Small and Medium-Sized Businesses in Ukraine Amid War: Current Trends and Barriers

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Abstract: The principal objective of this research lies in the conceptual reflection on the efficacy of economic instruments designed to support such economic entities under ongoing conflict conditions and throughout the period of transformational recovery, taking into account the identification of regulatory, structural, and resource-related barriers, the analysis of productivity-indicative status, and the formulation of proposals for their efficient revitalization. The methodological framework of the study incorporated cognitive synthesis of informational arrays, the application of statistical-prognostic methods, correlation-regression analysis, and a systematizing generalization approach. This comprehensive methodology enabled an integrative comprehension of the latent determinants influencing the functioning of the SME sector, the identification of prevailing trends, and the logically substantiated justification of its prospective renaissance within the synergistic dynamic of wartime and post-war development. The correlation analysis revealed a statistically relevant association between the sales volumes of medium-sized enterprises and the innovation index ($r = 0.587$), as well as the business confidence index ($r = 0.667$); however, the statistical insignificance ($p > 0.05$) indicates a deficiency in innovation saturation and a lack of investment-technological impetus. In contrast, a strong correlation between the sales performance of small enterprises and business confidence ($r = 0.806$ at $p = 0.05$), along with an exceptionally pronounced dependence of micro-enterprises on the same index ($r = 0.912$ at $p = 0.016$), highlights the critical sensitivity of these entrepreneurial units to macroeconomic stability parameters. The results implicitly underscore the imperative to reduce regulatory pressure, implement anti-corruption deregulation, debureaucratize administrative procedures, extensively expand financial and credit instruments, and institutionalize mechanisms for the preservation of human capital. These measures are deemed essential for the timely and effective resetting of the SME sector amid wartime conditions and throughout the post-conflict reconstruction period. Furthermore, they constitute an axiomatic foundation for sustainable national economic growth through the creation of a favorable, polycentrically balanced environment for entrepreneurial activity and the targeted stimulation of strategically critical segments of the economy.

Keywords: small and medium-sized businesses, Ukraine, war, security, economic instability, supply chains, workforce, financing, government support, digital transformation.

Introduction

Small and medium-sized enterprises (SMEs), as institutionally polyform entities, constitute an essential architectural element within the framework of macroeconomic stability. Their syncretic contribution to vitally important socio-economic vectors – namely, employment generation, decentralized regional development, and the formation of localized infrastructural contours – renders them a cornerstone of the national economic matrix. Nonetheless, the domestic SME sector currently operates under the conditions of a protracted crisis precipitated by full-scale military conflict, which has substantively deformed established mechanisms of socio-economic interaction and thereby necessitated a paradigmatic renewal of institutional support instruments.

The constellation of challenges induced by the war has transformed the business environment into a state of profound uncertainty, wherein traditional mechanisms of economic resilience have proven limited in their efficacy. Within this context, the entrepreneurial segment, adapting to emergent threats, is compelled to construct alternative protocols of operation, reinterpreting both the narratives of state-led protectionism and the internal strategies of managerial elasticity. Although certain representative indicators suggest a modest degree of optimism among SME actors, such sentiments appear to reflect adaptive stoicism rather than a substantive improvement in the institutional determinants of the business climate [1].

Simultaneously, the discourse surrounding post-conflict recovery is gaining increasing salience, highlighting the imperative to formulate not merely reactive but also proactive public policies capable of restoring entrepreneurial potential through the lenses of economic inclusion, deregulation, and fiscal mobilization. Accordingly, the exploration of economic instruments for supporting SMEs during wartime and in the subsequent post-war period emerges as a scientifically relevant undertaking, requiring a comprehensive analysis of both structural impediments and latent opportunities for business innovation.

The analytical deconstruction of Table 1 facilitates the extrapolation of a multifaceted portrait of a polystructural crisis, within which small and medium-sized enterprises operate as agents subjected to a polyphonic convergence of multidirectional disruptive factors that, in their aggregate, engender a synergistic dynamic of negative economic entropy. The categories delineated in the table encapsulate not only horizontal, operational-level challenges but also latent strategic threats that predicate a protracted inversion of institutional trust, resource mobilization, and regulatory coherence. In particular, the phenomenon of institutional-normative dysfunction – manifested through juridical entropy and administrative frustration – assumes the characteristics of a systemic deviation that accumulates regulatory inadequacy at the level of state policy. Fiscal and credit fragmentation, in turn, not only induces a multiplicative paralysis of financial circulation but also catalyzes processes of structural marginalization of SMEs within the architecture of financial intermediation.

Labor resource erosion, materializing as a degradation of the entrepreneurial cognitive base, results in the diminution of productive potential and simultaneously engenders long-term challenges to the restoration of intellectual capital under post-crisis reengineering conditions. Logistical and infrastructural degradation constitutes a nodal barrier that interferes with the essential circuits of production-distribution cycles, thereby precluding the effective integration of SMEs into broader economic macrostructures. Finally, psychoeconomic turbulence – an over-institutional phenomenon – complicates the predictability of entrepreneurial behavioral patterns by introducing elements of psychological indeterminacy into the business environment, necessitating the immediate implementation of multidisciplinary support protocols.

