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Resilience Factors of Ukrainian Micro, Small, and Medium-Sized Business

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Abstract: Nowadays, businesses in Ukraine face new challenges that the world has never experienced before. Earlier, during the war, countries had to curtail their economic activities, everything operated for the sake of military needs. However, now, within hybrid wars, the country's economy and its actors have to demonstrate rapid adaptive models and changes in strategies, and sometimes function without strategies at all. Advanter Group conducted a survey of 696 Ukrainian enterprises in the period from 20 December 2023 to 8 January 2024 (a year of full-scale aggression); a direct questionnaire method was used. Key hypotheses (10 hypotheses) regarding the resilience factors of Ukrainian businesses during the period of the full-scale invasion were tested using statistical analysis methods. Statistically significant differences were established in various aspects of the functioning of SMBs. Based on the research, it is concluded that reforms in the legal sphere, aimed at facilitating conditions for business and protecting the rights of enterprises, are an urgent necessity for the further development of the economy of Ukraine. Practical recommendations arising from the research are presented, including reducing the level of uncertainty for business, revising the tax system, creating incentives for the development of SMBs, and increasing the transparency and stability of the conditions for resource mobilization. Several key principles of the national policy aimed at facilitating conditions for the development of entrepreneurship and anti-corruption are also suggested.

Keywords: micro, small, and medium-sized enterprises (MSMEs); adaptive strategies; Wilkinson's test; Cramer's statistics; ANOVA; entrepreneurship development

Citation: Dligach, Andrii, and Andriy Stavytskyy. 2024. Resilience Factors of Ukrainian Micro, Small, and Medium-Sized Business. *Economies* 12: 319. https://doi.org/10.3390/economies12120319

Academic Editor: Ralf Fendel

Received: 24 September 2024
Revised: 21 November 2024
Accepted: 22 November 2024
Published: 26 November 2024

1. Introduction

Almost 91% of enterprises have resumed their activities after the aggressor country launched a large-scale invasion of Ukraine in 2022 (United Nations Development Programme in Ukraine 2024). In the ten months of 2023, only 9.6% of businesses were still suspended or almost out of business, contributing to at least a partial recovery of the economy. In 2022, a catastrophic drop in the GDP of Ukraine by 22.8% was recorded; in 2023, moderate growth at the level of 5% was observed (National Bank of Ukraine 2024). Naturally, this growth was primarily caused by the low base effect in 2022, but it allowed at least a partial restoration of the demand for goods and services and stimulated the development of logistics chains.

Despite the unprecedented losses and challenges brought on by the war, Ukraine succeeded in preserving relative macroeconomic and price stability, as well as in overcoming production shutdowns and managing the impact of labor resource outflows due to relocation to safer areas.

However, the number and level of problems remain massive, despite Ukraine's partners' attempts to provide support. First of all, Ukraine faces logistical problems due to the blockade of seaports and the concentration of missile strikes on export logistics transport. This harms foreign economic activity. Due to the decline of the economy, Ukrainian businesses must adapt to the new level of demand. A crucial role is played by micro, small,

and medium-sized enterprises, which make up 99.98% of all Ukrainian enterprises and generate 64% of added value, providing 74% of all jobs (United Nations Development Programme in Ukraine 2024). Therefore, attention to the problems of micro, small, and medium-sized enterprises is crucial for the formation of a correct strategy for Ukraine's recovery after the war.

During the research, a survey of the management of Ukrainian micro, small, and medium-sized enterprises (MSMEs) was conducted. Key challenges, problems, and threats to business development were identified. It should be noted that historically, the distinction between micro, small, and medium-sized businesses in Ukraine has been quite blurred. Thanks to various tax optimization schemes, the company could function as a set of micro-companies, which after some time merged into one. From a legal perspective, the difference was only in the number of employees and turnover of the company. For micro-enterprises, which in most cases were registered as individual entrepreneurs, tax accounting is much simpler than for larger companies, so the process of enlargement of such firms is currently underway in Ukraine. For this reason, the analysis is relevant for all considered types of companies.

Therefore, the purpose of this research is to determine the key factors that shape the stability of business in war conditions, based on a direct survey.

The logic of the research consists of the analysis of recent cases from around the world regarding the adaptation of businesses to significant fluctuations and crises. The methodology is based on the need for statistical confirmation of differences in samples in order to highlight homogeneity or heterogeneity in a large array of respondents' answers. It is the tools of statistical analysis that are capable of providing mathematically based conclusions to research hypotheses. The calculations of the research give grounds for developing recommendations and frameworks, as well as stretches for the development of road maps within the Ukrainian economy and messages for the investment recovery of the Ukrainian economy.

The paper tests the following statements: whether companies that had been established a long time ago turned out to be more resistant to the challenges of wartime; whether companies that had had a broad internationalization strategy really turned out to be more stable in wartime; whether companies headed by women really turned out to be more vulnerable to the challenges of wartime; whether companies really lost human resources during the war; or whether companies are really not ready to invest resources during a period of turbulence.

Structurally, the paper consists of the following classic parts: an overview of the current situation in the field and challenges that make this material relevant (introduction); a literary review of existing cases in the literature regarding other countries that suffered from military operations since the beginning of the millennium; the methodology of the computational basis for statistically weighted effective theses and confirmation/refutation of hypotheses; and calculation results with conclusions for further real practical implementation.

2. Literary Review

Business in conditions of instability (Candiya Bongomin et al. 2018), such as geopolitical changes and wars, (Israel (Marom and Lussier 2014), Kosovo (Govori 2013), Ukraine (Nate et al. 2022), etc.) is still not considered at the desired level in scientific discourse, partly due to the presence of certain tangible moments (Naradda Gamage et al. 2020), delivering of history from the winners' perspective etc.

Bosnia and Herzegovina. Djip (2014) identified three types of conditions that influence entrepreneurship in Bosnia and Herzegovina: socio-political, economic, and legal.

Kosovo. Govori (2013) and Soini and Veseli (2011) recognize that external factors—including access to finance, competition, corruption, and government policies—significantly affect the development of SMEs in Kosovo. Improving access to finance has been highlighted as essential for fostering a supportive environment for SME growth. Nonetheless, SMEs in both developing and developed nations frequently face substantial funding bar-

riers, such as high administrative costs, strict collateral requirements, and banks' general reluctance to lend to them.

Increasing awareness of the role of SMEs and improving their access to finance can help enhance economic conditions in developing countries. This approach can drive innovation, stimulate GDP growth, and reduce economic disparities and unemployment.

Syria: Çörekçioğlu et al. (2021), examining the impact of the Syrian war on SME exports, found that export volume and subsidies from KOSGEB (the SME Development Organization of Turkey) were major factors in business disruptions, while other anticipated factors were less relevant. Despite earlier assumptions that firms in the region struggled with high logistics costs, the study suggests that expanding the scope and amount of logistics subsidies from KOSGEB could be advantageous.

Africa: Candiya Bongomin et al. (2018) identified a strong interaction between government support and various factors—such as business skills, capital adequacy, access to finance and markets, and entrepreneurial education—in influencing the survival of Small, Medium, and Micro Enterprises (SMMEs) in post-conflict communities in Northern Uganda. Each of these factors—business skills, capital adequacy, access to finance, market access, entrepreneurial education, and government support—was found to have a significant, positive impact on SMME survival in these communities.

At the same time, Farja et al. (2017) indicate that the successful growth and resistant models for Israeli SMEs are based on two factors: funding and knowledge. However, Palestinian SME researchers (Alone Sultan (2014), Farja et al. (2016)), mostly see it in clustering. Meanwhile, the background (Felsenstein and Schwartz 1993) says that during the initial start-up phase, the individual traits of the entrepreneur help reduce the likelihood of facing constraints, whereas as the firm expands in size, the probability of encountering constraints tends to increase. During the operational phase, the personal attributes of the owner and the type of economic activity play significant roles in influencing outcomes.

