporting socially vulnerable groups	Increases the potential of the enterprise, forms personnel flexibility	Opening vacancies for war veterans, displaced persons, creating a quick employment programme
2	Organising training and advanced training for new employees	Adapting staff to the specifics of the company	Increases adaptability and quality of project implementation	Advanced training courses, internal training, mentoring from experienced employees
3	Temporary housing or assistance with housing	Providing basic needs of employees, stabilising staff	Increases employee loyalty and stability of the production process	Providing a dormitory, compensation for rent, organising social apartments for employees
4	Support for local communities (repairs, infrastructure projects)	Forming a positive image in the regions	Strengthens market presence and reputational advantages	Participation in the restoration of schools, hospitals, community centers; carrying out landscaping of territories
5	Co-operation with state and public organisations	Coordination of assistance and social programmes	Improves interaction with customers and authorities, increases trust	Signing memorandums with local authorities, participating in the programme to support displaced persons
6	Flexible working conditions for displaced people (remote work, variable schedules)	Increasing the availability of work for new staff	Increases adaptability and speed of response to market changes	Implementing variable schedules, partial remote work, flexible start and end times of the working day
7	Information support and consultations for war veterans, IDPs	Assistance in social and professional integration	Strengthens the reputation of the company, forms positive branding	Consultations on document processing, training seminars, internal directories and information portals
8	Social initiatives in projects (green construction, safe construction zones)	Supporting safety and ecology, attracting public attention	Increases image and trust, which indirectly affects the market and potential	Use of environmentally friendly materials, arrangement of safe zones on construction sites, certification of projects according to green building standards

level of disruptions in the investment cycle: freezing and postponing projects have become a systemic phenomenon, indicating the industry's dependence on the security situation and the state of public finances.

The personnel aspect proved to be one of the most vulnerable. A significant outflow of qualified workers due to migration and mobilisation, combined with a high level of psychological stress, makes the management of human capital significantly more complicated. At the same time, however, enterprises are demonstrating an active adaptation strategy by employing war veterans and internally displaced persons and implementing training programmes. These strategies partially compensate for personnel losses. Such practices correspond to the trends identified in the analysed literature, which highlights the importance of investing in human capital as a means of ensuring organisational resilience in times of crisis.

The survey revealed that logistical and resource constraints continue to be a critical issue for operational activities. High estimates of material and equipment shortages, coupled with tightened work deadlines, suggest significant supply chain disruptions. Notably, there is a shortage of imported materials, indicating the industry's dependence on external markets and the restriction of access to them due to war risks. The results obtained confirm that logistical sustainability should be a priority area for enterprise development in the post-war period.

A notable finding of the study is the revealed impact of corporate social responsibility. Notwithstanding the challenging operating conditions, a considerable proportion of enterprises implement CSR initiatives with the objective of providing support to employees, local communities and environmental solutions. Furthermore, a significant proportion of respondents expressed a high level of appreciation for the impact of these measures on the enterprise's reputation and its capacity to retain personnel. This finding suggests that CSR acquires not only a social but also a strategic dimension, thereby contributing to the formation of stakeholder trust and the strengthening of internal enterprise stability. Consequently, reputational capital and social partnership assume particular importance.

The assessment of enterprise competitiveness shows that, despite significant external risks, most companies maintain an average market position. This is due to the fact that the key drivers of competitive advantage are adaptability, organisational structure flexibility and personnel management effectiveness. In other words, enterprises that respond faster to environmental changes, integrate new work formats more effectively and implement social programmes more actively are more likely to maintain their competitiveness.

In summary, the survey results demonstrate the high adaptability of construction enterprises and their ability to respond to unprecedented challenges. At the same time, the results provide a basis for strategic recommendations to increase sustainability. The key determinants of competitiveness were adaptability, personnel sustainability, logistical flexibility, and the social activity of enterprises. Thus, empirical data confirm the need for a transition to management models that focus on sustainability, flexibility, and social responsibility as fundamental components of the industry's strategic development in times of war and recovery.

6. Conclusions

The findings of the study offer a comprehensive insight into the state of construction enterprises in Ukraine amidst the ongoing war and significant migration patterns. The findings indicate that the functioning of the industry is shaped by the simultaneous influence of a wide range of factors, including operational and logistical constraints, personnel-related risks, increasing uncertainty, and the need to adapt to new regulatory and social requirements. All key indicators were assessed by respondents at relatively high levels, indicating the multidimensional and long-term transformation of the sector.

The war has had a profound impact on the structure of the construction market, resulting in a decline in investment activity, project suspensions, and an increase in the complexity of medium-term planning. This is identified as one of the most critical challenges for enterprises.