Table 1. Structural-Functional Analysis of Disruptive Factors Determining the Transformation of the SME Operating Environment Under Systemic Crisis Conditions

Classification Category	**Determinants of Influence**	**Mechanism of Manifestation**	**Potential Regulatory Responses**
Institutional and Normative Imbalance	Prolonged asymmetry between the state regulatory paradigm and the practical operations of SMEs	Legal entropy causing administrative frustration among entrepreneurial actors	Development of an adaptive regulatory infrastructure based on the principle of subsidiarity
Fiscal and Credit Fragmentation	Limited institutional capacity of the banking sector; disruption of SME capitalization channels	Credit inertia and chronic inaccessibility of financial instruments for SMEs	Integration of financing guarantee mechanisms through quasi-governmental partnership models
Labor Resource Erosion	Evacuation of highly skilled personnel; demographic depopulation	Decline in enterprises' cognitive capital; increase in recruitment and training expenditures	Development of cross-sectoral mobilization strategies and professional

	resulting from military hostilities		reintegration of the workforce
Logistical and Infrastructure Degradation	Destruction of transportation, energy, and communication infrastructure	Disruption of production and distribution chains; impeded market access	Prioritization of emergency infrastructure recovery through decentralized logistics frameworks
Psychoeconomic Turbulence	Cumulative effect of war-induced stressors on the entrepreneurial environment	Decline in entrepreneurial activity; rise of latent investment aversion	Implementation of mental health support programs for entrepreneurs, including crisis coaching interventions

Source: compiled by the author based on [2]

The principal objective of this theoretical-empirical study is to identify the core mechanisms of economic support for small and medium-sized enterprises in Ukraine that correspond to the dynamics of the current transformational period. It further seeks to determine strategic priorities, taking into account the multivectoral influence of both exogenous and endogenous factors. Within this analytical framework, a systematic examination is conducted of the prevailing conditions under which SMEs operate, including institutional constraints, human resource shortages, fluctuations in sales dynamics, and specific financing needs – factors that collectively delineate the entrepreneurial ecosystem amidst a hybrid economic crisis.

Literature Review

In the systemic dimension of a market economy's functioning, small and medium-sized enterprises (SMEs), which emerge as institutionally heterogeneous yet structurally agile economic actors, play a pivotal role in shaping macroeconomic resilience, polystructural employment, fiscal revenue generation, and the maintenance of competitive pluralism [3, 4, 5]. Retrospective empirical studies underscore that, in the context of global challenges, SMEs are subject to regulatory constraints, a scarcity of financial instruments, structural and price-based competition, and underdeveloped infrastructural components [6, 7], while simultaneously exhibiting low levels of innovation adoption and a limited capacity for export expansion [8, 9].

Concurrently, under the conditions of the ongoing full-scale military aggression by the Russian Federation against Ukraine, the structural fragility of SMEs has become particularly pronounced, revealing a multitude of crisis-induced vulnerabilities that extend beyond the ordinary risks of peacetime. As recent scholarly interpretations indicate [10, 11], the irrationality of the regulatory landscape, compulsive instability of the business environment, counterparty paralysis, and systemic disruption of logistical chains have engendered a qualitatively new degree of exposure. Furthermore, a contraction in domestic consumer demand and a deficit in human capital – caused by both mobilization and mass emigration of the working population – significantly reduce SMEs 'adaptive capacity in the face of transformational turbulence [12, 13].

Among the most salient issues is the predominance of a repressive regulatory environment that generates persistent administrative burdens [2], as well as institutional inertia in the implementation of digital innovations, which – despite their potential efficacy – encounter structural deficiencies in workforce competencies and a lack of preparedness for operating in a rapidly digitalizing economy [10, 14, 15].

According to Syniura-Rostun [16], the de-ideologization of the regulatory domain and the sanitization of governance practices from corruption should be prioritized by the state to restore functional equilibrium within the economic system. In this context, Yatsenko's [17] proposition to introduce an adaptive digital model for reserving key personnel emerges as a viable mechanism for selectively preserving critically important human capital in strategic sectors. Moreover, state interventions aimed at stabilizing the entrepreneurial landscape under martial law must be realized through multilayered institutional mechanisms encompassing financial, advisory, infrastructural, and grant-based support [13].

Merezhko et al. [18] and Yudina et al. [15] emphasize the imperative of diversifying funding sources – particularly through the proactive engagement of extra-budgetary resources such as grants, investments, and concessional loans –

which, when accompanied by prudent budgetary reconfiguration and expenditure optimization, can ensure the sustainable operational viability of enterprises even amid extreme uncertainty and existential threat.

The research conducted by Gazuda et al. [19] conceptualizes a structurally integrated mechanism for the advancement of branding in agrarian regions, explicating its key principles within the broader framework of European integration dynamics. The investigation by Gazuda et al. [20] entails a comprehensive evaluation of the developmental potential of agricultural regions as a fundamental precondition for strategic branding, wherein the stages of brand deployment are delineated alongside the elaboration of its core structural components.

The research presented by Yerko et al. [21] formulates a methodological framework for assessing the competitive potential of entities within the tourism sector, emphasizing the intricate balance between supply-side operators and consumer demand through the application of multifactorial evaluative criteria.

Research Methodology

The present inquiry employed a constellation of epistemologically grounded and methodologically robust research techniques, aimed at capturing the multifaceted nature of the structural and functional transformations of small and medium-sized enterprises (SMEs) in Ukraine under the conditions of prolonged geopolitical turbulence and the anticipated post-conflict socio-economic reconstruction. Method of Information Synthesis – served as a mechanism for the distillation and integration of divergent scientific approaches and conceptual paradigms articulated in contemporary academic literature, facilitating a coherent reconstruction of the complex discourse surrounding the current challenges and prospective trajectories of SME development in Ukraine amidst wartime disruption and post-war revitalization.

Statistical-Analytical Method – was employed as a tool for secondary data analysis, enabling the empirical identification and classification of dominant trends within the SME sector, particularly in relation to business environment conduciveness, employment dynamics, and potential for sectoral expansion under strategic uncertainty. Forecasting Method – utilized for the purpose of simulating prospective scenarios of SME sales volume evolution. Specifically, the FORECAST.ETS function embedded in Microsoft Excel's statistical toolkit was employed to extrapolate sales projections for the year 2024, based on verified time-series data retrieved from official statistical repositories.