Mentorship (Nate et al. 2022), gender, and maturity of the firms were considered as the impactful factors in the pre-war period for Ukraine (Stavytskyy et al. 2020). The COVID-19 period and the following active-phase war revealed one more instrument to move on for Ukrainian SMEs—Digital Marketing (Oklander et al. 2024).

3. Methodology

Small and medium-sized enterprises (SMEs) are widely recognized as critical drivers of economic growth, employment, and innovation in modern economies. According to the Organization for Economic Co-operation and Development (OECD), SMEs account for approximately 99% of all businesses and contribute significantly to GDP in most countries (Pulka and Gawuna 2022). These enterprises play a pivotal role in fostering regional development, reducing inequalities, and enhancing economic resilience in times of crisis (Woźniak et al. 2019; Taiwo et al. 2022; Hossin et al. 2023).

Research highlights the unique vulnerabilities of SMEs, particularly in volatile and uncertain environments, such as those shaped by global pandemics, economic recessions, and military conflicts. Studies by (Erdiaw-Kwasie et al. 2023) and (Yapicioglu 2023) emphasize the need for adaptive strategies and supportive policy frameworks to sustain SME growth under such conditions.

In Ukraine (see Appendix A, Figure A1), SMEs contribute to about 50% of GDP and represent a significant portion of employment. Micro, small, and medium-sized enterprises (MSMEs) form the backbone of Ukraine's economy, accounting for 99.98% of all business entities, providing 74% of total employment, and generating 64% of the country's added value. However, the ongoing challenges of war and economic instability have exposed the sector to unprecedented risks. Despite these challenges, SMEs in Ukraine demonstrate remarkable resilience, adapting through innovative practices, strategic pivots, and leveraging digital tools.

This paper attempts to build on the extensive body of research addressing the role of SMEs in economic systems while providing new insights into the resilience factors that enable these enterprises to thrive under extreme circumstances. Our findings have the ambition to contribute to the broader discussion on the necessity of structural reforms, particularly in legal frameworks and resource mobilization, to enhance the long-term sustainability of SMEs in developing economies.

In this research, key attention is paid to the opinions of managers and owners of micro, small, and medium-sized businesses, which allows for receiving individual information, not biased by aggregate indicators. During December 2023–January 2024, a survey of business leaders was conducted with the help of a Google Form. During the survey period from 20 December 2023 to 8 January 2024, the answers of 696 respondents were received and analyzed. Among them, 66.3% represented micro-businesses, 31.1% accounted for small businesses, and 2.6% covered medium-sized businesses; 83% of questionnaires were filled by business owners, and 17% were filled by senior managers. Companies differ in their main markets. In particular, 32% of companies operate throughout Ukraine, 10% of companies focus only on the capital of the country, and 7.8% of firms operate in the Kharkiv region. The companies are fairly evenly distributed across industries: 11.35% work in wholesale trade, 10.2% in retail trade, 8.76% in construction, 8.19% in IT, and 7.33% in service provision. In total, 30 spheres of activity of the companies were analyzed. We must admit that in Ukraine, the boundaries between micro, small, and medium-sized enterprises are not clearly defined. Legally, these businesses are classified based on employee count and turnover. However, due to prevalent tax optimization practices, a single business can operate as a group of micro-enterprises, which may later merge into one organization. Micro-enterprises are typically registered as sole proprietors and benefit from simplified tax regulations compared to larger companies. Given this context, the study's findings are relevant to businesses of all sizes, as responses from micro, small, and medium-sized enterprises revealed no significant variations. Categorical scales were used in the study to digitize responses (see Appendix A, Table A1).

The research hypotheses are established as follows:

H1: *Differences exist in the resilience of SMEs depending on whether the company is chaired by a male or a female.*

H2: *A statistically significant difference exists in the ability to maintain turnover and personnel depending on the maturity of the company.*

H3: *The resilience of a company during the period of the full-scale invasion significantly depends on its location (region of Ukraine).*

H4: *Companies' views on the future differ significantly depending on their location (region of Ukraine).*

H5: *Company resilience in a military situation varies significantly based on the level of internationalization.*

H6: *The need for financial assistance varies significantly depending on the level of internationalization.*

H7: *The amount of investment differs significantly depending on the level of internationalization of the company.*

H8: *Company resilience varies significantly depending on whether its activities were suspended during the period of the full-scale invasion.*

H9: *The need for additional resources differs significantly among companies with different turnover levels and types of taxation.*

H10: *The amount of investment differs significantly depending on the maturity of the company.*

To analyze data for uniformity representation, the Jarque–Bera test is applied for a normal distribution. The Jarque–Bera test is an asymptotic test, i.e., applicable to large samples. If errors are normally distributed, then, according to the Gauss–Markov theorem, the least squares estimator will be better (will have the lowest dispersion within the class of linear unbiased estimators), and regression coefficients also will be distributed asymptotically normally. The test looks as follows:

$$JB = \frac{n}{6}\left(S^2 + \frac{(K-3)^2}{4}\right) \sim \chi^2(1-\alpha;2)$$
$$S = \frac{1}{n}\sum_{t=1}^{n}\left(\frac{y_t - \overline{y}}{\hat{\sigma}}\right)^3,\ K = \frac{1}{n}\sum_{t=1}^{n}\left(\frac{y_t - \overline{y}}{\hat{\sigma}}\right)^4$$

n—number of observations, σ—estimator of the mean squared error of the series.

This statistic has a χ^2-distribution with two degrees of freedom. The closer the error distribution is to normal, the less the Jarque–Bera statistic differs from zero. With a sufficiently large value of the statistic, the p-value will be small, and then there will be grounds to reject the null hypothesis (statistics fell into the tail area of distribution).

The methodology for analyzing such a large data set should incorporate a range of methods to ensure sufficient and reliable results and conclusions, including multivariate statistical analysis, descriptive statistical analysis, linear regression, and others. We have selected the most appropriate methods to effectively address the primary research objectives:

(1) One-way ANOVA and a t-test with a statistical significance of 5% are used to check the statistical significance of the differences; ANOVA (Thomsen et al. 2013) factor analysis is used to determine the differences between the number of two groups of entrepreneurs (like gender difference). The t-test and ANOVA are analytical methods used to determine whether there is a significant difference between groups. The t-test compares the means of two groups, assessing whether any observed difference is statistically significant or likely due to chance. ANOVA, on the other hand, is used when comparing the means across multiple groups to identify any significant differences among them (Student 1908).

(2) Descriptive statistics are used to assess the difference in levels and diversity within data sets because many observations are physically unavailable for analysis using a graph or table.

(3) The Wilcoxon rank-sum test (McCullough 2004) is used to assess differences in responses between two groups (e.g., gender) by testing the null hypothesis that both subgroups are independent samples drawn from the same overall distribution. If the test rejects the null hypothesis, the alternative hypothesis suggests that the values in one group tend to differ significantly from those in the other group.

(4) In analyzing conditional independence between series within a group, EViews presents measures of association for each conditional table in a tabular format. These measures function similarly to correlation coefficients, where a higher measure indicates a stronger association between the row and column series in the table. Alongside the Pearson χ^2 statistic for the table, EViews also reports three additional measures of association:

$$Phi\_coefficient = \sqrt{\frac{\overline{\chi}^2}{N}}$$
$$Cramers\_V = \sqrt{\frac{\overline{\chi}^2}{N \cdot \min\{r,c\} - 1}}$$

$$Contingency\_coefficient = \sqrt{\frac{\overline{\chi}^2}{\overline{\chi}^2 + N}}$$

In this context, min(*r*,*c*) represents the smaller value between the number of row categories *r* and column categories c in the table, while *N* denotes the total number of observations. Notably, all three measures range from 0 to 1, where a higher value signifies a stronger relationship between the two series in the table. Unlike the correlation coefficient, which only captures linear association, these nonparametric measures are robust to deviations from linearity, making them suitable for assessing various types of relationships.

