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AN ENTROPIC PERSPECTIVE ON BUSINESS RELOCATION IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

ABSTRACT

This article explores dynamic shifts in entropy, focusing on the entropic perspective of business relocation within the sustainable development framework. Emphasizing sustainable practices and long-term goals, the research employs deep interviewing to gain profound insights into Ukrainian businesses' perspectives on relocation challenges. The study examines the intricacies of moving through the prism of entropy. It comprehensively addresses multifaceted issues during relocation, highlighting the delicate balance between disruption and opportunities. Providing insights into adaptive strategies, the study aids scholars, policymakers, and businesses in navigating the uncertainties of global economic changes. It serves as a guiding beacon for strategic and successful relocation, offering practical insights based on real-life cases. Stakeholders can optimize the relocation process by leveraging the key features outlined in the article.

The article, with its economic dimension, emerges as a vital resource for stakeholders aiming to streamline the relocation process. Through the outlined key features, businesses and policymakers can make well-informed decisions that not only align with sustainable development goals but also foster economic resilience and growth. Furthermore, the research carries substantial potential in exploring the post-relocation development of companies, drawing insights from the experiences of those who have already undergone relocation. By delving into the economic, social, and environmental dimensions of businesses' evolution post-relocation, the study can reveal patterns of resilience, innovation, and growth. Examining the post-relocation landscape provides an opportunity to assess the effectiveness of sustainable practices adopted during relocation and their impact on long-term economic performance. Leveraging the experiences of previously relocated enterprises offers practical insights into the challenges and opportunities in the post-relocation phase. In essence, the article not only optimizes the relocation process but also serves as a foundation for an exploration of post-relocation development, offering a roadmap for sustained economic resilience and growth.

Keywords: entropic perspective, business relocation, require careful planning, strategic thinking, international business, sustainable development

JEL Classification: L25, M16, R30, D81, O18

INTRODUCTION

In today's globalized world, business relocation abroad has become not only a strategic choice but a necessity for many companies striving to broaden their horizons and discover new opportunities for growth. At first glance, the process of relocation opens up numerous possibilities for businesses, yet it also presents various challenges and complexities that require thorough study and analysis. In this paper, we will explore the key aspects of international business relocation, focusing on the challenges it poses to companies. Additionally, we will identify algorithms for addressing these challenges and propose a program for success in the realm of international business activities. By delving into this topic, we aim to uncover the fundamental aspects of relocation, study the latest trends, and examine examples of successful companies that have managed to overcome the challenges accompanying the expansion of their businesses on an international scale.

Simultaneously, the relevance of the theme of corporate relocation abroad has gained particular significance due to complex geopolitical circumstances and natural disasters. Adverse conditions compel businesses to seek new markets and opportunities beyond their home countries to maintain stability and efficiency in their operations (Porter, 1998; Tepluk, 2022a, 2022b). In such cases, relocation becomes an essential survival strategy for businesses, demanding not only significant financial investments but also considerable organizational and strategic expertise. In the context of force majeure events, relocation can have not only economic but also social significance by providing employment opportunities for people and ensuring their safety.

In this paper, we will address the challenges businesses may face during relocation, examine crucial aspects of selecting new markets and countries, and explore potential solutions to problematic issues associated with corporate relocation in the midst of armed conflicts. Our paper is driven by essential aspects of this problem and aims to provide readers with a deeper understanding of how businesses can adapt and thrive amid geopolitical entropy, illustrated through real-world examples and best practices.

LITERATURE REVIEW

When considering the question of company relocation, it is necessary to take into account all its aspects, including the consequences for the company resulting from this decision, advantages and disadvantages, strategic motives, the company's competitiveness, and innovation. Additionally, one should consider all the problems related to preparing for the company's move, risk management models, challenges during the relocation, organizational aspects of the move, and cultural challenges (Ornoy and Tarba, 2013; Ward, 1967; Balbontin and Hensher, 2019). One of the earliest and most frequently mentioned studies on corporate relocation in international literature is the book by McLaughlin and Robock (1949) titled "Why Industry Moves South." In their book, the authors discuss the relocation of manufacturing companies in America due to cheap labour and reduced labour union activity. The authors primarily consider relocation from a geographical perspective and identify factors such as resource availability, market conditions, energy costs, and climatic conditions as reasons for companies moving south.

Another researcher who has examined corporate relocation is Haines (1970). One of the author's research works is the book "Business Relocation: A Guide to Moving a Business." In the book, the author examines and describes the process of preparation, planning, and consequences of relocating a company. The author also emphasizes the importance of selecting a new location, the reasons and goals for the move, risks and challenges that may arise during the relocation, as well as the relocation schedule and budget development. Brouwer et al. (2004), in their paper "The firm relocation decision: An empirical investigation," consider corporate relocation as a complex process that depends on a wide range of factors, both economic and non-economic, and can also vary depending on the type of company's activities. Therefore, the authors believe that corporate relocation is a highly challenging process that depends on numerous factors. It is essential to carefully consider the move and take all aspects into account. With the right decision and a suitable location, profit can be maximized.

In their paper "A study on the impact of soft location factors in the relocation of service and manufacturing firms," (An et al., 2014) explore the issue of corporate relocation and assess the influence of soft location factors on the relocation of manufacturing and service firms. Their research highlights the significance of qualitative education and skilled personnel when selecting a location for relocation. In the context of Ukraine's business landscape, corporate relocation has become highly relevant for Ukrainian businessmen, both domestically and internationally. Different challenges appear while companies are trying to relocate their businesses to proceed the optimization of business processes and among them is logistics (Prokopenko et al., 2020; Tananaiko et al., 2023; Khaietska et al., 2023; Semenets-Orlova et al., 2022; Kalina et al., 2022). One of the domestic researchers who has explored the topic of corporate relocation is Melnyk and Leshchuk, 2022. In their study, "Features, Problems, and Incentives for the Relocation of National Production in Times of War," the authors argue that relocating a company allows regions where businesses have relocated to retain and effectively utilize the region's resources, as well as preserve the industrial and labour potential within the country. In a review of publications by (Dykan et al. 2021) examining corporate relocation due to the full-scale war in Ukraine, it is noted that it is essential for the country to support businesses, considering localization aspects, both legislatively by creating favourable conditions and by expanding the areas where companies can relocate to preserve the country's labour and production potential within its borders.

Entropic changes play a significant role in the global economic transformations of the modern world. The term "entropy" denotes the degree of disorder or chaos within a system. In the context of globalization, entropic changes can be regarded as uncertainties and unpredictability accompanying the expansion of global economic connections and interactions (Ornoy and Tarba, 2013). One of the fundamental aspects of entropy in the context of globalization is the unpredictable changes

in political, economic, and sociocultural spheres. Globalization creates a network of interconnections between countries and regions, often accompanied by political instability, economic crises, and cultural conflicts (Mulska et al., 2022).

Therefore, **Hypothesis 1** was proposed: Positive Impact of Sustainable Development Strategies on Business Relocation (Bafas et al., 2023). According to this research, the implementation of sustainable development strategies was associated with higher efficiency in business relocation. Analyzing a range of companies, they demonstrated that businesses adhering to sustainability principles achieved significant positive outcomes in their new locations.

This led to **Hypothesis 2**: Key Success Factors of Business Relocation within the Context of Entropic Approach (Ranjbari et al., 2021). This study analyzed the factors contributing to the successful business relocation using an entropy-based approach. They identified key aspects such as internal organizational structures and efficient resource management that significantly influenced relocation outcomes.

This led to the submission of **Hypothesis 3**: Relationship Between Business Relocation and Sustainable Development: Real-Life Case Studies (López-Pérez et al., 2017). In their work examined real-life cases of business relocation and the integration of sustainability. Their research highlighted how businesses successfully integrating sustainable development principles into their relocation strategies achieved consistent success in their new environments.