Concurrently, the survey results indicate a substantial adaptive capacity among enterprises. Notable activity in the field of corporate social responsibility (CSR) highlights the readiness of companies to play a key role in supporting employees, local communities, and ensuring the sustainability of internal processes. CSR practices fulfil a social function in addition to creating additional competitive advantages by enhancing corporate reputation and contributing to staff retention.

In summary, the competitiveness of construction enterprises during wartime is less determined by traditional economic parameters and more by an organisation's ability to adapt quickly to external conditions, manage risks, stabilise the workforce and ensure effective stakeholder engagement. The key determinants of the sector's resilience are adaptability, workforce and logistical flexibility, strategically oriented CSR, and the ability to operate under conditions of uncertainty.

These findings provide a foundation for further research aimed at developing mechanisms to enhance organisational resilience, optimise risk management, and strengthen the role of social responsibility in the competitive development strategies of construction enterprises during wartime and post-war recovery.

References:

Akimova, O., Ishchenko, A., & Perga, I. (2025). *Community resilience in conflict zones: Identifying key factors for conflict resolution and recovery potential*. In H. Shinoda & P. Fedorchenko-Kutuyev (Eds.), *The impacts of the Russo-Ukrainian War* (SpringerBriefs in International Relations). Springer. https://doi.org/10.1007/978-981-96-2295-5_8

Al-Kayed, A., Rotimi, F. E., Purushothaman, M., & Ghaffarian Hoseini, A. (2024). Factors affecting competitiveness in the construction industry: A systematic literature review. *Proceedings of International Structural Engineering and Construction, 11*(2). https://doi.org/10.14455/ISEC.2024.11(2).CON-14

Bielienkova, O. (2020). Theoretical approaches to ensuring strategic competitiveness of enterprises on the basis of sustainable development. *Management of Development of Complex Systems,* 42, 153–158. https://doi.org/10.32347/2412-9933.2020.42.153-158

Bielienkova, O., Stetsko, M., Sorokina, L., Tsyfra, T., Tytok, V., & Kalashnikov, D. (2023). Financial and Economic Basis of Ensuring the Competitive Potential of the Enterprise. In: Alareeni, B., Hamdan, A., Khamis, R., Khoury, R.E. (eds) Digitalisation: Opportunities and Challenges for Business. ICBT 2022. *Lecture Notes in Networks and Systems*, 620. Springer, Cham. https://doi.org/10.1007/978-3-031-26953-0_31

Bielienkova, O., Moholivets, A., & Loktionova, Y. (2021). Measurement of the level of economic security of enterprises by the indicator of the attractiveness for hostile takeovers. *Baltic Journal of Economic Studies*, 7(5), 29–40. https://doi.org/10.30525/2256-0742/2021-7-5-29-40

Centre for Economic Strategy (2024). *The recovery spending watchdog №13: Is the construction sector ready for Ukraine's recovery?* CES Analytical Report. https://ces.org.ua/en/the-recovery-spending-watchdog-%E2%84%9613/

Chavez, J.-P., Hordynska, O., Cardoni, A., Murcia Delso, J., Lopez Almansa, F., & Cimellaro, G. P. (2025). A novel urban resilience framework through post conflict reconstruction. *ResearchGate* (preprint). https://www.springerprofessional.de/en/a-novel-urban-resilience-framework-through-post-conflict-reconst/51636386

Chen, W., Ye, M., & Ye, K. (2024). Review on corporate social responsibility in the domain of international construction. In *Proceedings of the 28th International Symposium on Advancement of Construction Management and Real Estate* (pp. 757–765).

Emmanuel, O., Białko, M., & Nikolaiev, V. (2025). The construction industry in a war-ravaged region: Examination of challenging factors. *Applied Sciences, 15*(6), 2900. https://doi.org/10.3390/app15062900

Iastremska, O., Bielienkova, O., Bondar-Pidhurska, O., Skakun, V., Ruban, V., & Khimich, S. (2025). Financing innovative-strategic development of enterprises in the context of the experience economy. *Financial and Credit Activity Problems of Theory and Practice, 2*(61), 430–442. https://doi.org/10.55643/fcaptp.2.61.2025.4616

Fenyuk, V., Deneka, V., Sadoviak, M., & Sekretar, I. (2024). Economic security of construction industry enterprises in times of martial law. *Academiv Visions, 29*. https://doi.org/10.5281/zenodo.10695549

Greits, O., & Liventsov, R. (2025). Construction industry of southern Ukraine: Current state and strategic role in the post war reconstruction. *Journal of Education, Health and Sport, 82*. https://doi.org/10.12775/JEHS.2025.82.65754

Haman, H. V. (2023). The influence of migration processes on the construction industry of Ukraine. *Modern Economics,* 42. https://doi.org/10.31521/modecon.V42(2023)-05