Below, we provide a summary of the identified limitations and the steps taken to mitigate their impact on the research:

(1) Limitation of Sample Representation (while the study covered a relatively large number of enterprises (696), the sample may not fully represent all sectors and regions of Ukraine).
Decision to solve: to address this, we ensured diverse geographic and sectoral representation within the sample, though further stratification could improve generalizability.

(2) Limitation of Self-Reported Data (the research relied on a direct questionnaire method, which inherently carries the risk of response bias).
Decision to solve: to minimize this, the survey design included carefully structured, neutral questions to reduce subjectivity, and multiple-choice options were validated to align with the research objectives.

(3) Limitation of Temporal Constraints (the data collection period (December 2023 to January 2024) reflects a snapshot of the ongoing challenges faced by SMEs. The rapidly changing economic and geopolitical landscape in Ukraine may limit the applicability of findings over time).
Decision to solve: we recognize this limitation and suggest future studies adopt a longitudinal approach to capture evolving trends.

(4) Limitation of Specificity of Context (the study focuses on SMEs within the unique context of Ukraine, particularly during a time of war and economic turbulence. While this provides valuable insights, it limits the generalization of results to other countries or contexts).
Decision to solve: further comparative studies across different economies could provide a broader perspective.

(5) Limitation of Data Interpretation (the statistical analysis tested 10 hypotheses but relied on aggregated data, which might overlook nuanced differences among micro, small, and medium enterprises).
Decision to solve: we conducted subgroup analyses where feasible and clarified in the discussion that variations among subcategories should be interpreted cautiously.

We believe these limitations are inherent to studies conducted in such complex environments and have taken every possible step to mitigate their impact on the quality and interpretation of results.

4. Data Description

Based on the proposed hypotheses for the analysis, we take several basic factor characteristics of the respondents who took part in the survey:

(1) Maturity: we can see (Figure 1) that in general, the distribution of the surveyed enterprises by the year of establishment does not correspond to a normal distribution (as shown by the Jarque–Bera test); with slight variability, enterprises from the 2000–2013 year of establishment prevail.

(2) Gender: we can see (Figure 2) that in general, the distribution of surveyed enterprises by the gender of the owner does not correspond to a normal distribution (as shown by the Jarque–Bera test); with slight variability, enterprises with male management prevail.

(3) Region: we can see (Figure 3) that in general, the distribution of surveyed enterprises by location as of the beginning of the full-scale war does not correspond to a normal

distribution (as shown by the Jarque–Bera test); with slight variability, enterprises with a regional presence prevail.

(4) Taxation: we can see (Figure 4) that in general, the distribution of surveyed enterprises by the form of taxation does not correspond to a normal distribution (as shown by the Jarque–Bera test); with slight variability, enterprises with the single tax and the VAT prevail.

(5) Turnover: we can see (Figure 5) that in general, the distribution of surveyed enterprises by turnover volume does not correspond to a normal distribution (as shown by the Jarque–Bera test); with fairly insignificant variability, enterprises with UAH 5–10 million prevail.

(6) Workforce: we can see (Figure 6) that in general, the distribution of surveyed enterprises by the number of employees does not correspond to a normal distribution (as shown by the Jarque–Bera test); with fairly insignificant variability, enterprises with 6–10 employees prevail.

(7) Cancelation: in general, the majority of surveyed companies suspended their activities, but for less than 1 month (Figure 7).

(8) Internationalization: most of the companies that took part in the survey had not been involved in international partnerships either before or during the full-scale invasion (Table 1).

Table 1. Descriptive statistics for var17 and var18.

	var17	**var18**
Mean	0.283046	0.251437
Median	0.000000	0.000000
Maximum	1.000000	1.000000
Minimum	0.000000	0.000000
Std. Dev.	0.450803	0.434151
Skewness	0.963216	1.145878
Kurtosis	1.927785	2.313035
Jarque–Bera	140.9627	165.9978
Probability	0.000000	0.000000
Sum	197.0000	175.0000
Sum Sq. Dev.	141.2399	130.9986
Observations	696	696

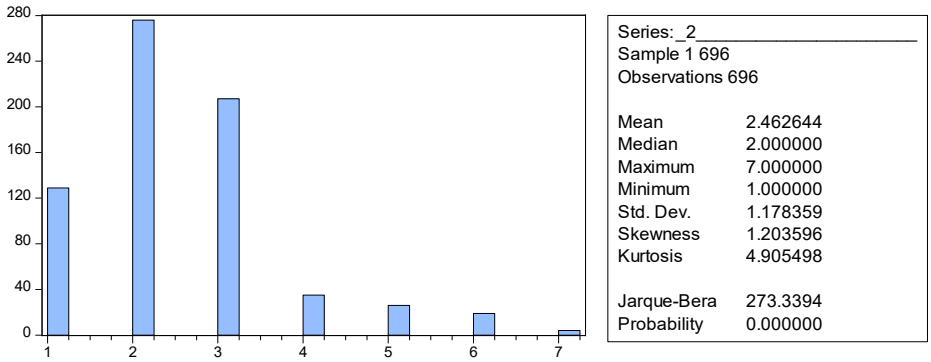

Figure 1. Distribution of responses for var02. Source: Calculated by the authors.

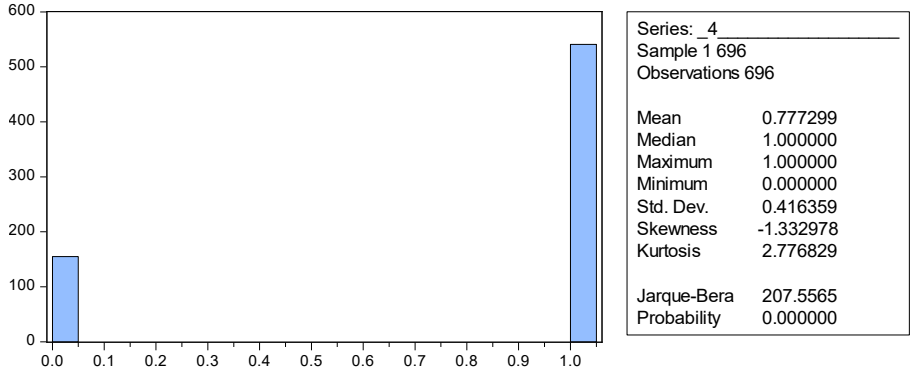

Figure 2. Distribution of responses for var04. Source: Calculated by the authors.

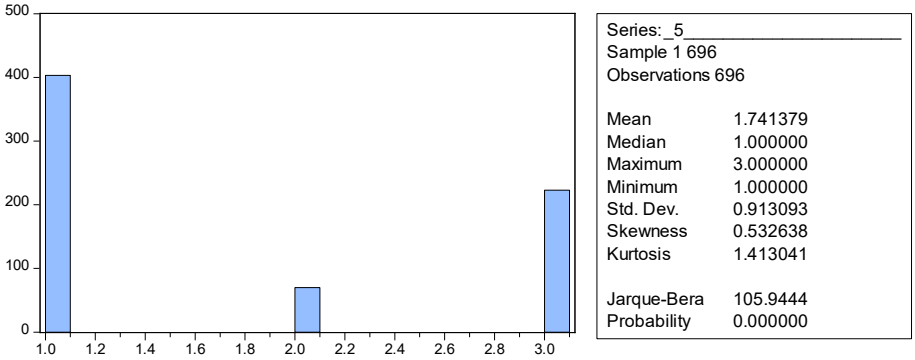

Figure 3. Distribution of responses for var05.Source: Calculated by the authors.