Therefore, **Hypothesis 4** was proposed: Importance of Considering Entropic Principles in the Process of Enterprise Decision-Making During Relocation (Allen et al., 2018). Through this work, it became evident that considering entropic principles in the process of strategic decision-making is a crucial factor for the success of business relocation. Their findings indicate that adaptability and flexibility in choosing optimal strategies are key to the effective transition of enterprises to a new level.

In the context of Ukrainian business realities (Vlasova et al., 2022; Korobka, 2023), the government has implemented various programs to support national producers (Alekseieva et al., 2023; State Property Fund of Ukraine, 2022; Cabinet of Ministers of Ukraine, 2022; Ministry of Economy of Ukraine, 2022; Ukrainian Union of Industrialists and Entrepreneurs, 2023). Resolution dated October 30, 2013, No. 841 "On approval of the Procedure for Evacuation in the event of the threat of occurrence or occurrence of emergency situations" played a crucial role in launching a campaign to evacuate business entities. The state ensured that the process of accepting relocation proposals was streamlined, fast, and cost-effective. Companies relocating to Western Ukraine received assistance in transporting equipment and production materials, often free of charge, and local authorities helped with employee placement, quick provision of utilities, and even finding new employees, markets, and raw materials. According to the authors, corporate relocation plays a significant role in a country's economy, particularly in terms of the labour market, exports and imports, investment attractiveness, and the business environment (Balanovska et al., 2019; Melnyk et al., 2022; Arsawan et al., 2022). Business relocation can have a positive impact on the region or country where the company is relocating, creating new job opportunities, boosting the local economy, enhancing scientific and technological potential, improving infrastructure, and increasing employment levels among the population (Business Zeal, n.d.; Carter, n.d.; Mia et al., 2022).

AIMS AND OBJECTIVES

The aim of the scientific article is to investigate the challenges and complexities faced by companies when relocating abroad within the framework of sustainable development. To achieve this objective, the following tasks need to be undertaken: conduct an analysis of scientific works that illuminate the challenges and aspects of corporate relocation in the context of sustainable development; identify the key socio-economic and financial factors influencing the decision-making process of companies regarding relocation; develop strategies and algorithms that will assist companies in successfully adapting to changes during the relocation process.

METHODS

For the scientific investigation of business relocation through the lens of entropy, various methods aimed at unravelling the chaos and uncertainty of this process are employed. However, we chose to conduct in-depth interviews as our preferred methodology. For this paper, a qualitative research method known as deep interviewing was employed to gain profound insights into the perspectives, thoughts, beliefs, and internal motivations of the study participants (Figure 1). The Ukrainian business representatives who displaced themselves and their business abroad were interviewed. The research process comprised several stages:

1. *Semi-structured Interviews*: researchers crafted a set of core questions, allowing participants space for detailed responses to delve deeper into the topic;
2. *Probing Questions*: questions were formulated to encourage participants to share their thoughts and experiences in detail;
3. *Prompting*: researchers posed clarifying questions to extract additional information about specific aspects of participants' responses;
4. *In-Depth Analysis*: researchers analyzed participants' responses, taking into account the context, non-verbal cues, and emotions, aiming to comprehend the deeper meanings and subtexts within the answers.

It is crucial to note that this method enables hypothesis formation. During its implementation, certain trends or motivations that might not be evident beyond the scope of deep research were identified. However, there are limitations to this method, such as:

1. *Subjectivity of Responses*: deep interviews can be influenced by participants' subjective responses, potentially limiting the generalizability of the results;
2. *Small Sample Size*: limited resources or time often restrict researchers to a small number of participants, complicating the generalization of findings;
3. *Researcher Influence*: the researcher's impact on the interview process (e.g., through clarifying questions or non-verbal signals) can affect participants' responses;
4. *Ambiguity in Responses*: participants may provide ambiguous or vague answers, necessitating in-depth analysis to understand their true motivations and beliefs.

Interview Questions for Business Relocation Study:

Introduction: Please introduce yourself and tell us about your business (industry, number of employees, company size - large, medium, small, micro, gender of the owner, years in business, location at the time of the full-scale invasion).

- **Relocation Process:** Has your business been relocated? (Yes/In the process/Requires relocation but not yet moved/Open a new business)
 - What influenced your choice of this particular country for relocation?
 - Was the relocation partial/full/retained certain aspects?
 - What aspects of your business were affected by relocation (production facilities, structural departments, personnel, warehouses, equipment, etc.)?
 - Why did you decide to move abroad rather than within the country?
- **Impact of Relocation:** What changes did relocation bring to your business?
 - Production volume (increased/decreased/no change/n/a),
 - Volume of production/services provided (increased/decreased/no change/n/a),
 - Sales volume (increased/decreased/no change/n/a),
 - Number of clients (increased/decreased/no change/n/a),
 - Inventory volume (increased/decreased/no change/n/a),
 - Range of products/services (increased/decreased/no change/n/a),
 - Profitability (increased/decreased/no change/n/a),
 - Cost of production (increased/decreased/no change/n/a),
 - Accounts payable (increased/decreased/no change/n/a),
 - Accounts receivable (increased/decreased/no change/n/a),
 - Investment in business development projects (increased/decreased/no change/n/a).
- **Recovery and Future Plans:** Assess the potential for a complete recovery of your business in the host country. (Fully recovered/ Possible complete recovery within a year/ Possible complete recovery beyond a year/ Unable to fully recover under relocation conditions)
 - How is your business being financed (pre and post full-scale invasion)?
 - Which factors most influenced your business operations after relocation (loss of suppliers/sales issues/export problems/lack of skilled workforce/decreased demand for products/services/different business practices in the new country/cultural differences/high energy costs/lack of infrastructure/numerous bureaucratic procedures/lacks of access to financing/legal barriers)?
 - Has business relocation affected your relationships with suppliers and access to related goods/services/raw materials? Have you sought new stakeholders in the new country?
- **Business Practices:** What are the main differences between doing business in Ukraine and doing business abroad?
 - What practices from your international business experience would you introduce into the Ukrainian business environment? What aspects of doing business do you find better in Ukraine?
- **Support during Relocation:** Did you seek assistance from other organizations during relocation? (If yes, which ones, and what kind of assistance did you require?)
- **Future Plans:** After the cessation of hostilities in your native region, what are your plans? (Plan to return to your region/Plan to relocate the business within Ukraine/Plan to stay in the host country/Plan to have offices in two countries/Difficult to answer?)

Figure 1. Questionnaire survey of representatives of the relocated business.

In conclusion, despite these limitations, deep interviewing remains a valuable qualitative research method, providing nuanced insights that are crucial for understanding complex human motivations and behaviours. The method's strengths, including its ability to reveal underlying motivations and contextual insights, make it a valuable tool in social science research.

RESULTS

Relocating domestic businesses abroad is the process of transferring a company's operations from one country to another. This can be driven by various reasons such as accessing new markets or political and economic instability in the home country (Svyrydenko et al., 2023; Islam et al., 2021). In the case of our country, relocation was prompted by a full-scale invasion, hence the movement was spontaneous, and the chaotic actions of business entities were a result of rapid territorial expansion and aerial bombardments. However, some businesses lost access to their workplaces.

A recent study examining the status and requirements of businesses in conflict-affected areas reveals that 5.6% of enterprises in the Eastern region have either undergone or are contemplating the relocation of their production facilities and personnel in the immediate future. Concurrently, there is a discernible global shift in strategies among Small and Medium-sized Enterprises (SMEs), with 43% prioritizing export development. The pursuit of expanded market reach and growth aspirations among businesses has led to an increased demand for capital. Specifically, SMEs alone project collective financial needs amounting to an estimated USD 73 billion. This substantial capital requirement underscores the importance of financial support mechanisms for businesses to actualize their growth plans. Such support has the potential not only to facilitate the relocation endeavours of enterprises but also to contribute significantly to budgetary goals for the upcoming year. The global trend of SMEs prioritizing export development adds a broader context to these localized efforts. Moreover, the financial requirements of SMEs signal a pressing need for accessible capital, emphasizing the crucial role financial support plays in enabling businesses to achieve their growth objectives and contribute substantially to economic goals.