Systematization Method – applied to develop a taxonomically coherent framework of criteria influencing SME productivity. This entailed the incorporation of a composite set of indicators including the Business Confidence Index (BCI), the Business Activity Index (UBI), the Global Innovation Index (GII) [22], alongside quantitative variables such as sales volumes for the period 2020–2023 and projected values for 2024. Correlation Analysis – conducted using Pearson’s Correlation Coefficient within the JASP statistical environment, which enabled the identification and formalization of latent interdependencies between enterprise size, sales performance, and core business development indicators within the Ukrainian economic context.

Method of Generalization – deployed to substantiate the necessity of implementing targeted economic instruments capable of fostering trust in the business environment and enhancing SME productivity amid war-induced distortions. This method was instrumental in distilling policy-relevant insights derived from the systemic challenges and operational barriers constraining the sector’s performance.

Results

Within the discourse of polysystemic transformation of the national economy, and considering the post-industrial nature of contemporary challenges alongside the heterogeneity of institutional interactions, particular significance is attached to a reflexive analysis of the functional role of small and medium-sized enterprises (SMEs) as a stabilizing mechanism amidst socio-economic turbulence.

Small and medium-sized enterprises (SMEs), representing a phenomenon of polystructural economic formation with an inherently high degree of flexibility in response to socio-economic fluctuations, are institutionally positioned as pivotal actors in maintaining economic homeostasis. They not only catalyze processes of budgetary reproduction but also structurally transform the labor market through endogenous employment generation. In this context, their capacity to adapt to volatile environments, to exhibit resilience against external shocks, and to implement innovation-oriented economic paradigms, situates them as a backbone of social stability, civilizational advancement, and the democratization of economic relations.

Conversely, the onset of full-scale military aggression by the Russian Federation triggered profound processes of economic involution, resulting in institutional paralysis across a significant segment of the SME sector, thereby impeding their evolutionary-economic function. A systematic escalation of exogenous disruptions has been observed: from the suspension of tax invoices, inducing financial inertia, to logistical collapse caused by the destruction of transportation infrastructure and critical transit corridors. These developments have precipitated increased transactional costs and the compromise of supply chains. Equally detrimental is the refusal by competent state authorities to grant exemption from mobilization to key employees, which in turn generates human capital entropy within enterprises critically dependent on narrowly specialized labor resources (Figure 1).

As of 2024, according to an analytical and sociological study conducted by the National Institute for Strategic Studies, the vector of expectations articulated by the entrepreneurial community underscores the necessity of implementing an anti-corruption stratification framework (66.7%) as a prerequisite for restoring the legitimacy of economic policy and consolidating public trust in state institutions. Equally significant is the need for the refinancing of entrepreneurial initiatives via deregulated credit access (42.4%), the execution of judicial (36.4%) and fiscal (32.5%) restructuring, as well as the introduction of digital mechanisms for mobilization-related exemption (32.6%), the prolongation of moratoria on fiscal and regulatory inspections (29.3%), and the acceleration of customs clearance procedures (26.4%) – all of which are imperative for revitalizing economic activity amid conditions of wartime recession [23].

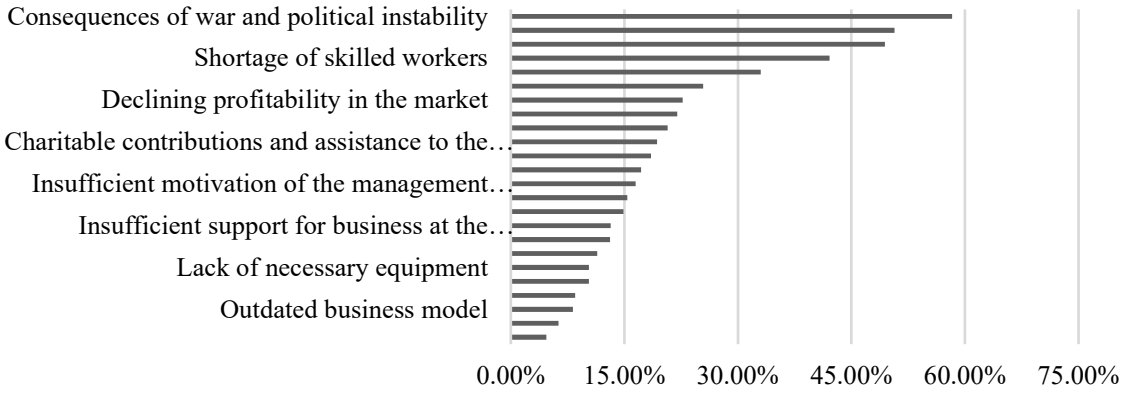

Figure 1. Structural Diagnostics of the Entrepreneurial Ecosystem for Small and Medium-Sized Enterprises in Wartime Ukraine Source: [24]

Amidst the constellation of multifaceted impediments that substantially hinder entrepreneurial activity and obstruct the post-crisis revitalization of business entities under the protracted state of martial law, one of the most persistent and deleterious threats remains the chronic deficit of highly qualified human capital, which, according to empirical indicators, affects 42.1% of surveyed business representatives. Prior to the full-scale invasion in February 2022, micro, small, and medium-sized enterprises (MSMEs) constituted a pivotal structural component of Ukraine's labor market, accounting for nearly half (48%) of the total employed population, approximately 4.3 million individuals [25].

Concurrently, extrapolation of the most recent data provided by the analytical platform "Hromada" (May 2024) reveals that, although there has been a discernible reduction in the share of employees compelled to take leave (7.5% in 2024 compared to 20% in June 2022), this figure continues to reflect the fragile and volatile condition of the labor environment. In a parallel dimension, despite a decline in the incidence of wage reduction (from 27% in 2022 to 12.9% in 2024), the persistence of this indicator over the past two consecutive quarters indicates a latent trend toward the normalization of diminished labor compensation as an emerging status quo (Figure 2).