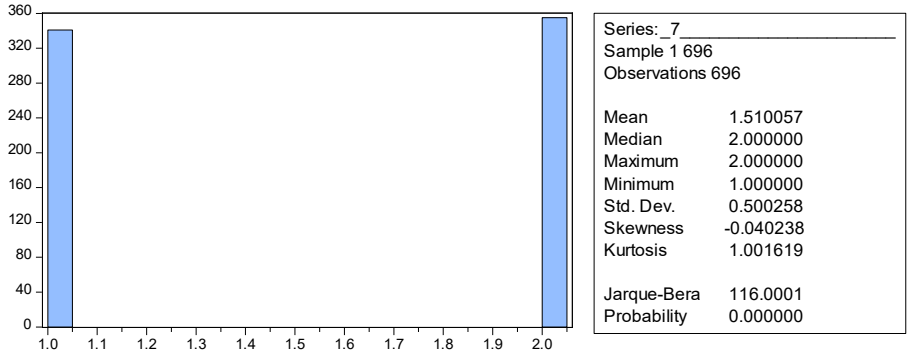

Figure 4. Distribution of responses for var07. Source: Calculated by the authors.

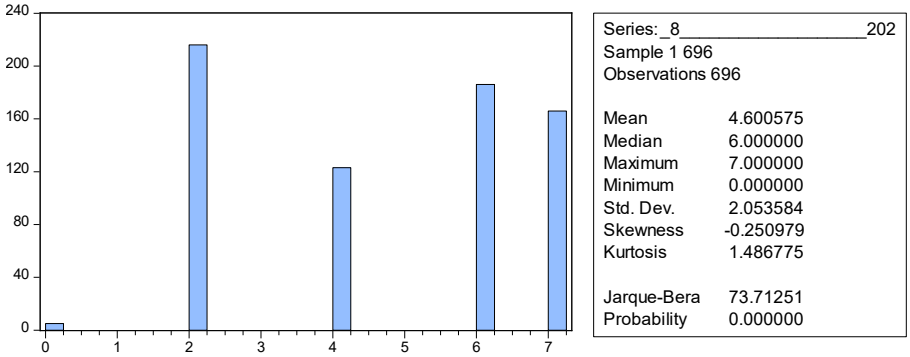

Figure 5. Distribution of responses for var08. Source: Calculated by the authors.

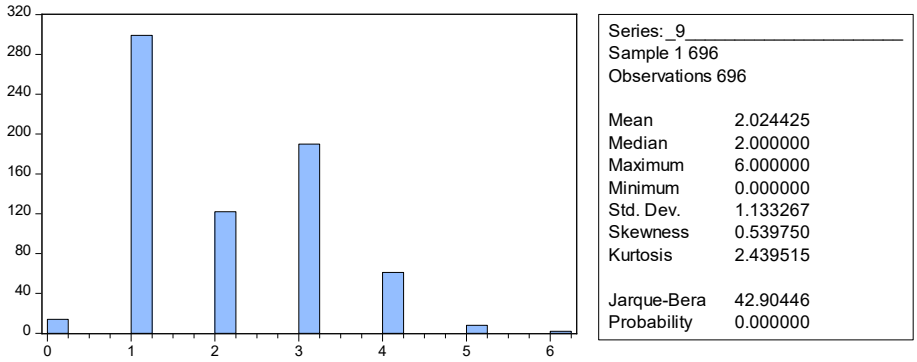

Figure 6. Distribution of responses for var09. Source: Calculated by the authors.

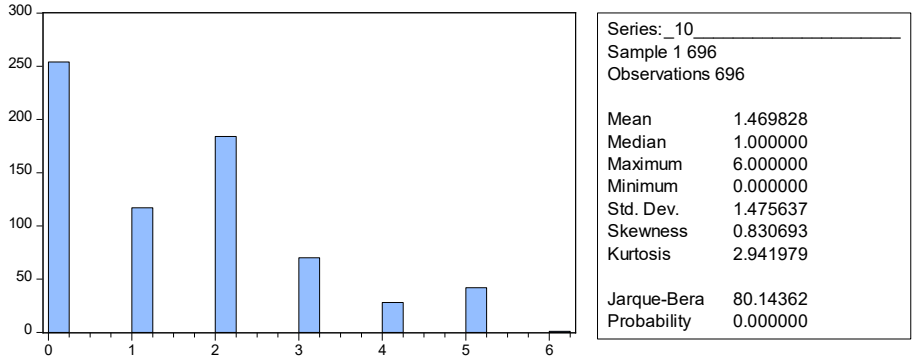

Figure 7. Distribution of responses for var10. Source: Calculated by the authors.

The research essentially presents a description of a typical entrepreneur who took part in the survey of small and medium-sized businesses in Ukraine during December 2023–January 2024.

What are the typical reactions of this typical entrepreneur? We monitor them according to the descriptive statistics of the following variables:

(1) Reduction in personnel: if in 2023, most companies noted that, compared to the period before the full-scale invasion, there was an insignificant reduction in personnel (−10%), then in 2023, compared to 2022, the number of personnel remained unchanged for the most part (Table 2).
(2) For most companies, the average amount of investment in the business for the next year does not exceed USD 5000–USD 10,000 (Figure 8).
(3) Most companies note that they need an average of USD 30,000–USD 300,000 additionally (to available resources) to implement their business development strategy within 3 years (Figure 9).
(4) Most of the companies that took part in the survey estimate the financial losses due to the full-scale invasion at the "from USD 50,000 to USD 100,000" level, while for the future, they mostly predict that 2024 will be "almost the same as 2022" (Table 3).
(5) The financial and economic situation in 2024 is predicted by the majority of companies to remain unchanged (Figure 10).
(6) At the same time, business expects effective GDP stability from the Ukrainian economy compared to 2023 (Figure 11).

Table 2. Descriptive statistics for var24 and var25.

	var24	**var25**
Mean	−0.985632	−0.396552
Median	−1.000000	0.000000
Maximum	4.000000	4.000000
Minimum	−10.00000	−10.00000
Std. Dev.	1.920677	1.982859
Skewness	−0.870288	−1.797403
Kurtosis	7.886398	10.57603
Jarque–Bera	780.2883	2039.246
Probability	0.000000	0.000000
Sum	−686.0000	−276.0000
Sum Sq. Dev.	2563.856	2732.552
Observations	696	696

Table 3. Descriptive statistics for var19 and var38.

	var19	**var38**
Mean	3.018678	3.579023
Median	3.000000	3.000000
Maximum	7.000000	10.00000
Minimum	−1.000000	0.000000
Std. Dev.	1.874769	2.354745
Skewness	0.080440	0.860162
Kurtosis	2.271498	3.499046
Jarque–Bera	16.14132	93.04836
Probability	0.000313	0.000000
Sum	2101.000	2491.000
Sum Sq. Dev.	2442.757	3853.654
Observations	696	696

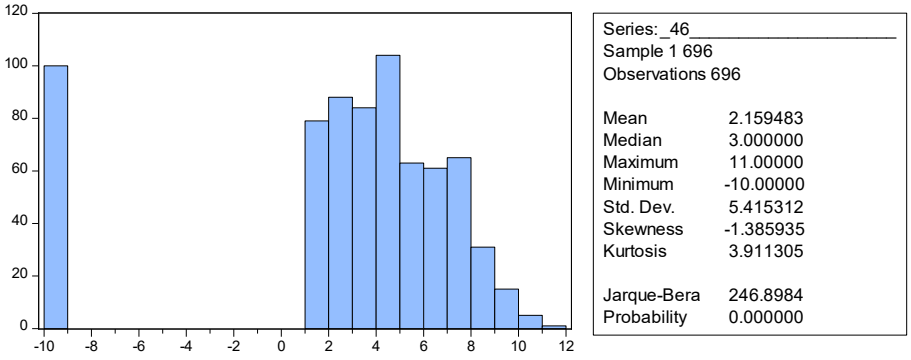

Figure 8. Distribution of responses for var46. Source: Calculated by the authors.