The primary obstacles hindering relocated business are multifaceted, with key challenges identified as follows:

1. 62% - Customer-related Challenges. Over six in ten businesses cite a substantial hindrance in the form of a lack of paying customers. Additionally, termination of payments by existing customers, exceeding the 20% threshold, poses a significant challenge to sustained business growth;
2. 48% - Market Unpredictability. Nearly half of the businesses express concerns regarding the unpredictability of the domestic market. Furthermore, approximately 30% highlight the challenges stemming from the unpredictable economic policies implemented by the state, creating an environment of uncertainty;
3. 43% - Capital and Funding Shortages. A significant percentage of businesses, totalling 43%, pinpoint the lack of capital as a major hurdle. Additionally, the unavailability of credit funds, including challenges related to accessing programs such as "5-7-9," is noted by almost 30% of surveyed entities;
4. 26% - Supply Chain Disruptions. More than a quarter of businesses identify disruptions in supply chains as a notable obstacle. The challenges associated with long and expensive logistics are also emphasized by 23% of businesses, contributing to operational complexities.

A majority, exceeding 50%, of surveyed IT companies opted for remote work rather than relocation. While some have partially returned to office-based work, 45% of IT companies in the survey chose to relocate to Ukraine. Additionally, 42% of these companies engaged in partial relocation abroad, with only 5% closing part of their offices in Ukraine. Encouragingly, none of the surveyed IT companies expressed an intention to completely cease operations in Ukraine [11].

In terms of small and medium-sized businesses, one in twenty reported no losses due to the war. Meanwhile, 27% estimated their losses to be up to USD 10,000, 28% fell within the USD 10,000-50,000 range, another 13% experienced losses in the USD 50,000-100,000 bracket, and 20% reported losses exceeding USD 100,000. Among the surveyed companies, 22% suffered direct damage to property or assets as a result of hostilities. Regarding operational status, 28% of businesses have fully resumed work, 37% are operating partially, and 16% of SMEs are still not operational. A follow-up study conducted in Fall 2022 delved into the evolving plans of businesses for the future. It aimed to capture the changing landscape and strategies of both IT companies and small to medium-sized enterprises, offering a comprehensive understanding of the ongoing impacts and adaptive measures taken in response to the dynamic socio-economic environment. Businesses grapple with a diverse set of challenges that impede their relocation. The critical issues range from acquiring and retaining paying customers to navigating unpredictable market conditions and economic policies. Moreover, securing capital and addressing supply chain disruptions are prominent concerns. Identifying and strategizing around these obstacles are essential steps for businesses aiming to foster sustainable growth in a dynamic economic landscape.

According to research centres, approximately 11% of all businesses in Ukraine relocated abroad (Figure 2). The gradation of the blue colour indicates that the darker the colour, the greater the percentage of relocation of enterprises to that country or region. Out of these relocations, 62% moved to European Union countries, 15% to other European and CIS countries, 15% to Asian countries, 8% to North American countries. Most of the surveyed respondents relocated mainly to Poland (63%), Germany (10%) and Lithuania (16%), as well as Belgium, Bulgaria, and Estonia. Therefore, in the case of relocating domestic businesses abroad, impulsive actions are evident, leading to increased financial losses. We do not take into account all the countries of the world, but only those to which the business was relocated after 2022. Undoubtedly, the decision to relocate requires careful analysis and strategic planning. Companies need to consider the economic, political, cultural, and legal aspects of the new country, as well as evaluate potential advantages and risks (Oliinyk et al., 2022; Omelchuk et al., 2022). This adaptation indicates a degree of resilience and flexibility among those who chose to relocate, suggesting that factors beyond mere safety concerns contribute to successful integration into new environments.

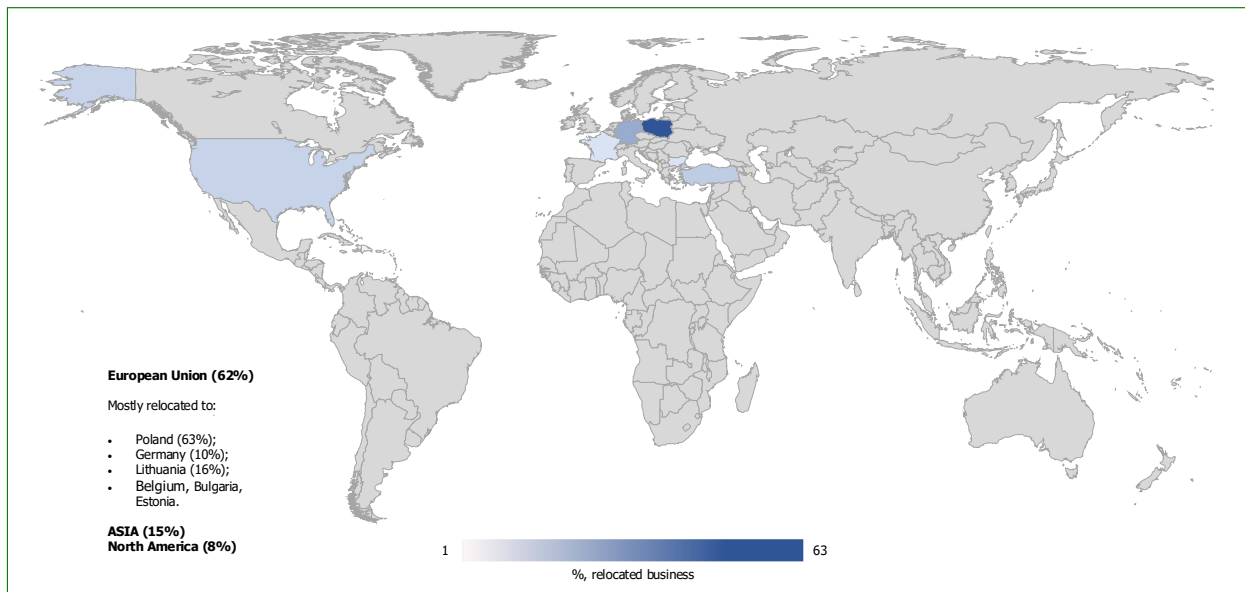


Figure 2. Visual representation of relocation abroad. (Source: formed by the authors using Bing platform)

In view, these findings illuminate the complex interplay of personal safety considerations and the practical aspects of adaptation that individuals and families grapple with during times of conflict. The specific choice of destination countries, such as Poland, Lithuania, and Germany, may be influenced by various factors, including geopolitical proximity, economic opportunities, and existing communities. Additionally, the high percentage of successful adaptation reflects the resilience and resourcefulness of individuals navigating challenging circumstances, contributing to a nuanced understanding of migration patterns during periods of conflict.

Overall, relocating domestic businesses abroad can be a strategic step for a company's development, but it demands a thoughtful approach and examination of all essential factors to ensure successful and sustainable expansion into a new market (Pavlova et al., 2021; Sumets et al., 2022). To achieve a successful relocation, businesses must meticulously analyze the challenges and genuine opportunities in the new environment. This process demands careful attention, strategic thinking, and a profound understanding of the context. As of Fall 2022, additional research has been undertaken, delving into both past plans and future prospects (Figure 3).