Regarding the trajectory of direct workforce downsizing, its temporal evolution evidences a sustained upward trend: as of the second quarter of 2024, the proportion of dismissed employees reached a record high of 29.6% – the peak level observed since the onset of the full-scale war. Nevertheless, given the seasonal cyclicality of labor market dynamics – particularly the typical winter surge in layoffs – this elevated figure cannot be unequivocally classified as catastrophic, but rather interpreted as partially attributable to the inertial rhythms of socioeconomic behavior. Overall, throughout the past two years, the share of downsized personnel has fluctuated within the 20–30% range, indicating a latent stabilization of structural labor market distress within the paradigm of adaptive business survival.

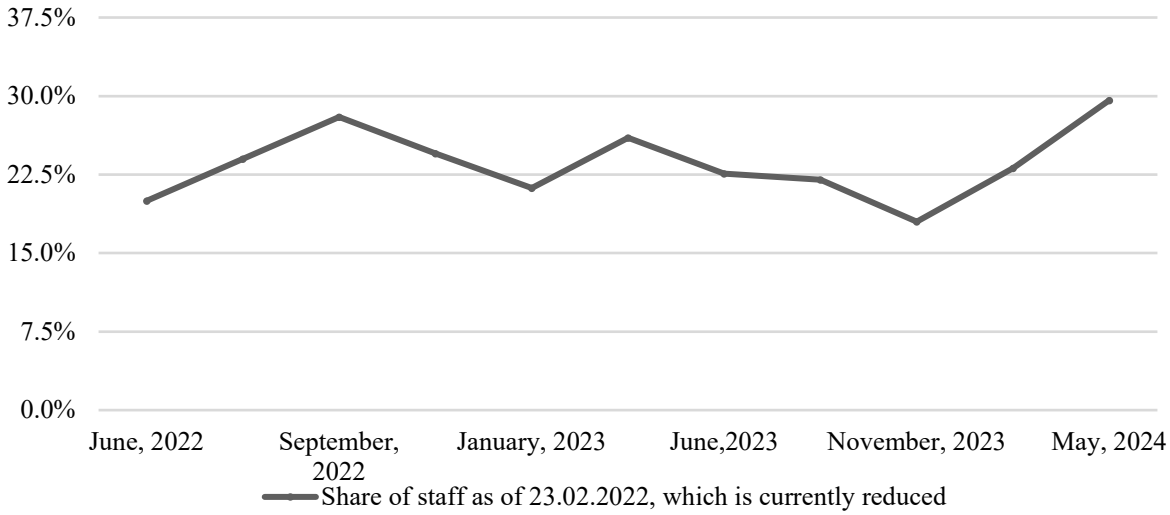

Figure 2. Evolution of Staff Reduction Rates in the Period 2022–2024
Source: [26]

In the context of escalating systemic threats driven by both internal economic and external geopolitical determinants, which impact economic entities across various sectors of national production, it is essential to emphasize that the transversal challenges of contemporary times influence not only the dynamics of operations but also the structural transformation of the entire paradigm of economic activity. Particular attention must be given to the agro-industrial segment, especially its production and logistics configuration, which, under conditions of ongoing wartime turbulence, has acquired the status of a system-forming factor in national economic security.

The issue of ensuring food sovereignty, which aligns with the priorities of state economic policy amidst hybrid warfare, becomes particularly acute given the strategic significance of the agricultural sector within the macroeconomic context. Empirical data extrapolated from reports by the Ministry of Agrarian Policy of Ukraine and analytical assessments by the Kyiv School of Economics verify the scale of destruction: the total material and financial losses of the agricultural sector in 2022 amounted to $6.6 billion, which, in absolute terms, constitutes nearly a quarter (23%) of the total declared losses. This indicator is proportionate to the share of damaged or destroyed assets within domestic agricultural production, underscoring the critical level of its vulnerability in the face of full-scale military aggression.

A disaggregation of these losses by functional categories and resource components affected by the intensification of hostilities is presented in a visualized format in Figure 3, which illustrates a structurally disaggregated analysis of the degradation volumes of Ukraine's agricultural infrastructure and technological potential during the specified period.

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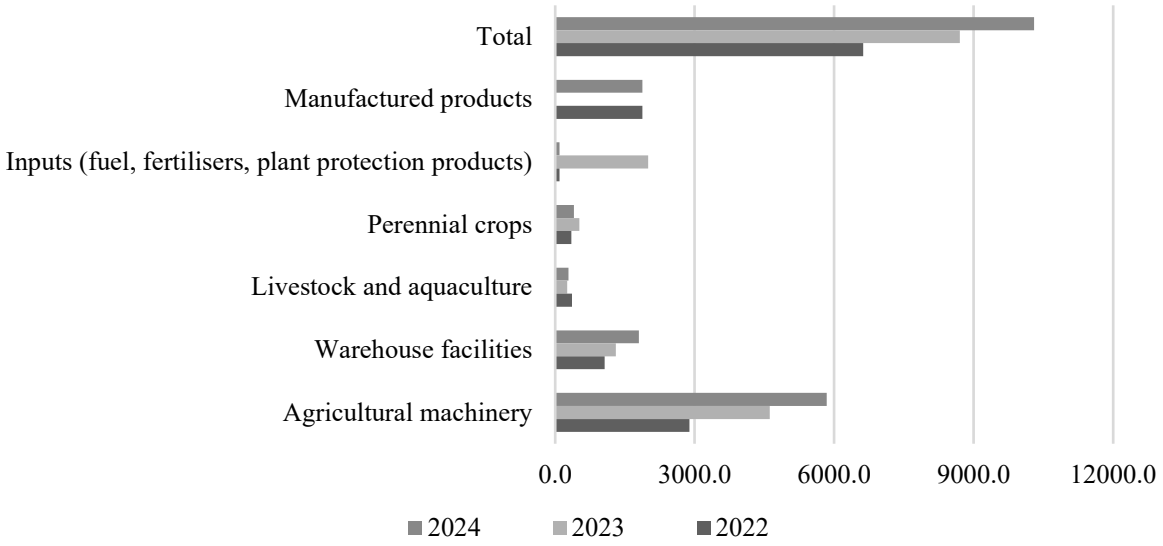