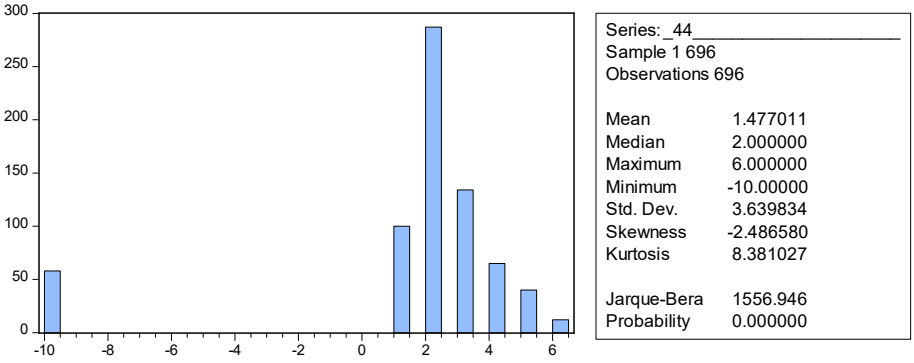

Figure 9. Distribution of responses for var44. Source: Calculated by the authors.

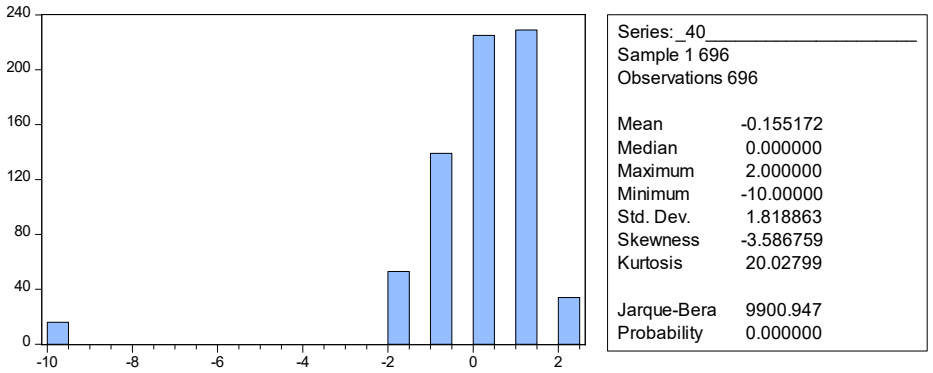

Figure 10. Distribution of responses for var40. Source: Calculated by the authors.

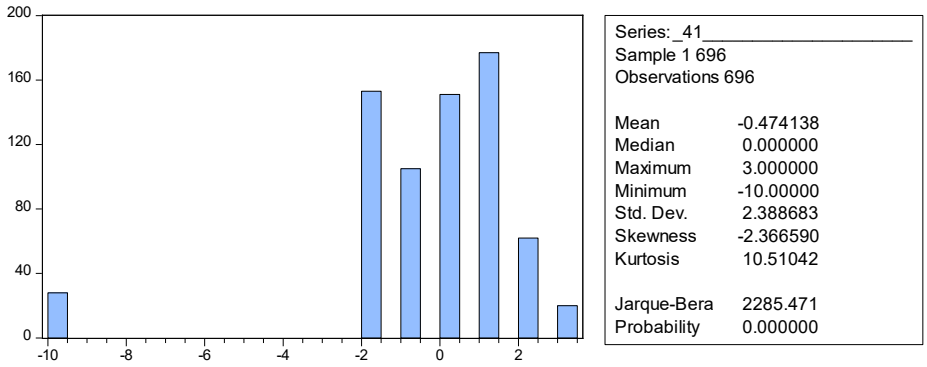

Figure 11. Distribution of responses for var41. Source: Calculated by the authors.

The data analysis has shown significantly low values of standard errors for the studied indicators; that is, on average, responses of the businesses are unanimous regarding their assessments of entrepreneurship in the country in the post-war period. All variables are not normally distributed, as confirmed by the Jarque–Bera test (all *p*-values are below 0.05), so the variables show statistical outliers based on either the mean or the minimum and maximum values. So, after all, there is marginality in the sample.

5. Results

Based on the presented theoretical arguments and empirical evidence, we test our set of hypotheses for verification.

H11: *There are gender differences in the perception of risk (*Table 4*) and the post-war future (*Table 5*) by entrepreneurs–owners.*

Table 4. Results of testing Hypothesis 1: var04 and var40.

Method	df	Value	Probability *
Wilcoxon/Mann–Whitney		13.82434	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		15.36673	0.0000
Med. Chi-square	1	34.85125	0.0000
Adj. Med. Chi-square	1	32.83133	0.0000
Kruskal–Wallis	1	191.1141	0.0000
Kruskal–Wallis (tie-adj.)	1	236.1388	0.0000
van der Waerden	1	196.9102	0.0000

* If the probability value is higher than 5%, we accept the null hypothesis that there is no difference in the sample.

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 5. Results of testing Hypothesis 1: var04 and var41.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		13.08462	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		14.18985	0.0000
Med. Chi-square	1	87.13282	0.0000
Adj. Med. Chi-square	1	85.02059	0.0000
Kruskal–Wallis	1	171.2091	0.0000
Kruskal–Wallis (tie-adj.)	1	201.3540	0.0000
van der Waerden	1	143.0076	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H12: *There is a statistically significant difference in the ability to retain personnel (*Tables 6 and 7*) and turnover (*Table 8*) depending on the maturity of the company.*

Table 6. Results of testing Hypothesis 2: var02 and var24.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		28.87786	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		29.21388	0.0000
Med. Chi-square	1	758.6940	0.0000
Adj. Med. Chi-square	1	755.7275	0.0000
Kruskal–Wallis	1	833.9347	0.0000
Kruskal–Wallis (tie-adj.)	1	853.4550	0.0000
van der Waerden	1	747.6143	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 7. Results of testing Hypothesis 2: var02 and var25.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		27.46618	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		27.88713	0.0000
Med. Chi-square	1	676.1027	0.0000
Adj. Med. Chi-square	1	673.3118	0.0000
Kruskal–Wallis	1	754.3945	0.0000
Kruskal–Wallis (tie-adj.)	1	777.6957	0.0000
van der Waerden	1	687.1557	0.0000

Considering that the *p*-value is less than zero, we reject the null hypothesis; therefore, there is a difference.

Table 8. Results of testing Hypothesis 2: var02 and var19.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		6.298173	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		6.452535	0.0000
Med. Chi-square	1	36.69260	0.0000
Adj. Med. Chi-square	1	36.04605	0.0000
Kruskal–Wallis	1	39.66782	0.0000
Kruskal–Wallis (tie-adj.)	1	41.63609	0.0000
van der Waerden	1	26.46780	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H13: *The location of the company does not affect the factors of its resilience during the period of the full-scale invasion (*Table 9*).*

Table 9. Results of testing Hypothesis 3: var05 and var10.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		6.362183	0.0600
Wilcoxon/Mann–Whitney (tie-adj.)		6.610234	0.0601
Med. Chi-square	1	2.979955	0.0843
Adj. Med. Chi-square	1	2.796618	0.0945
Kruskal–Wallis	1	40.47822	0.0702
Kruskal–Wallis (tie-adj.)	1	43.69611	0.0700
van der Waerden	1	40.32758	0.0790

We reject the hypothesis for var05 and var10, given that the *p*-value is greater than zero, we accept the null hypothesis; therefore, there is no difference—firms suspended operations regardless of regionality.

However, interestingly, the view of the future of the economy varies by region.