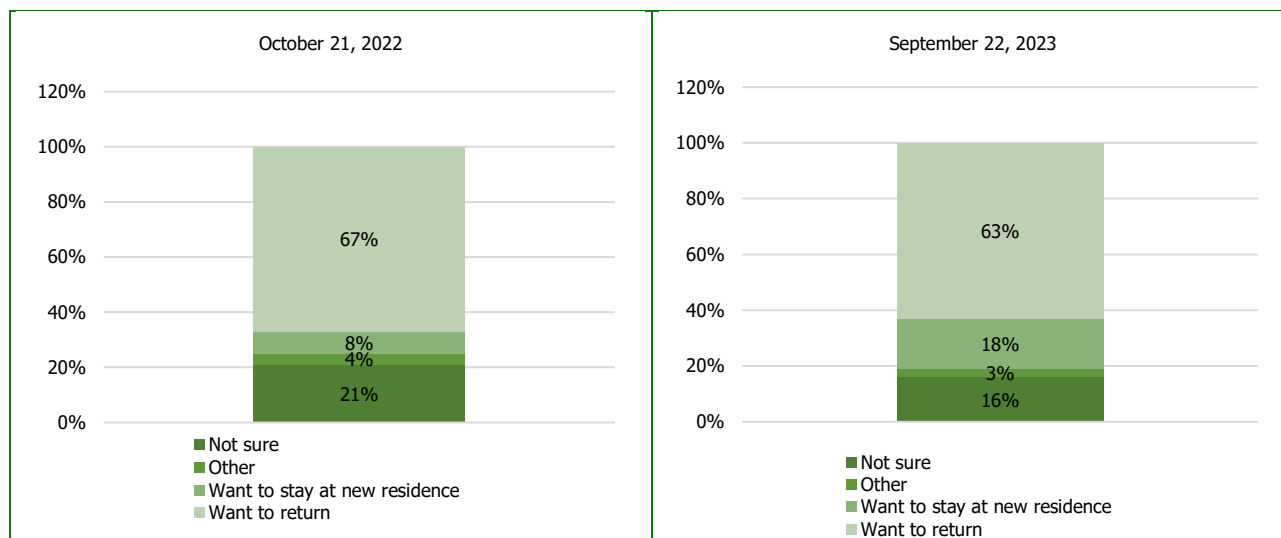


Figure 3. Desire to return to Ukraine. (Source: formed by the authors based on their own research and survey Study of the state of Ukrainian business during the war: how medium, small and large companies)

Simultaneously, there is a discernible inclination among Ukrainian businesses that have relocated to express a strong desire to return home – currently standing at 63% among respondents. Notably, this indicates a slight decrease from the previous year when it was at 67%. This shift suggests a nuanced dynamic where the decision to relocate is not necessarily permanent, and businesses remain open to considering the evolving landscape and opportunities in their home country. The evolving trend of businesses expressing a desire to return to Ukraine underscores the dynamic nature of the decision-making process associated with relocation. It reflects a responsiveness to changing circumstances, potentially influenced by factors such as economic developments, regulatory changes, or evolving business landscapes both domestically and internationally. The ongoing research provides valuable insights into the fluidity of business strategies, emphasizing the need for adaptability and continuous assessment in the ever-changing business environment. Among those who want to return, more than a third plan to do so by the end of 2024 (39%), and another third of respondents (36%) cannot decide (Figure 4).

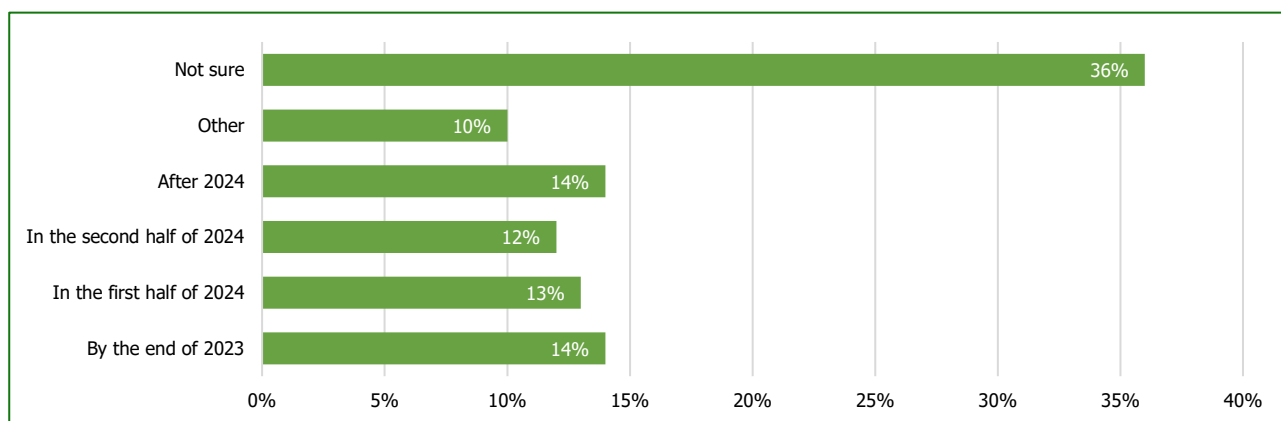


Figure 4. Return to Ukraine, timing. (Source: formed by the authors based on their own research and survey Study of the state of Ukrainian business during the war: how medium, small and large companies)

The survey results provide a comprehensive overview of the employment status of Ukrainian migrants, revealing that a significant percentage has found employment since their departure. According to the data, an impressive 70% of surveyed residents who left Ukraine since the commencement of the war are currently engaged in work. This high level of employment among Ukrainian migrants underscores their resilience and adaptability in securing opportunities in host countries. The timing aspect, as depicted in Figure 4, can offer valuable insights into the trajectories of return for these migrants. Understanding when individuals choose to return can shed light on factors such as economic conditions, personal circumstances, or shifts in the geopolitical landscape that influence their decisions. The noteworthy percentage of employed migrants suggests not only their ability to integrate into foreign labour markets but also the potential for skill transfer and knowledge exchange upon their eventual return to Ukraine. Additionally, analyzing the temporal aspects of return can

contribute to a nuanced understanding of migration patterns and the evolving dynamics of individuals' connections to their home country.

Figure 5 illustrates the sectorial business transformation, providing insights into the changes observed in various sectors. Simultaneously, there is a notable inclination among Ukrainian businesses that have undergone relocation to express a strong desire to return home – currently standing at 63% among respondents, reflecting a slight decrease from the previous year when it was at 67%. This data indicates the dynamic nature of the decision-making process associated with business relocation. Among those businesses expressing a desire to return, more than a third plan to do so by the end of 2024, constituting 39% of respondents, while another third (36%) find themselves unable to make a definitive decision at this point. These statistics underscore the complexity of the considerations involved in the relocation of businesses and the strategic planning necessary for their return. Analyzing the sectorial business transformation alongside the intentions to return offers a comprehensive view of the evolving dynamics within the business landscape. It suggests that the desire to return is not uniform across all sectors and may be influenced by sector-specific challenges, opportunities, and economic conditions. Understanding the timelines and uncertainties associated with the return plans provides valuable insights into the strategic outlook of relocated businesses. The sectorial nuances in business transformation, coupled with the intentions to return, contribute to a holistic understanding of the adaptability and resilience of Ukrainian businesses in the face of relocation challenges.