Hoiko, A., Tsyfra, T., Ustymenko, A., Koval, S., Nemtyriev, O., & Ryzhyk, T. (2023). Assessment of the competitiveness of a construction company for the elite segment of residential construction during full scale war. *Ways to Improve Construction Efficiency, 52*(3), 196–206. https://doi.org/10.32347/2707-501x.2023.52(3).196-206

Hui, G. U. O., & Meng, Y. E. (2024). Achieving competitive advantage for construction companies: Navigating the realm of corporate social responsibility. In *International Conference on Construction Engineering and Project Management* (pp. 216–223). Korea Institute of Construction Engineering and Management. https://www.auric.or.kr/user/Rdoc/DocRdoc.aspx?dn=431544

IREX. (2024). *Ukraine sector snapshot: Construction*. IREX Research Report. https://www.irex.org/sites/default/files/node/resource/Ukraine%20Construction%20Snapshot%20V4.pdf

Ivanova, H. P., Olishevska, V. Ye., Hapieiev, S. M., & Olishevska, S. O. (2024). Construction industry in Ukraine: Transformations and prospects in the context of martial law and postwar reconstruction. *Science and Transport Progress,* 108. https://doi.org/10.15802/stp2024/317405

Koba, O. (2022). Economic security of the construction industry under the challenges and threats of the martial state. *Economy and Society,* 42. https://doi.org/10.32782/2524-0072/2022-42-9

Kocheharov, S. (2025). Institutional capacity of construction SMEs in ensuring economic security in the context of post war recovery. *Kyiv Economic Scientific Journal,* 9. https://doi.org/10.32782/2786-765X/2025-9-18

Li, J., Yu, H., & Deng, X. (2024). A systematic review of the evolution of the concept of resilience in the construction industry. *Buildings,* 14, 2643. https://doi.org/10.3390/buildings14092643

Lopatka, S. (2023). Methodological framework for enhancing the competitiveness of construction sector enterprises under conditions of economic, social, and environmental sustainability. *Scientific Notes of Lviv University of Business and Law,* 39, 733–743. https://nzlubp.org.ua/index.php/journal/article/view/1572

Ma, T., Wang, H., & Qu, Y. (2024). Impact of corporate social responsibility on organizational resilience in construction firms—A study from China. *Sustainability, 16*(19), 8366. https://doi.org/10.3390/su16198366

Palamarchuk, O., & Petryshyna, S. (2023). Analysis of factors of competitiveness of construction enterprises of Ukraine. *Economy and Society,* 57, 99. https://doi.org/10.32782/2524-0072/2023-57-99

Panchal, P. B. (2020). Future of the construction industry: Resilience planning in construction for climate adaptation and global disruptions. *IOSR Journal of Mechanical and Civil Engineering, 17*(4), 67–76.

Shandrivska, O. Ya., & Kulyk, A.-M. O. (2025). Analysis of the construction materials market in the context of economic instability. *SMEU, 7*(1), 256–274. https://doi.org/10.23939/smeu2025.01.256

Shu, H., & Duan, J. (2023). The relationship between social responsibility fulfilment and industry competitiveness: Empirical evidence from construction industry in China. *PLOS ONE, 18*(11), e0295181. https://doi.org/10.1371/journal.pone.0295181

Stetsenko, S. P., Tytok, V. V., & Emelianova, O. M. (2021) The interrelation of digital technologies and organizational and economic mechanisms in construction: adaptation to change management. *International Review,* 1, 21–31.

UNDP, UNHCR, & IOM. (2024). *Socio-economic impacts of the war in Ukraine on host communities and emerging migration and displacement patterns*. https://www.undp.org/eurasia/publications/socio-economic-impacts-war-ukraine-migration-displacement

Vilgin, Y., & Lukashev, S. (2025). Strategic directions for the development of Ukraine's construction industry under global challenges. *Actual Problems of Innovative Economy and Law, 27,* 117–121. https://doi.org/10.36887/2524-0455-2025-2-27

Xuetong, W., Hussain, M., Rasool, S. F., & Mohelska, H. (2024). Impact of corporate social responsibility on sustainable competitive advantages: The mediating role of corporate reputation. *Environmental Science and Pollution Research, 31*, 46207–46220. https://doi.org/10.1007/s11356-023-28192-7

Zhyhlo, A., Tkachenko, R., Cirella, G. T., Morkovska, N., Yakymenko, O., & Viatkin, K. (2024). Innovation in Ukraine's construction and postwar recovery: Transformative power of information technologies. In *Handbook on Post War Reconstruction and Development Economics of Ukraine* (pp. 431–454).

Zungu, Z., & Laryea, S. (2024). Building organizational resilience capacities and capabilities in construction firms. In J. O. B. Rotimi et al. (Eds.), *Advances in Engineering Management, Innovation, and Sustainability* (Lecture Notes in Civil Engineering, Vol. 480). Springer. https://doi.org/10.1007/978-3-031-56544-1_4