Figure 3. Categorical Disaggregation of Financial Losses in Ukraine's Agricultural Sector Amid Wartime Turbulence (USD Million)
Source: [27, 28, 29]

The state, implementing a strategic paradigm of food policy, strives to balance the imperatives of ensuring national food security with consolidating Ukraine's status as a leading actor in the global agricultural export system. This dual focus necessitates the simultaneous allocation of domestic agro-industrial resources to meet internal market demands while maintaining competitive positions in international markets. In this context, small and medium-sized enterprises (SMEs) operating within the agricultural sector face multifaceted challenges, exacerbated by the consequences of the Russian Federation's military aggression. While agroholdings, through diversification of their business activities and systemic integration into global supply chains, can mitigate economic losses via export mechanisms, other agricultural market actors – such as farming enterprises and small agricultural producers – find themselves trapped in structural dependency on grain traders [30, 31, 32].

The complexity of the situation lies in the fact that grain traders effectively monopolize the price formation process, resulting in an asymmetrical distribution of financial resources within the agro-industrial complex. Consequently, farmers and enterprises lacking access to adequate financial instruments and state support lose their economic autonomy and are compelled to adapt to adverse market conditions.

Given the aforementioned, the strategic optimization of regulatory influence, institutional support for small and medium-sized businesses, and the establishment of transparent pricing mechanisms emerge as urgent objectives of state policy (Table 2). Only a systemic approach, founded on the synergy of economic, legal, and social factors, can ensure the sustainable development of the agricultural sector under contemporary geopolitical realities.

Table 2. The Adverse Impacts of the Wartime Period on Small and Medium-Sized Enterprises in the Agricultural Sector

Category	Negative Consequences
Economic Challenges	– Loss of financial autonomy due to the predominant dependency on grain traders who exert oligopolistic control over pricing mechanisms.
	– Significant reduction in profitability caused by asymmetric distribution of economic resources within the agro-industrial complex.
	– Limited access to institutional credit mechanisms and a shortage of capital to sustain ongoing operations.
Operational Disruptions	– Persistent disruption of supply chains for raw materials and finished products due to the destruction of transport infrastructure.
	– Inability to ensure continuity in production processes due to damage to essential production assets.
	– Reduction in the workforce due to the mobilization of labor resources and mass migration of the population.
Market Access Issues	– Loss of the ability to compete with large agroholdings in global export markets due to uneven starting conditions and the monopolization of distribution channels.
	– Elimination of traditional markets due to geopolitical instability and the rise of protectionist tendencies.
	– Imbalance in access to logistics services, with large-scale producers with capital-intensive infrastructure receiving preferential treatment.
Logistical Challenges	– Exponential increase in transportation costs due to critical infrastructure conditions and the forced use of alternative routes.
	– Limited access to ports and export corridors, resulting in the loss of external trade appeal for products.
	– Chronic delays in fulfilling contractual obligations due to the disorganization of supply.
Regulatory Constraints	– Absence of effective state intervention tools to stabilize market conditions in critical situations.
	– Inefficiency of state support programs, which are often directed at large enterprises, neglecting the specificities of SMEs' operations.
	– Lack of clear and transparent mechanisms for the distribution of financial subsidies, exacerbating structural imbalances.
Social Impacts	– Increased economic vulnerability of rural communities dependent on small-scale agricultural producers.
	– Reduction in local employment opportunities due to decreased production volumes.
	– Devaluation of trust in market institutions and the state regulatory system among SME representatives.

Source: compiled by the author

In light of the endogenous and exogenous transformational vectors currently reshaping the national entrepreneurial landscape, it is pertinent to underscore that, according to statistically validated data provided by the United Nations Development Programme [24], the expectations of small and medium-sized enterprise (SME) executives regarding prospective business growth trajectories exhibit a high degree of segmental polarity and disaggregated variability (Figure 4). Specifically, one-third of surveyed enterprises anticipate a downturn in turnover; 20% foresee stability at

the current level of economic activity. Simultaneously, another 20% project incremental growth relative to the weighted average, while 26% express expectations of substantial expansion – an indication of the emergence of an optimistic strategic posture amidst systemic uncertainty.