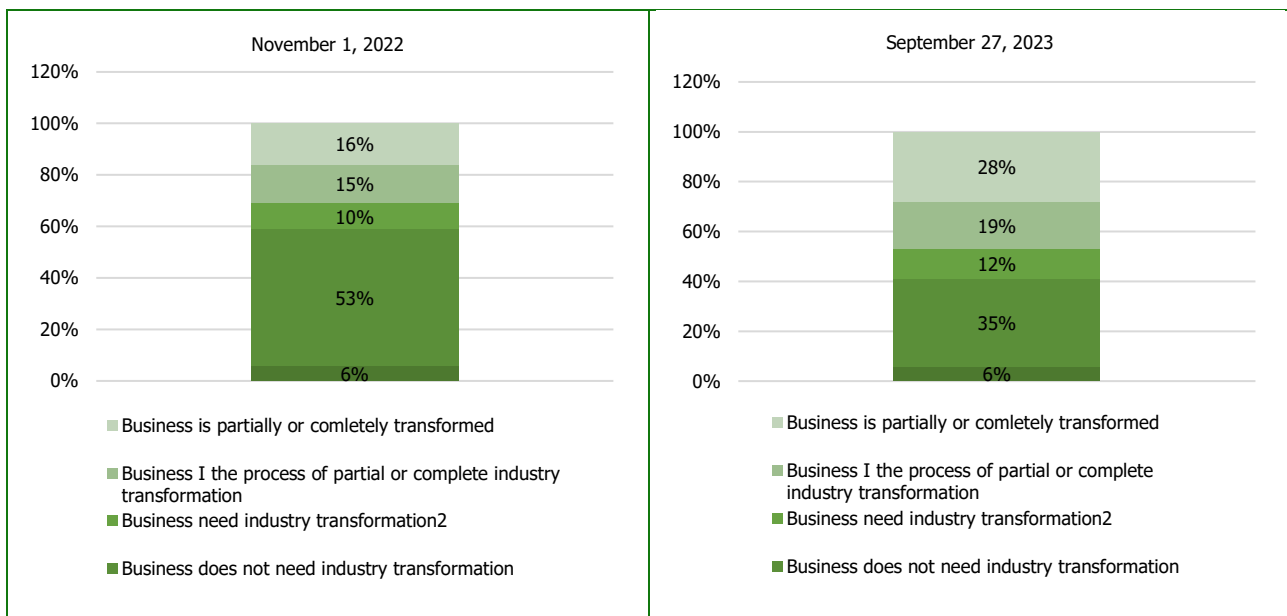


Figure 5. Sectorial business transformation. (Source: formed by the authors based on their own research and survey Study of the state of Ukrainian business during the war: how medium, small and large companies)

Figure 6 delves into the specific business challenges faced by companies during times of war, shedding light on the nuanced aspects of their operations in challenging environments. The findings from this segment of the research contribute to a comprehensive understanding of the impact of conflict on business dynamics. Amidst the backdrop of war, there is a discernible trend indicating a contraction in business planning horizons. A significant majority of the surveyed companies, comprising 71%, now plan for a year ahead or even shorter time frames. This shift underscores the heightened uncertainty and volatility that businesses contend with during periods of conflict, necessitating more agile and adaptive planning approaches. Despite the challenges posed by the ongoing war, there remains a notable sense of optimism within the business community. More than half of the respondents, specifically 53%, have incorporated plans for active or moderate development into their strategies. This optimistic outlook suggests a resilience and determination among businesses to not only navigate the current challenges but also to position themselves for growth and development in the future. The juxtaposition of shortened planning horizons and optimistic development prospects speaks to the adaptive strategies adopted by businesses in response to the war. It reflects the agility and flexibility necessary for businesses to navigate an unpredictable landscape, ensuring their viability and positioning for growth amidst adversity. The findings from Figure 6 underscore the complex interplay of challenges and opportunities that businesses navigate during times of conflict. However, despite the restrained optimism for business development, the losses from the war are disproportionate. Almost all Ukrainian companies have seen a reduction in profits due to the conflict. According to some estimates, Ukrainian businesses collectively estimate their overall losses at USD 87 billion. More than half of the enterprises in Central Ukraine (50.6%)

and over a third of businesses in the Western region (38.9%) report insignificant losses. In Eastern Ukraine, 8.2% of enterprises experienced significant direct losses ranging from USD 1 million to USD 5 million, and 2.7% reported losses exceeding USD 5 million by Study of the state of Ukrainian business during the war: how medium, small and large companies.

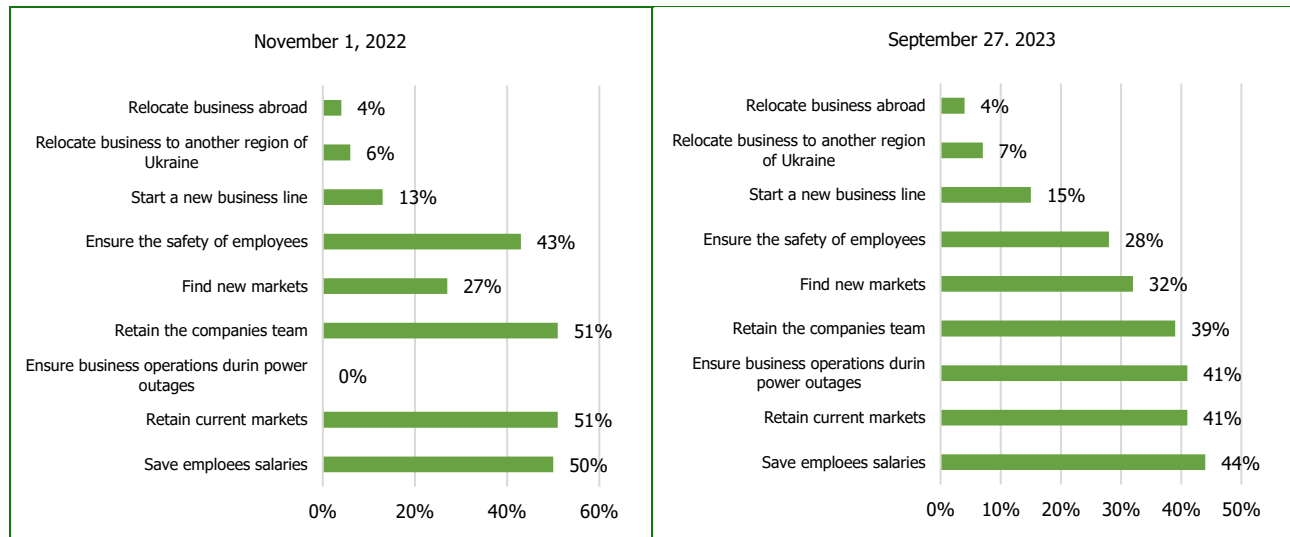


Figure 6. Business challenges during the war. (Source: formed by the authors based on their own research and survey Study of the state of Ukrainian business during the war: how medium, small and large companies)

In the course of our research, interviews were conducted with representatives of the relocated business, Table 1. The analysis of the information provided to us made it possible to form a portrait of the relocated business abroad, which can vary depending on various factors, such as the field of activity, the size of the company and its strategic goals. However, some general features of such a business can be identified. First of all, these are usually companies that have a strategic focus on the global market and a desire to expand beyond their country, in particular, Roof Global BV has already started this way. Undoubtedly, they have a high level of innovation, creativity, stress resistance, financial portfolio, competitiveness and readiness to adapt to new market conditions. The respective companies operate in high-tech sectors such as information technology, biotechnology, pharmaceuticals, energy, etc. They may have significant potential for growth and development in the international market.

Table 1. Participants of in-depth interviews. Note: only the owners of the companies participated.

Nº	The country to which the business moved	Name	Abbreviated name of respondents
1.	The Netherlands	LLC "Roof Global BV"	P1
2.	Canada	Individual entrepreneur	P2
3.	Canada	The recruiting company	P3
4.	Finland	NGO "Union of Marketers of Ukraine"	P4
5.	Scotland	Individual entrepreneur, SSM	P5
6.	Germany, Mexico	Individual entrepreneur, Tattoo master	P6
7.	Scotland	The owner of the women's club	P7
8.	Turkey	Legal company "Dictum"	P8
9.	Turkey	Founder of NGO "VISIT UKRAINE"	P9
10.	Turkey	LLC "ELLANA"	P10

At the same time, if we talk about the individual entrepreneur, then this relocated business abroad is characterized by flexibility, lightness, mobility, and the ability to adapt to new market conditions and requirements. It can have a developed network of suppliers and distributors, as well as actively use the Internet and digital technologies to ensure communication

and business development. Undoubtedly, it should be noted that the relocated business abroad contributes to the development of local economies and the exchange of knowledge, technologies and cultural values between countries, in particular, it creates jobs for residents of the host state. In general, the portrait of a business relocated abroad is a dynamic, innovative and globally oriented individual or legal entity entrepreneur who has the potential for successful expansion and development in the international market. Relocating a business abroad has its own challenges that should be considered before making the decision to relocate. Here are some of them, in Table 2.