H14: *The view of the future of the economy varies by region (*Table 10*).*

Table 10. Results of testing Hypothesis 4: var05 and var41.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		22.36292	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		23.33464	0.0000
Med. Chi-square	1	162.4995	0.0000
Adj. Med. Chi-square	1	160.9628	0.0000
Kruskal–Wallis	1	500.1032	0.0000
Kruskal–Wallis (tie-adj.)	1	544.5089	0.0000
van der Waerden	1	524.3138	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H15: *Internationalization is a factor of stability for domestic enterprises (*Table 11*).*

Table 11. Results of testing Hypothesis 5: var17 and var40.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		3.410994	0.0006
Wilcoxon/Mann–Whitney (tie-adj.)		3.745022	0.0002
Med. Chi-square	1	14.14338	0.0002
Adj. Med. Chi-square	1	13.71804	0.0002
Kruskal–Wallis	1	11.63533	0.0006
Kruskal–Wallis (tie-adj.)	1	14.02574	0.0002
van der Waerden	1	20.58897	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H16: *Companies with international partnerships are more open to investment; that is, there is a statistically significant difference in the need for financial assistance (*Table 12*) and investment volumes (*Table 13*) depending on the level of internationalization.*

Table 12. Results of testing Hypothesis 6: var17 and var44.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		25.60255	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		26.48651	0.0000
Med. Chi-square	1	876.9274	0.0000
Adj. Med. Chi-square	1	873.6705	0.0000
Kruskal–Wallis	1	655.4942	0.0000
Kruskal–Wallis (tie-adj.)	1	701.5390	0.0000
van der Waerden	1	524.0656	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 13. Results of testing Hypothesis 7: var18 and var46.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		22.09608	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		22.79107	0.0000
Med. Chi-square	1	822.4731	0.0000
Adj. Med. Chi-square	1	819.2945	0.0000
Kruskal–Wallis	1	488.2397	0.0000
Kruskal–Wallis (tie-adj.)	1	519.4360	0.0000
van der Waerden	1	370.6450	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H17: *Companies that suspended operations during the period of the full-scale invasion have lower survival rates* (Table 14).

Table 14. Results of testing Hypothesis 8: var10 and var19.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		15.40211	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		15.66053	0.0000
Med. Chi-square	1	208.5791	0.0000
Adj. Med. Chi-square	1	206.9960	0.0000
Kruskal–Wallis	1	237.2271	0.0000
Kruskal–Wallis (tie-adj.)	1	245.2542	0.0000
van der Waerden	1	229.4758	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H18: *There is a significant difference in the need for additional resources for companies with different turnovers* (Tables 15 and 16) *and different types of taxation* (Tables 17 and 18).

Table 15. Results of testing Hypothesis 9: var08 and var44.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		18.97573	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		19.52611	0.0000
Med. Chi-square	1	376.6982	0.0000
Adj. Med. Chi-square	1	374.5967	0.0000
Kruskal–Wallis	1	360.0809	0.0000
Kruskal–Wallis (tie-adj.)	1	381.2715	0.0000
van der Waerden	1	396.7999	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 16. Results of testing Hypothesis 9: var08 and var46.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		7.942360	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		8.046791	0.0000
Med. Chi-square	1	36.19793	0.0000
Adj. Med. Chi-square	1	35.54865	0.0000
Kruskal–Wallis	1	63.08214	0.0000
Kruskal–Wallis (tie-adj.)	1	64.75194	0.0000
van der Waerden	1	56.60441	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 17. Results of testing Hypothesis 9: var07 and var44.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		13.11496	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		14.06874	0.0000
Med. Chi-square	1	306.2156	0.0000
Adj. Med. Chi-square	1	303.7805	0.0000
Kruskal–Wallis	1	172.0039	0.0000
Kruskal–Wallis (tie-adj.)	1	197.9314	0.0000
van der Waerden	1	161.8713	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Table 18. Results of testing Hypothesis 9: var07 and var46.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		15.39878	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		15.89107	0.0000
Med. Chi-square	1	620.1121	0.0000
Adj. Med. Chi-square	1	617.2246	0.0000
Kruskal–Wallis	1	237.1244	0.0000
Kruskal–Wallis (tie-adj.)	1	252.5283	0.0000
van der Waerden	1	191.6135	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

H19: *There is a difference in investment volumes depending on the maturity of the company (*Table 19*).*

Table 19. Results of testing Hypothesis 10: var02 and var46.

Method	df	Value	Probability
Wilcoxon/Mann–Whitney		7.878484	0.0000
Wilcoxon/Mann–Whitney (tie-adj.)		8.008908	0.0000
Med. Chi-square	1	229.5285	0.0000
Adj. Med. Chi-square	1	227.7731	0.0000
Kruskal–Wallis	1	62.07155	0.0000
Kruskal–Wallis (tie-adj.)	1	64.14369	0.0000
van der Waerden	1	49.85394	0.0000

Given that the *p*-value is less than zero, we reject the null hypothesis, so there is a difference.

Let us check the conclusions obtained above using Kramer's statistics, considering the representation of the sample (Table 20).

Table 20. The results of testing research hypotheses using Cramer's statistics (Conditional independence between series in the group).

Variables	Description	Pearson X^2	Likelihood Ratio G2	Cramer's V
var02 var41 var04	Business establishment year How do you assess prospects of the Ukrainian economy in 2024? Company owner	114.5637 Prob = 0.0150	101.5574 Prob = 0.0933	
Conditional var04 = 0 (var02–var41)	Condition: the owner of the company is a woman; is there any difference in the establishment year and assessment prospects of the Ukrainian economy in 2024?	39.28415 Prob = 0.3249	40.6084 Prob = 0.2745	0.205526 *
Conditional var04 = 1 (var02–var41)	Condition: the owner of the company is a man; is there any difference in the establishment year and assessment prospects of the Ukrainian economy in 2024?	50.13307 Prob = 0.0590	39.13184 Prob = 0.3310	0.124276
Unconditional var02–var41	No condition: is there any difference in the establishment year and assessment prospects of the Ukrainian economy in 2024?	33.90021 Prob = 0.5688	32.59059 Prob = 0.6315	0.090099
var44 var46 var02	44. What amount of financial resources does your business need additionally (additionally to resources available to you) to implement your business development strategy within 3 years? 46. What amount do you plan to invest in business development in the following year? Business establishment year	1814.476 Prob = 0.0000	720.5307 Prob = 0.0000	
Conditional var02 = 1 (var44–var46)	Condition: business establishment year is before 2000. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	113.6952 Prob = 0.0000	112.5079 Prob = 0.0000	0.383266
Conditional var02= 2 (var44–var46)	Condition: business establishment year is 2000–2013. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	291.8439 Prob = 0.0000	199.7963 Prob = 0.0000	0.419803
Conditional var02 = 3 (var44–var46)	Condition: business establishment year is 2014–2019. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	223.0970 Prob = 0.0000	155.6882 Prob = 0.0000	0.423825
Conditional var02 = 4 (var44–var46)	Condition: business establishment year is 2020. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	41.42619 Prob = 0.2106	36.74545 Prob = 0.3879	0.486540

Table 20. *Cont.*

Variables	Description	Pearson X^2	Likelihood Ratio G2	Cramer's V
Conditional var02 = 5 (var44–var46)	Condition: business establishment year is 2021. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	47.76778 Prob = 0.0736	41.86354 Prob = 0.1975	0.606172
Conditional var02 = 6 (var44–var46)	Condition: business establishment year is 2022. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	37.96769 Prob = 0.1506	24.81173 Prob = 0.7341	0.632187
Conditional var02 = 7 (var44–var46)	Condition: business establishment year is 2023. Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	4.000000 Prob = 0.1353	4.498681 Prob = 0.1055	1.000000
Unconditional var44–var46	No condition: Is there any difference between the amount of necessary additional financial resources for business and a planned amount of investment in the following year?	578.6611 Prob = 0.0000	416.4818 Prob = 0.0000	0.372248

* a more likely dependence scenario.

Thus, as the results show, for companies where women are the owners, the maturity factor is more related to the prospects of the Ukrainian economy in 2024 than for men.

Testing the hypothesis of how the maturity of the company affects the investment capabilities/needs, we concluded that the strongest dependence concerns the need to invest in companies founded in 2023, and the weakest dependence relates to those registered before 2000. That is, the assumption was confirmed.

6. Conclusions and Discussion

This research was conducted on the basis of the collected database of responses from owners and managers of MSMEs in Ukraine from the end of 2023 to the beginning of 2024. The main objective was to determine the factors affecting the resilience of small and medium-sized enterprises (MSMEs) in the face of the full-scale invasion. For this, 10 hypotheses were formed, which were tested using statistical tools. The results of the research confirmed a statistically significant difference according to nine hypotheses.