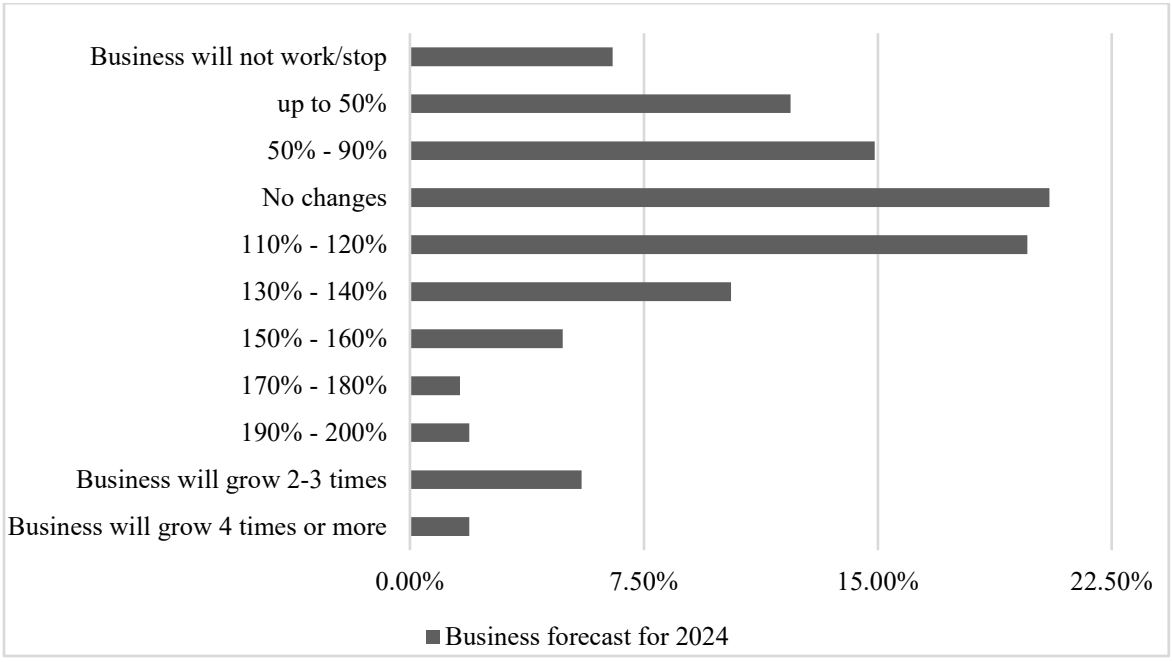

Figure 4. Projected Weighted Mean Expansion Trajectory of Small and Medium-Sized Enterprises for the Period 2022–2024, Source: [24]

Within this conceptual framework, it is noteworthy that, despite the protracted crisis-induced context – precipitated by the ongoing war and its attendant political and macroeconomic destabilization – SMEs have demonstrated a notable degree of functional resilience and a tendency toward gradual economic resurgence. Empirical observation of product (goods and services) turnover reveals systemic adaptation and recovery (Figure 5). Accordingly, the ex-ante projection of SME turnover for the forthcoming period assumes significant heuristic value in delineating future vectors of national economic growth.

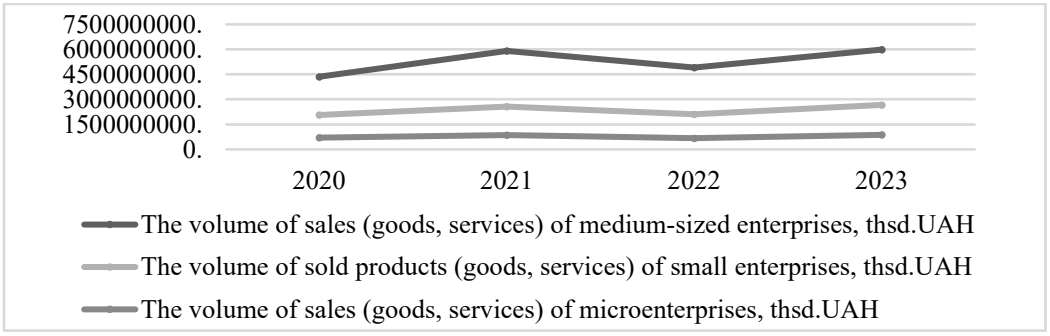

Figure 5. Projection of Turnover Volumes in the Small and Medium Enterprise Sector (Goods and Services) Source: compiled by the author based on [33]

The analysis of statistical data compiled by the State Statistics Service of Ukraine reflects a distinctly binary trend. On the one hand, the year 2022 was marked by substantial contraction in turnover: medium-sized enterprises experienced a decline of 16.8%, small enterprises 18.4%, and microenterprises 21.97%, attributable to the systemic shock induced by the onset of full-scale military aggression. On the other hand, 2023 recorded a pronounced rebound:

turnover increased by 22.08% for medium enterprises, 26.97% for small enterprises, and 29.65% for microenterprises. This rebound indicates a gradual attenuation of crisis effects and the reactivation of internal market forces, facilitated by business relocation, institutional support, and increased levels of economic mobilization.

Based on the empirical parameters derived from the cross-sectional analysis, future turnover dynamics of SMEs were projected using the FORECAST.ETS algorithm integrated within the Microsoft Excel computational environment. The forecasted scenario suggests relative stabilization, accompanied by minor fluctuations: medium-sized enterprises are expected to experience a 5.2% increase in turnover; small enterprises, a modest decline of –1.29%; and microenterprises, a more significant reduction of –3.25%. These predictive vectors imply a predominantly positive developmental outlook for the sector, conditioned upon high adaptive elasticity, intensified investment activity, and a strategic shift toward an innovation-oriented entrepreneurial paradigm. To further elucidate the determinants of SME productivity, a correlation-based extrapolation was conducted, encompassing key influencing variables, with primary emphasis placed on the following indicators:

- Business Activity Index (UBI). A comprehensive macroeconomic indicator reflecting the operational agility of enterprises. The normative range lies between 50 and 100, wherein values below 50 denote the prevalence of negative expectations and strategic pessimism. Correlation between UBI fluctuations and turnover enables the identification of underlying dependencies between microeconomic performance and the overall business climate.

- Global Innovation Index (GII). This index captures a country's structural capacity for the accumulation and application of innovation capital. In 2023, Switzerland recorded the highest score – 67.6 points – while Ukraine ranked 55th among 132 countries, with a score of 32.8, thereby evidencing significant barriers to technological advancement.

- Business Confidence Index (BCI). This indicator measures enterprises' subjective assessments of current and future economic conditions. Values above 100 reflect optimism, while values below 100 indicate skepticism. In the second quarter of 2024, Ukraine's BCI was recorded at 99.5, signaling weakened business confidence. For comparison, the BCI across OECD countries at the beginning of 2024 stood at 99.38 [34].

Table 3 encapsulates the prognosticated quantitative metrics pertaining to the volumetric realization of goods and services by small and medium-sized enterprises, concurrently delineating the evaluative parameters employed for the correlative interrogation of the predominant exogenous and endogenous determinants exerting multifactorial influence upon the enterprises 'productive efficacy.