Table 2. Key challenges of business relocation abroad.		
Challenge	Essence	Quote
High costs	Relocating a business abroad can be very costly. This includes the costs of relocating employees, carrying out legal procedures, renting or buying new premises, adapting to a new market and cultural environment.	"It is very difficult for non-residents of Turkey to get an official job because there are quota restrictions per foreigner, the company owner must first of all provide a workplace for residents. Also, there are certain restrictions on wages, so often it is simply unprofitable for our compatriots to get a job legally" - P8 "In Canada, the level of wages is very high, and since it is almost impossible for our companies to enter their market, the question arises of the feasibility of conducting business as a legal entity of Ukraine" - P3
Legal and regulatory complexities	Different countries have their own legal and regulatory requirements that can complicate the relocation process. This includes licensing requirements, taxation, asset freezes and other legal restrictions.	"Any relocation of business abroad has several main features, namely: legislation - each country, along with international law, has its own features that must be taken into account when conducting business activities. Countries may have different percentages of taxes, as well as the terms of their payment. And also, the banking sphere, payment methods, currency restrictions, time limits may differ" - P8
Cultural differences:	Different ways of communicating, business etiquette, and consumer demands may require adaptation and training to work effectively in a new environment.	"Everything is very slow in Europe, no one is in a hurry, so all processes are delayed too much" - P1 "In Turkey, all issues are resolved only by acquaintance, and if you quarrel with someone, consider that you are in conflict with the whole of Turkey" - P9
The risk of a change in the political or economic situation	Relocation abroad may be affected by changes in the political or economic situation in the country of destination. Instability, changes in legal conditions or economic crises can affect the success of a business and lead to financial losses.	All those who took part in interviews from European countries and Turkey noted that any political and economic instability creates turbulence in the market and leads to an increase in the price of raw materials, which has certain consequences. However, in Canada, there are no political or economic fluctuations (for many years).
Loss of ties with the home market	Relocation abroad can lead to loss of ties with the home market and customers. It is important to carefully balance the advantages of the new market with the loss of positions in the old market.	During the interview, we were told the case of a businessman who sold cars from Canada to Ukraine, with the start of the war, the business ceased to exist.

In particular, according to the owner of LLC "ELLANA" (Turkey-Ukraine), by the beginning of 2022, their ambitious plans included the construction of a factory for the production of cosmetics in the Kyiv region, but there were problems with implementation, since there is no practice of building a factory for the manufacture of cosmetics in Ukraine, according to European standards. Also, there were problems with the logistics chain, since in Ukraine the process of customs clearance and export of products, in general, is slow. In March 2022, a decision was made to relocate the business abroad, and Turkey was chosen as a neighbouring country. At the same time, it was an interesting insight that it is in this country that factories are built according to the necessary standards, and there is also an international organization of quality standards, which speeds up the process of product certification.

Relocating a business abroad involves various challenges, including high costs associated with employee relocation, legal procedures, and adapting to new market dynamics, as highlighted by participants from different countries such as Turkey and Canada. Additionally, legal and regulatory complexities, cultural differences, and the potential risks posed by political or economic changes in the destination country further underscore the careful consideration required before undertaking such a move.

Furthermore, the loss of ties with the home market poses a significant concern, as exemplified by a case involving a Canadian businessman who faced challenges selling cars to Ukraine due to geopolitical events. These factors collectively emphasize the need for thorough planning and strategic evaluation when contemplating business relocation on an international scale.

Relocation of business abroad can have several advantages, Table 3.

Table 3. Key advantages of business relocation abroad.

Nº	Advantage	Essence	Quote
1.	Access to a new market	Relocation allows a business to gain access to a new market with greater sales potential or increased opportunities for growth. This can help expand the customer base and increase sales.	"If your company is a representative of any European country, the sales volumes increase significantly in proportion to the importance of the country" - P1 "Turkey has a good geographical location and a good reputation, which facilitates not only the logistics chain but also increases sales" - P10
2.	Cost reduction	In some cases, relocating abroad can result in lower costs for labour, raw materials, rent or taxes. Countries with low labour costs are often attractive to businesses looking for economic efficiency.	"Construction of a plant according to the necessary European standards takes 20 days, in Ukraine, it takes almost a year, so if you consider the cost and speed, it is more profitable to build plants in Turkey". - P10
3.	Possibilities of innovative development	Relocation abroad can open up new opportunities for innovation and technological development. New markets may have a different approach to business that encourages entrepreneurship and the creation of new ideas.	"Very strong support of the EU for enterprises of innovative direction, as well as sustainable development. There are special support programs for such companies" - P1 "Turkey supports any manufacturing enterprise by providing benefits and advertising. At the same time, if the enterprise is aimed at innovative development, even the country pays for the company's participation in international exhibitions". - P10
4.	Diversification of risks	Placement of business abroad allows you to distribute risks between different markets and countries. This can protect the business from the impact of local economic or political turbulence.	"Working in the Netherlands, we have our branches in different countries of the world, which allows us to avoid any problems with supplies, customers and protects the business from any political instability" - P1
5.	Creating an international image	Relocation can improve the international image of a business and its competitiveness. Having a presence in different countries can increase the trust of customers, partners and investors, as well as help establish a global brand.	All interview participants noted that after registering the company, the client flow immediately increased, trust in the company increased, and top international companies began to cooperate - P10, P1, P3, P9

These benefits may vary depending on the specific situation and industry. It is important to conduct a detailed analysis and consider all aspects before making a decision to relocate abroad, Table 4.

Table 4. Characteristics of receiving countries of related business.

Nº	The factor	Essence	Quote
Turkey			
1.	Geographical location	Turkey has a strategic geographical location that provides access to the markets of Europe, the Middle East and Central Asia. This makes it an ideal place for exporting and distributing goods	"It is very easy to export products from this country to any corner of the world"- P10
2.	A large domestic market	Turkey has one of the largest domestic markets in the region. There is a significant consumer base and demand for various goods and services.	"The country is developing strongly, it accumulates many representatives of different nationalities, which creates a demand for legal services, especially representatives of the CIS countries" - P8
3.	Business-friendly policy	The Turkish government is actively working on political and economic reforms aimed at improving the business climate in the country. There is a favourable tax system, simplified business registration procedures and protection of property rights.	"In Turkey, we quickly passed the registration of copyrights for our innovative products" - P10 "Since we work for the whole world, we managed to solve all legal issues regarding the functioning of the business very quickly" - P9
4.	Strong manufacturing sector	Turkey has a developed manufacturing sector in various industries, including textiles, automobiles, food, and others. This creates opportunities for cooperation with local producers and suppliers.	"Since the country is developing very strongly, and is relatively closed to imports, everything necessary is produced in the country, therefore it is profitable to buy various related products from Turkish manufacturers" - P10
5.	Innovative potential	Turkey actively invests in research and development of innovative technologies. This stimulates the development of new ideas and technological startups.	"There is government support for the development of innovative business" - P10
Netherlands			
6.	Easy business registration	The process of registering a business in the Netherlands is simple and efficient. It is possible to register a company online and obtain the necessary licenses and permits.	"You can register a business in a couple of hours, they will help you and you will only need to sign contracts" - P1
7.	Loyal tax system	The Netherlands has a competitive business tax system. There are a number of tax benefits and incentives for entrepreneurs, as well as tax treaties with many countries.	"There was an interesting case of paying taxes, where the tax official herself helped and explained how to pay less tax" - P1

(continued on next page)

Table 4. Continued.