There are differences in the resilience of MSMEs depending on the gender of the head of the company, which may indicate a different approach of men and women to business management in crisis situations. The resilience of companies to maintain turnover and personnel significantly depends on the age of the company; in particular, more mature companies are likely to have more resources and experience to withstand crises. Statistically significant differences were revealed in the views of companies on the future depending on their location in the region of Ukraine. This may be due to different economic and social conditions in different regions. For example, companies that do business across the country or in the capital are more resilient than regional companies.

Companies that have a higher level of internationalization demonstrate greater resilience in a military situation. This may be due to the diversification of markets and the presence of international partners. There is a statistically significant difference in the need for financial assistance depending on the level of internationalization of the firm. Internationalized companies can have better access to international financial resources, as well as more opportunities to attract loan funds. The level of internationalization of the firm affects the amount of investment. Companies that are active in international markets

are likely to receive more investment. A firm's survival depends on whether it suspended operations during the full-scale invasion. Companies that have continued to operate show better results in resilience.

There is a significant difference in the need for additional resources for companies with different turnovers and different types of taxation. Companies with higher turnover may have better opportunities to attract additional resources, as well as larger reserves. Investment volumes depend significantly on the maturity of the company. More mature companies are likely to have more opportunities to attract investment.

Only one hypothesis (H3), which predicted the existence of a statistically significant difference in company resilience during a full-scale invasion depending on its location (a region of Ukraine), was not confirmed. This may indicate that all companies in the country were affected by the large-scale invasion and have suffered the corresponding consequences for economic survival.

The research confirms that various factors, including the gender of the manager, the maturity of the firm, the level of internationalization, and the operational status during the crisis, play an important role in the resilience of small and medium-sized enterprises in the crisis. This indicates the need for an integrated approach to the management and support of MSMEs, considering these different aspects, to increase their resilience and adaptability in the future.

Despite the magnitude of the research, it has several limitations. Firstly, there is an uneven distribution of business size, in particular, a large share of respondents (66.3%) represents micro-business, while a medium-sized business is represented only at 2.6%. This can lead to biasing the results toward the problems and prospects of micro-businesses, underestimating the peculiar challenges medium-sized businesses face.

Secondly, the survey was conducted over a fairly short period of time, which may fail to consider seasonal fluctuations and changes in the business environment. It is also important to conduct similar studies in different periods.

Thirdly, the research used categorical rating scales, which allowed structuring the responses, but limited the depth of the analysis.

However, in any case, this study provided valuable insights into the resilience of micro, small, and medium-sized enterprises in crises. To improve the quality of research in the future, the possibility of more uniform and long-term data collection, the engagement of various stakeholders, and the use of mixed methods of data analysis should be considered.

Finally, to improve the resilience of MSMEs, uncertainty at both the military and national levels need to be reduced; corruption levels need to be lowered permanently; access to loans should be improved; and judicial and tax reforms should be developed. Businesses should also demand a review of the taxation system and stimulation of the development of SMEs. To achieve these goals, the government must create stable conditions for business, in particular by improving the regulatory environment and ensuring transparency in terms of mobilization. In addition, a crucial condition is the need for further implementation of the principles of economic freedom to promote the development of MSMEs in Ukraine.

Author Contributions: Conceptualization, A.D. and A.S.; methodology, A.S.; software, A.S.; validation, A.D. and A.S.; formal analysis, A.S.; investigation, A.D.; resources, A.D.; data curation, A.D.; writing—original draft preparation, A.S.; writing—review and editing, A.S. and A.D.; visualization, A.D.; supervision, A.D.; project administration, A.D.; funding acquisition, A.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data is unavailable due to privacy or ethical restrictions.

Conflicts of Interest: The authors declare no conflicts of interest.

Appendix A

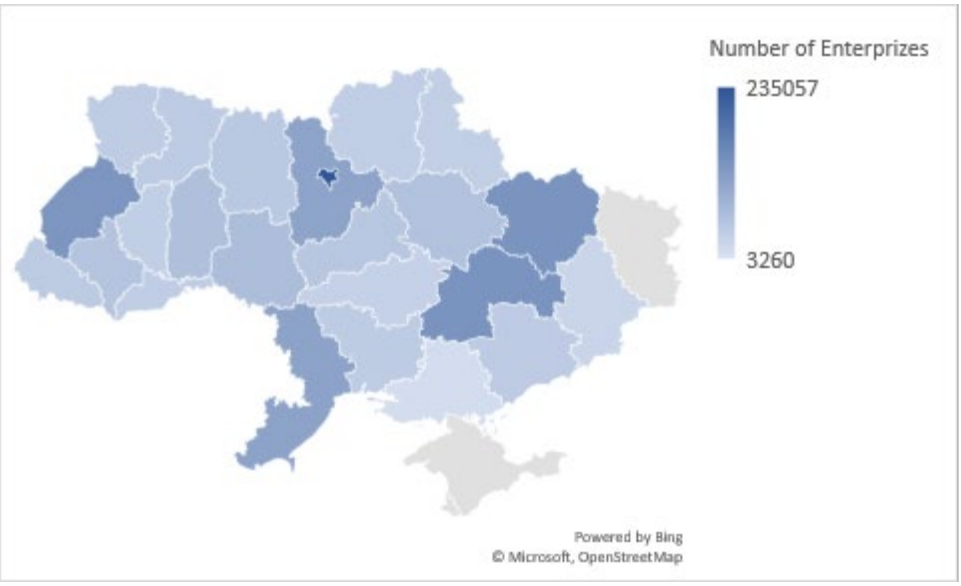

Figure A1. The map of Ukraine: scale of entrepreneurship, 2023.

Table A1. Questionnaire variables.

Text Question	Var	Answers	Codes
1. Position of the person filling out the questionnaire	var01	owner	1
		Senior manager	0
2. Year of business establishment	var02	before 2000	1
		2000–2013	2
		2014–2019	3
		2020	4
		2021	5
		2022	6
		2023	7
3. Organizational form of your business	var03	Individual entrepreneur	1
		Legal entity	2
4. Company owner	var04	Woman	0
		Man	1
5. Specify the location of your business (where the main income is generated)	var05	One region	1
		Kyiv	2
		All of Ukraine	3
6. Which area of business is the MAIN one in your activity?	var06	Construction	1
		Production of furniture	2
		Production of food	3
		Water supply, sewage, waste management	4
		Hotel business	5
		Activities in the field of administrative and auxiliary services	6
		Mining and quarrying	7
		Media	8
		Other types of processing industry	9

Table A1. *Cont.*

Text Question	Var	Answers	Codes
		IT sector	10
		Light industry	11
		Engineering	12
		Arts, sports, entertainment, and recreation	13
		Provision of other types of services	14
		Real estate transactions	15
		Wholesale trade	16
		Education	17
		Health care and provision of social assistance	18
		Supply of electricity, gas, steam, and air conditioning	19
		Professional, scientific, and technical activity	20
		Professional services: marketing, consulting, design	21
		Repair of motor vehicles	22
		Restaurants and cafés	23
		Retail trade of other products	24
		Retail trade of food	25
		Agriculture, forestry, and fisheries	26
		Telecommunications	27
		Transport, warehousing, postal and courier activities	28
		Tourism	29
		Financial and insurance activities	30
7. Which form of tax payment is the main one in your business?	var07	General system of taxation	1
		Single tax	2
8. Business turnover in 2022	var08	Up to UAH 1 million	1
		UAH 1–5 million	2
		UAH 5–10 million	3
		UAH 10–50 million	4
		UAH 50–100 million	5
		UAH 100–500 million	6
		UAH 500+ million	7
9. How many employees are currently working in your business?	var09	Up to 5	1
		6–10	2
		11–50	3
		51–250	4
		251–1000	5
		more than 5,000	6
10. Did your company suspend operations due to a full-scale intrusion?	var10	No	0
		Yes, for less than 1 month	1
		Yes, for 1–3 months	2
		Yes, for 3–6 months	3
		Yes, for 6–12 months	4
		Yes, for more than 12 months	5
11. What was the average load level (according to capacity) of your company? [Before the full-scale invasion]	var11	[0;100]	[0; 100]
12. What was the average load level (according to capacity) of your company? [2022]	var12	[0;100]	[0; 100]
13. What was the average load level (according to capacity) of your company? [2023]	var13	[0;100]	[0; 100]