Table 3. Empirical Foundation for Correlation-Based Evaluation of Key Determinants Influencing SME Productivity in Ukraine

Period	Global Innovation Index (GII)	Ukraine Business Confidence Index (BCI)	Ukrainian Business Index (UBI)	The volume of sales (goods, services)		
				Medium enterprises, thsd. UAH	Small enterprises, thsd. UAH	Of these, microenterprises, thsd. UAH
2020	45	90,8	39,9	4359362088,3	2064120734,4	704885585,2
2021	49	112,3	52,5	5900055014,1	2576371440,7	862346302,5
2022	57	72,6	33,9	4906839019,4	2101911968,7	672875826,7
2023	55	104,5	38,2	5990514360,3	2668866290,6	872356457,3
2024	60	99,5	43,7	6302122012*	2634303864*	843973314*

Source: compiled by the author based on [25, 26, 35, 36]
Note: * – forecast values calculated by the author

Based on meticulously systematized and stratified empirical data, a differential-integral correlation analysis was conducted to examine the relationships between sales volumes (in a broad sense, including goods, works, and services) stratified by enterprise size categories and parameters that are interpreted in the scientific literature as indicators of institutional-economic synergy for business development in Ukraine. The methodological foundation of the study is

based on the use of the Pearson correlation coefficient, tested through the high-precision computational tools of statistical analysis within the JASP software environment.
An extract of the consolidated results representing statistically significant (and borderline significant) correlations between the key variables is presented in Table 4, while the full analytical verification of the obtained data is provided in Appendix A.

Table 4. Correlations between Sales Volumes and Productivity Factors of Small and Medium-Sized Enterprises in Ukraine

Variable		Global Innovation Index (GII)	Ukraine Business Confidence Index (BCI)	Ukrainian Business Index (UBI)
Medium-sized enterprises	Pearson's r	0.587	0.667	0.472
	p-value	0.149	0.109	0.211
	Lower 95% CI	-0.454	-0.343	-0.572
	Upper 95% CI	1.000	1.000	1.000
Small enterprises	Pearson's r	0.404	0.806*	0.519
	p-value	0.250	0.050	0.185
	Lower 95% CI	-0.626	-0.046	-0.529
	Upper 95% CI	1.000	1.000	1.000
Microenterprises	Pearson's r	0.201	0.912*	0.628
	p-value	0.373	0.016	0.129
	Lower 95% CI	-0.744	0.358	-0.402
	Upper 95% CI	1.000	1.000	1.000

Source: compiled by the author
Note: * – significant correlation at $p < 0.05$

The analyzed results empirically represent the heterogeneity of the impact of individual macro- and mesoeconomic factors on the performance characteristics of SMEs. Specifically, sales of medium-sized enterprises show a positive correlation with the innovation index ($r = 0.587$) and the business confidence index ($r = 0.667$). However, the identified relationship, though positively expressed, does not reach the generally accepted level of statistical significance ($p > 0.05$), which, nonetheless, does not diminish the potential of these indicators as predictors of latent trends. Therefore, the government intervention strategy aimed at stimulating innovation-technological transfer, building cognitive infrastructure, and capitalizing on intellectual resources should be considered a catalyst for the exponential growth of this sector of the economy.

At the same time, the characteristics of economic confidence as a socio-psychological phenomenon influence entrepreneurial activity, as the stability of the institutional-economic macroenvironment serves as a guarantee for the systematic growth and investment attractiveness of businesses.

Regarding small enterprises, there is a high degree of correlation between sales volumes and the business confidence index ($r = 0.806$ at $p = 0.05$), indicating the cumulative effect of exogenous determinants on the productivity of small economic agents.

The most sensitive to these factors were microenterprises, which, being at the threshold of economic stability, demonstrate an exceptionally high level of positive association with the confidence index ($r = 0.912$ at $p = 0.016$). This clearly indicates their dependence on fluctuations in the economic environment. Any destabilization of the external environment may trigger a chain reaction of economic marginalization for such structures, which requires special attention from economic policy focused on supporting microeconomic entities.

Discussion

In the current spatiotemporal context, defined by the intense escalation of a military-political conflict, the systemic destabilization of the national legal paradigm due to the protracted imposition of martial law, and the chronic inversion of the financial and economic model, small and medium-sized enterprises (SMEs) emerge as pivotal actors in macroeconomic modeling. These entities operate under conditions of acute resource scarcity, excessive regulatory burden, and multistructural uncertainty. Given their multifunctional nature – ranging from the generation of gross domestic product to the provision of structural employment and fiscal contribution – SMEs represent not only objects but also subjects of systemic economic reconfiguration [3, 4, 5]. However, the conflict-induced environment substantially erodes their institutional capacity, necessitating a profound revision of traditional approaches to entrepreneurial support.

One of the dominant institutional-structural anomalies characterizing the functioning of SMEs is the hypertrophied regulatory pressure which, in symbiosis with cumulative corruptive deviations, cultivates a toxic business environment [13]. This, in turn, undermines sustainable economic growth and exacerbates fiscal deficits [16]. Accordingly, the implementation of a deregulation strategy – particularly through the reduction of administrative barriers, the digitalization of procedures, and the elimination of corruption-inducing institutional practices – is not only desirable but existentially imperative. Within this context, special emphasis must be placed on the fundamental reform of the State Customs Service, whose institutional renewal should be guided by the principles of transparent governance, digital verification, and standardized procedural unification [2].

Equally pertinent is the conceptualization of a comprehensive rebranding of the Bureau of Economic Security of Ukraine. In accordance with current EU regulatory and institutional precedents, this body should be transformed into a high-tech analytical agency with a strategic focus on digital forensics, big data analytics, and inter-agency interoperability in the fight against economic deviations.