№	The factor	Essence	Quote
8.	High level of infrastructure	The Netherlands has a developed transport and logistics infrastructure, which facilitates the ease of deliveries and the implementation of international trade.	"It is very easy to export from the country to any EU country" - P1
9.	Innovative culture	The Netherlands is known for its innovative developments and high level of scientific research. The country actively supports startups and innovative projects.	"There is significant grant support for startups and businesses based on sustainable development in the country, we also took advantage of tax holidays and a grant of 10,000 euros" - P1
10.	International orientation	The Netherlands has an open domestic market and a large number of international companies. This creates opportunities for cooperation with partners from all over the world.	"The market is open and there are no obstacles to international cooperation" - P1
Scotland			
11.	Entrepreneurial culture	Scotland has a developed entrepreneurial culture and a favourable environment for business. Scots value innovation, support entrepreneurial endeavours and create favourable conditions for the development of new ideas.	"The country has its own culture, for example, they do not use social networks at all, so it is difficult for the advertising business to develop here" - P5
12.	Government support	The Scottish Government supports businesses through various programs, grants, loans and advisory services. There are special organizations that provide assistance to entrepreneurs in launching and developing their businesses.	"There is full support in encouraging any activity, but at the same time, the more you earn, the more you pay in taxes" - P5
13.	Market access	Scotland has access to a large European market and international markets through its membership in the UK and the European Union. This opens opportunities for export and business expansion outside the country.	"The country is a reliable player on the market, so there are no problems with export/import operations" - P7
14.	Workforce	Scotland has a skilled workforce in a variety of industries, including information technology, science, energy and tourism. This can be an advantage for businesses, especially in high-tech sectors.	"The country has a lot of people with high-quality education and many immigrants, so finding employees is not difficult" - P7
15.	The tax system	Scotland has its own tax system which can have an impact on businesses. It is important to understand the rules and obligations regarding taxation, including corporate tax and payroll tax.	"In order to understand the nuances of the tax system, it is necessary to contact specialists and lawyers. If there is a violation of tax rules, they can even close the visa" - P7
Canada			
16.	Qualification features	In Canada, the requirements for the quality of education are high, so before you get a job, you must have an appropriate education, specifically in your speciality.	"Having a diploma of higher education, in Canada I still have to take courses and confirm my speciality" - P3
17.	Government support	The government actively provides grant support and encourages innovative development.	"Actively support young people and their social initiatives" - P2
18.	Financial support	Its own closed financial system, which has been operating for more than 50 years without changes.	"Check books are in operation, which slows down the process of receipt of funds" - P3
19.	Entrepreneurial culture	Its business atmosphere is built on trust.	"Since Canada has the largest diaspora, our compatriots fully support us" - P3

During the interviews, the respondents were asked a question for a generalized picture of the relocated business, Table 5.

Table 5. Analysis of answers to the questions.		
№	Question	Answers
1.	What was the reason for choosing the country for relocation	For the most part, all respondents said that they chose the country for relocation - it is where there are relatives, acquaintances, or they had information about the state of affairs in the country. But everyone chose countries that are economically developed and have good logistics potential
2.	What exactly did the move affect?	All respondents said that since the beginning of the war, they have carried out a complete relocation.
3.	Why did you decide to move abroad and not within the country?	The respondents noted that they were saving their business and staff, as they had no idea of the scale of the war and the threat to life, and unanimously chose a full relocation abroad.
4.	What did the relocation give you?	All respondents noted that the relocation made it possible to expand the client base, increase and facilitate export operations, as well as find new connections and open prospects.
5.	Determine the possibilities for the full recovery of your business activities in the host country	All businesses are currently operating abroad, so the question is not appropriate
6.	How is your activity financed	All financing of the business took place through the funds of enterprises and own funds. Maintenance allowance was provided only to individuals
7.	Business support during relocation.	No one applied for financial assistance, but everyone consulted how to open a business according to the laws of the host country.
8.	Plans for the future	All respondents noted that currently, they do not see the point of developing business in Ukraine while the war is going on, but they all unanimously assured that when the war ends, they will definitely restore business in Ukraine.

It is worth noting that at the beginning of the interview, certain patterns and aspects were revealed, which are extremely important for the implementation of the process of business relocation abroad. Therefore, in order to make relocation as successful as possible, business entities need to analyze challenges and real business opportunities. That is why we offer generalized drivers of business relocation abroad, Table 6.

Table 6. Indicators of elements realizing the potential of relocated enterprises in 2022-2023.

Year	Element of used potential	Share in income w(Pi), %				The value of the element of the used potential Ps, UAH million			
		LLC "Roof Global BV"	LLC "EL-LANA"	NGO "VISIT UKRAINE"	LLC Dicum	LLC "Roof Global BV"	LLC "EL-LANA"	NGO "VISIT UKRAINE"	LLC Dicum
1	2	3	4	5	6	7	8	9	10
2022	The potential of fixed assets	40	31	34	24	5029	2859	987	1654
	The potential of working capital	2	16	10	3	322	1418	285	178
	Financial potential	5	9	2	8	622	776	49	564
	Intellectual potential	52	45	55	65	6466	4070	1617	4371
	The potential of human resources	23	22	30	9	2852	1979	892	594
	– core staff	17	17	23	1	2157	1533	670	63
	– management staff	6	5	8	8	695	446	223	530
	The potential of organizational resources	9	10	14	16	1138	872	399	1066
	– intangible assets	3,0	4	6	4	379	376	160	264
	– brand	0,5	0,6	1	4	65	51	16	272
	– others	6	5	8	8	695	446	223	530
	Relationship resource potential	20	13	11	40	2477	1220	326	2711
– client's	15	9	5	34	1898	848	141	2269	
2023	The potential of fixed assets	22	34	25	23	2868	3392	1014	1484
	The potential of working capital	1	2	5	5	113	195	198	300
	Financial potential	9	7	5	7	1163	741	181	451
	Intellectual potential	68	57	65	66	8832	5734	2598	4258
	The potential of human resources	26	21	29	8	3411	2145	1150	539
	– core staff	20	16	21	1	2544	1557	847	54
	– management staff	7	6	8	8	867	588	303	485
	The potential of organizational resources	9	8	12	11	1151	822	492	733
	– intangible assets	2	2	4	4	239	234	162	225
	– brand	0	0	1	0	46	0	27	23
	– others	7	6	8	8	867	588	303	485
	Relationship resource potential	33	28	24	46	4271	2767	956	2986
	– client's	18	14	7	29	2293	1426	264	1879
The potential of fixed assets	15	13	17	17	1978	1341	692	1107	

The analysis conducted allows identifying elements of intellectual potential that are either utilized to a significant extent or underutilized. Types with the highest share in the utilized potential may be approaching their limits, requiring an expansion of the corresponding resource base for enhanced performance. Conversely, components of the potential with low weight share may be underutilized, necessitating a search for reserves to more effectively consume available resources. For relocated enterprises, there is a consistent trend of the substantial influence of capital and intellectual potential on performance, with less significance attributed to working capital and financial resources. This is explained, in part, by the capital-intensive nature and lesser need for working capital, given the absence of a production process, as facilities and equipment are required for service provision.

These entropic changes can introduce uncertainty into business operations, complicating forecasting and strategic decision-making (Khaietska et al., 2023; López-Pérez et al., 2017). On the other hand, entropic changes can stimulate innovation and technological progress. Conditions of instability and chaos can inspire companies to develop new products, services, and business models that align with the new realities of the global market. Furthermore, entropic changes can impact the distribution of resources and social justice worldwide. Instability in the economy and society can lead to inequalities in resource access, exacerbating issues related to poverty and social tension. Therefore, entropic changes in the globalized

world affect various aspects of the economy, politics, and sociocultural sphere. Understanding these changes is crucial for the development of resilient management strategies and adaptation to unforeseen challenges that arise in the contemporary world. In the context of entropic changes in the modern globalized world, business relocation plays a pivotal role in addressing challenges and capitalizing on unforeseen situations (Prokopenko et al., 2020; Tepliuk et al., 2023b etc.). Here are the opportunities and roles of business relocation highlighted amidst entropic changes:

1. **Risk Diversification:** Situating businesses in different parts of the world can mitigate risks associated with political, economic, or natural disasters. If one part of the business faces a crisis, other segments can compensate for the losses;
2. **Access to New Markets:** Relocation can open doors to new markets and consumers, enabling business growth and expanding the customer base;
3. **Efficient Production:** Placing production in regions with lower labour costs or a favourable business environment can enhance the competitiveness of the enterprise and reduce overall expenses;
4. **Adaptation to Market Changes:** Rapid market shifts may demand swift responses. Relocation helps businesses react promptly to new conditions by moving operations to locations where they can be more effective;
5. **Formation of Strategic Partnerships:** Relocation can create opportunities for collaboration with local companies and industry leaders, strengthening the business and providing new avenues for development;
6. **Attracting Talented Workforce:** Establishing businesses in regions with a high level of education can provide access to skilled employees, fostering innovation and the development of new ideas.