Table A1. *Cont.*

Text Question	Var	Answers	Codes
14. What was the average load level (according to capacity) of your company? [2024 (forecast)]	var14	[0;100]	[0; 100]
15. Did the business relocate due to the war?	var15	No relocation	1
		Partially moved to another region	2
		Yes, business completely relocated to another region	3
		New branches were opened in another region	4
		New sales points were opened in another region	5
16. If so, what were the main factors that influenced your choice of a new region?	var16	Yes	1
		No	0
17. Was the company part of the supply chain of international companies [Before the full-scale invasion]	var17	Yes	1
		No	0
18. Was the company part of the supply chain of international companies [After the full-scale invasion]	var18	Yes	1
		No	0
19. How do you estimate the financial loss due to the full-scale invasion?	var19	No financial losses incurred	0
		Up to USD 10,000	1
		From USD 10,000 to USD 50,000	2
		From USD 50,000 to USD 100,000	3
		From USD 100,000 to USD 500,000	4
		USD 100,000–USD 1 million	5
		USD 1 million– USD 10 million	6
		More than USD 10 million	7
20. What was the financial and economic condition of your enterprise before the full-scale invasion?	var20	Bad	0
		Satisfactory	1
		Good	2
		Excellent	3
21. How do you assess the current financial and economic condition of your enterprise?	var21	Bad	0
		Satisfactory	1
		Good	2
		Excellent	3
22. Business performance results in 2023 compared to the period before the full-scale invasion (dollar equivalent)	var22	Business effectively ceased operations (0–30%)	0
		Significantly below expectations (40–60%)	1
		Below expectations (70–90%)	2
		Meet expectations (100%)	3
		Exceeded expectations (110–130%)	4
		Significantly exceeded expectations (140%+)	5
23. Business performance results in 2023 compared to the same period in 2022 (dollar equivalent)	var23	Business effectively ceased operations (0–30%)	0
		Significantly below expectations (40–60%)	1
		Below expectations (70–90%)	2
		Meet expectations (100%)	3
		Exceeded expectations (110–130%)	4
		Significantly exceeded expectations (140%+)	5

Table A1. *Cont.*

Text Question	Var	Answers	Codes
24. How has the number of employees changed in 2023 compared to the period before the full-scale invasion?	var24	Significant reduction: −50 to −100%	−3
		20–40% reduction	−2
		Minor reduction: −10%	−1
		Remained unchanged	0
		Minor increase: +10%	1
		20–40% increase	2
		50–100% increase	3
		More than doubled	4
25. How has the number of personnel changed in 2023 compared to 2022?	var25	Significant reduction: −50 to −100%	−3
		20–40% reduction	−2
		Minor reduction: −10%	−1
		Remained unchanged	0
		Minor increase: +10%	1
		20–40% increase	2
		50–100% increase	3
		More than doubled	4
26. How has the number of ORDERS from customers that the business receives changed over the past month?	var26	Has fallen	−1
		Remained unchanged	0
		Has grown	1
27. How has the number of EMPLOYEES (full-time and part-time) changed over the past month?	var27	Has fallen	−1
		Remained unchanged	0
		Has grown	1
28. How has the PRODUCTION VOLUME of products/provided services changed over the past month?	var28	Has fallen	−1
		Remained unchanged	0
		Has grown	1
29. How has the overall level of INVENTORIES changed over the past month?	var29	Has fallen	−1
		Remained unchanged	0
		Has grown	1
		Our business has no inventories	2
30. How has the number of your ORDERS from your suppliers changed over the past month?	var30	Has fallen	−1
		Remained unchanged	0
		Has grown	1
34. What proportion of the staff has been reduced at the current moment? (percentage of the number as of 23 February 2022)	var34	[0; 100]	[0; 100]
35. What proportion of the staff is on unpaid leave (as a percentage of the workforce as of 23 February 2022)	var35	[0; 100]	[0; 100]
36. What proportion of the staff (of those who are currently working) is working for reduced wages? (percentage of currently employed people)	var36	[0; 100]	[0; 100]
37. What proportion of employees (of those hired since the start of the full-scale invasion) have IDP status?	var37	[0; 100]	[0; 100]

Table A1. *Cont.*

Text Question	Var	Answers	Codes
38. Your forecasts for 2024 regarding your business—compared to 2023 (in hryvnias)	var38	Business will not operate/ceased operations	0
		to 50% from 2022	1
		50–90% from 2022	2
		Almost like in 2022	3
		110–120% from 2022 (10–20% growth)	4
		130–140% from 2022 (30–40% growth)	5
		150–160% from 2022 (50–60% growth)	6
		170–180% from 2022 (70–80% growth)	7
		190–200% from 2022 (90–100% growth)	8
		Business will grow 2–3 times (in hryvnias, compared to 2022)	9
		Business will grow 4 times or more (in hryvnias, compared to 2022)	10
39. To what extent do you plan to change the number of the staff in the company in 2024 (percentage of those currently employed)?	var39	Significant reduction: −50 to −100%	−3
		Reduction by 20–40%	−2
		Minor reduction: −10%	−1
		Will remain unchanged	0
		Minor increase: +10%	1
		Increase by 20–40%	2
		Increase by 50–100%	3
		Will more than double	4
40. What are your expectations regarding the financial and economic condition of your enterprise in 2024?	var40	Will significantly worsen	−2
		Will worsen	−1
		Will remain unchanged	0
		Will improve	1
		Will improve significantly	2
41. How do you assess the prospects of the Ukrainian economy in 2024?	var41	GDP will decrease significantly (by 5% or more)	−2
		GDP will decrease slightly (between −1% and −4%)	−1
		GDP will actually not change compared to 2023	0
		GDP growth in the range of 1–4%	1
		GDP growth in 2024 by 5–9%	2
		GDP growth in 2024 by 10% or more	3
42. Are you engaged in foreign economic activity as of now?	var42	We do not carry out foreign economic transactions	0
		We plan to enter international markets in 2024	1
		We only carry out export transactions	2
		We only carry out import transactions	3
		We carry out export and import transactions	4
44. What amount of additional financial resources does your business need (in addition to resources available to you) to implement your business development strategy within 3 years?	var44	up to USD 30,000	1
		USD 30,000–USD 300,000	2
		USD 300,000–USD 1,000,000	3
		USD 1,000,000–USD 3,000,000	4
		USD 3,000,000–USD 10,000,000	5
		More than USD 10,000,000	6

Table A1. *Cont.*

Text Question	Var	Answers	Codes
46. What amount do you plan to invest in business development next year?	var46	Up to USD 1000	1
		USD 1000–USD 5000	2
		USD 5000–USD 10,000	3
		USD 10,000–USD 30,000	4
		USD 30,000–USD 50,000	5
		USD 50,000–USD 100,000	6
		USD 100,000–USD 300,000	7
		USD 300,000–USD 1,000,000	8
		USD 1,000,000–USD 3,000,000	9
		USD 3,000,000–USD 10,000,000	10
		More than USD 10,000,000	11
47. Do you plan to attract foreign investments? If so, how much do you plan to raise?	var47	We do not plan to attract foreign investments	0
		USD 10,000–100,000	1
		USD 100,000–500,000	2
		USD 500,000–USD 1 million	3
		USD 1–5 million	4
		USD 5–10 million	5
		more than USD 10 million	6
49. How useful was this assistance?	var49	Not useful at all	−2
		Not very useful	−1
		Somewhat useful	0
		Very useful	1
		Extremely useful	2

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