The issue of human resources constitutes another heterogeneous yet conceptually significant dimension. Amid systemic migration of highly skilled personnel and mobilization-induced depletion of labor capital, the need for a flexible and functionally adaptive system of employee reservation comes to the fore. Such a system – implemented through digital platforms such as e-Reservation – should be recognized as a critical infrastructural precondition for ensuring production continuity and the competitiveness of domestic SMEs [12, 17].

Beyond the current crisis horizon, the strategology of post-war economic recovery gains particular relevance, wherein SMEs are envisioned as core drivers of national reconstruction. The introduction of export stimulation mechanisms, tools for insuring foreign trade risks, and targeted support programs for export-oriented business entities integrated into global value chains is of paramount importance [7, 8, 9]. In this regard, information and advisory platforms will play a key role by providing epistemological support to entrepreneurs navigating entry into new markets. In the context of war-induced instability, impression marketing may serve as a strategic communication instrument for small and medium-sized enterprises (SMEs) in Ukraine to rebuild consumer trust and emotional connectivity, particularly within the framework of public-private interactions, as emphasized by Likarchuk et al. [37].

Conclusions

In light of a critical examination of the operational dysfunctions within the micro-, small-, and medium-sized enterprise (MSME) sector amid the protracted military conflict, one may assert the presence of systemic distortions in the institutional environment that necessitate the implementation of complex, synergistically coordinated economic and legal mechanisms for stimulating and safeguarding entrepreneurial activity. The documented deficit in business confidence among small-scale economic actors indicates a latent threat of productivity erosion, which, in turn, may precipitate a prolonged deceleration in national economic dynamics. Accordingly, it appears expedient to institutionalize the eradication of quasi-legal practices in the domain of law enforcement oversight of economic

activities through the introduction of legal detoxification and deregulation instruments. These efforts must be complemented by the comprehensive renovation of the State Customs Service, grounded in procedural digitalization and extraterritorial oversight by certified international consultants – measures that will ensure the depersonalization of decision-making processes and a reduction in corruption rents.

Furthermore, a refactoring of the institutional architecture of the Bureau of Economic Security should entail a transition toward acquis communautaire standards, with emphasis on functional autonomy, development of human capital competencies, and deployment of high-tech analytical frameworks for counteracting economic crimes. In this context, a reconceptualization of the risk-based monitoring paradigm (SCOR) is critically important – shifting towards a cognitively analytical approach with mandatory temporal verification of administrative constraints.

In terms of fiscal administration, it is imperative to revise the threshold criteria for mandatory VAT registration while preserving elements of fiscal liberalization through a simplified taxation regime, delimited by explicitly codified legal filters to prevent misuse for tax evasion purposes. Automated international exchange of tax and customs information emerges as an effective preventive mechanism against transnational tax avoidance, creating a transparent and traceable informational environment for businesses. The enhancement of business financing instruments – especially for enterprises involved in the defense or dual-use sectors – requires the establishment of parallel credit and guarantee structures, including the mobilization of resources from international financial institutions.

The institutionalization of a digital employee reservation system (e.g., e-Booking) must ensure the strategic mobilization of human resources in critically important sectors. Concurrently, in the post-conflict recovery phase, it is essential to operationalize multivector export credit strategies, including tax incentives, foreign trade risk insurance programs, and digital communication and orientation platforms for businesses.

Additionally, a comprehensive audit and recalibration of business support budgetary programs – especially the verification of resource allocation algorithms – is a prerequisite for reframing state intervention policy. A focus on subsidiarity, concessional lending, and the establishment of special economic zones in de-occupied territories, along with a recalibrated labor market policy promoting flexible employment models, forms the cornerstone of socially-oriented economic revitalization. Special prioritization must be given to the agrarian sector, where decentralization of energy supply, access to EU subsidies pursuant to association agreement protocols, and modernization of storage infrastructure constitute key catalysts of long-term resilience.

Therefore, only through a conceptual reorientation of state economic policy – toward institutional reflexivity, technological modernization, and strategic coherence – can the emergent recovery of the MSME sector be ensured, enabling it to become a driving force for sustainable socio-economic growth in Ukraine both during wartime and in the post-war reconstruction period.

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Appendix A

The full analytical verification of the obtained data

Correlation							
Pearson's Correlations							
Variable		GII	BCI	UBI	Medium	Small	Micro
GII	Pearson's r	-					
	p-value	-					
	Lower 95% CI	-					
	Upper 95% CI	-					
BCI	Pearson's r	-0.204	-				
	p-value	0.629	-				
	Lower 95% CI	-0.879	-				
	Upper 95% CI	1.000	-				
UBI	Pearson's r	-0.309	0.809*	-			
	p-value	0.694	0.049	-			
	Lower 95% CI	-0.902	-0.040	-			
	Upper 95% CI	1.000	1.000	-			
Medium	Pearson's r	0.587	0.667	0.472	-		
	p-value	0.149	0.109	0.211	-		
	Lower 95% CI	-0.454	-0.343	-0.572	-		
	Upper 95% CI	1.000	1.000	1.000	-		
Small	Pearson's r	0.404	0.806*	0.519	0.965**	-	
	p-value	0.250	0.050	0.185	0.004	-	
	Lower 95% CI	-0.626	-0.046	-0.529	0.695	-	
	Upper 95% CI	1.000	1.000	1.000	1.000	-	
Micro	Pearson's r	0.201	0.912*	0.628	0.898*	0.977**	-
	p-value	0.373	0.016	0.129	0.019	0.002	-
	Lower 95% CI	-0.744	0.358	-0.402	0.289	0.788	-
	Upper 95% CI	1.000	1.000	1.000	1.000	1.000	-
Notes. All tests are one-tailed for positive correlation.							
* p < .05, ** p < .01, *** p < .001, one-tailed							