Thus, business relocation becomes a strategic management tool in the face of entropic changes, allowing companies to adapt to new realities and find competitive advantages in an unpredictable environment.

Here are the key steps for a successful relocation, Table 7.

Table 7. Key aspects of business relocation abroad.		
№	Question	Essence
1.	Legal and regulatory aspects:	Before relocating, find out the legal and regulatory requirements of the country you plan to move to. Will investigate the procedure for business registration, obtaining licenses and permits, taxation and any other legal restrictions that may affect your activity.
2.	Market analysis	Study the country's market, including competition, demand for your goods or services, cultural and consumer habits, market size and potential growth opportunities, etc. Analyze market trends and find out how popular your products or services are among local consumers.
3.	Financial planning	Calculate the costs of relocation, including the costs of transporting equipment, renting or buying premises, personnel, marketing, product localization and other costs. Develop a financial plan that takes into account these costs and the potential income from your activities in the new country.
4.	Personnel issues	Familiarize yourself with local labour regulations, including employment, working conditions, payroll taxes, and social security. Plan the process of hiring and transferring staff or finding new employees depending on the needs of your business.
5.	Marketing strategy	Develop a marketing plan to introduce your business to a new market. Consider cultural differences, language barriers, and other factors that may affect your marketing efforts. Develop a brand strategy, promotion and acquisition of new customers.
6.	Logistics	You need to explore logistics options, look at local distribution networks, check the possibilities of local supply of raw materials or components, and find out the possibilities of a local manufacturing base.
7.	Cultural adaptation	Consider the cultural differences between your home country and the new country of location. Prepare to adapt to work and interpersonal environments, and learn local customs and business protocols to successfully interact with local partners and customers.

DISCUSSION

Discussion on the entropic perspective of business relocation in the context of sustainable development reveals key aspects of this intricate process and contributes significant insights for further development. Discussion points and problematic aspects: In the context of the research results, there arises a need for the implementation of sustainable development strategies as a key component of relocation strategies. The discussion emphasizes the importance of developing and implementing a sustainable relocation strategy as part of the overall corporate strategy to ensure long-term stability and success in new conditions.

The discussion also highlights the importance of understanding entropic processes in the context of business relocation. It points out the necessity for thorough research and analysis of entropic interactions to develop optimal strategies for managing enterprise relocation. Moreover, the discussion of the results underscores the significance of the practical implementation of sustainable development principles in business relocation strategies. It emphasizes the need for developing mechanisms of cooperation between business, society, and government to ensure the effective implementation of sustainable development in the process of enterprise relocation.

Addressing the issue of continuous monitoring of entropic processes and their consideration in making strategic decisions for the enterprise is also crucial. The discussion points to the need for the development of new methods and tools to manage entropic influences during business relocations. These elements serve as general guidelines and may vary depending on the specific conditions and type of business. Careful planning, research, and consultation with relocation specialists and local experts will help you make a successful international relocation of your business.

Discussion Points for Hypotheses:

1. Discussion of the results emphasizes the need for the implementation of sustainable development as a key component of business relocation strategies. The discussions highlight the importance of developing and implementing a sustainable relocation strategy as part of the overall corporate strategy to ensure long-term stability and success in new conditions.
2. Discussion of the results underscores the importance of understanding entropic processes in the context of business relocation. The discussions also point out the necessity for thorough research and analysis of entropic interactions to develop optimal strategies for managing enterprise relocation.
3. Discussion of the results highlights the significance of the practical implementation of sustainable development principles in business relocation strategies. The discussions emphasize the need for developing mechanisms of cooperation between business, society, and government to ensure the effective implementation of sustainable development in the process of enterprise relocation.
4. Discussion of the results indicates the importance of continuous monitoring of entropic processes and their consideration in making strategic decisions for the enterprise. The discussions point to the need for the development of new methods and tools to manage entropic influences during business relocations.

These elements are general guidelines and may vary depending on the specific conditions and type of business. Careful planning, research and consultation with relocation specialists and local experts will help you make a successful international relocation of your business.

CONCLUSIONS

In this article, we have explored various dimensions of business relocation through the lens of entropy theory. Deep analysis showed that the relocation of the enterprise is a complex and multifaceted process that can affect both internal and external aspects of the business. Using an approach based on the theory of entropy allowed us to better understand the chaotic and unpredictable nature of relocation and its impact on businesses. One of the key findings is that the entropic changes associated with business relocation can affect all aspects of the enterprise. The volatility, uncertainty, and risks associated with moving to a new location require careful planning, strategic thinking, and adaptation to change. In addition, our research highlighted the importance of flexibility and innovation in the relocation process. Businesses must be prepared for uncertainty and rapid change, and be able to use chaos as an opportunity for growth and improvement. Finally, our paper leaves room for further research in this direction. Understanding the impact of entropic changes on business relocation can be an important step in developing management strategies that will allow businesses to successfully navigate this chaotic process and thrive in the face of uncertainty and change.

Conclusions for Hypotheses: Positive Impact of Sustainable Development Strategies on Business Relocation: The results of the study indicate that the implementation of sustainable development strategies significantly enhances the efficiency of the business relocation process. Companies incorporating sustainable principles in their relocation strategies achieve more robust and successful outcomes, ensuring stability and sustainability in new environments. Key Success Factors of Business Relocation within the Context of the Entropic Approach: The research confirms that successful business relocation depends on the correct implementation of entropic principles. Internal organizational structures and resource management are key factors that significantly influence relocation outcomes. Relationship Between Business Relocation and Sustainable Development: Real-Life Case Studies: Studying real-life cases of business relocation demonstrates that integrating sustainability principles into relocation strategies leads to enduring and stable successes. Companies that successfully implement sustainable solutions in their new

environment not only achieve economic success but also contribute significant social and environmental benefits to the new region. Importance of Considering Entropic Principles in the Process of Enterprise Decision-Making During Relocation: The research validates that considering entropic principles in strategic decision-making is crucial for successful business relocation. Flexibility and adaptability in choosing optimal strategies empower businesses to effectively adapt to changes in the new environment.

The economic consequences of the war in Ukraine are impressive: the total losses of enterprises are estimated at USD 87 billion. This figure clearly demonstrates the serious impact of the military conflict on the country's economy and calls into question its opportunities for business development and overall economic stability. Regional differences in loss conditions are also an important aspect. The Center and West of Ukraine, where more than half of the enterprises suffered minor losses, stand out in the context of other regions. In the East of the country, where enterprises experienced the greatest direct losses, the situation is more complicated. Such significant losses raise questions about the sustainability of enterprises and their ability to survive in the conditions of a military conflict. In this context, the need for active support from the government and international communities becomes important. Financial and other support can become key factors in business recovery and contribute to the overall economic development of the country. In comparing these facts, the conclusion is obvious: the situation requires immediate measures to stabilize and support enterprises affected by the military conflict, in order to ensure their survival and restore the economic stability of Ukraine as a whole.

In conclusion, this study underscores the importance of examining business relocations through the lenses of sustainable development and entropic principles. Our research confirms that companies integrating sustainability into their relocation strategies achieve high efficiency and stability in new environments. Managing internal organizational structures and understanding entropic principles are pivotal for successful business relocations. Flexibility and adaptability in strategic choices play a pivotal role in navigating the new entrepreneurial landscape. Considering entropic influences in strategic decision-making is imperative for the successful relocation of businesses. Our findings emphasize the need to develop adaptive and sustainable strategies for enterprises during the relocation process to achieve enduring success in the global business environment.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

All authors have contributed equally.

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CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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ЕНТРОПІЙНИЙ ПОГЛЯД НА ПЕРЕМІЩЕННЯ БІЗНЕСУ В КОНТЕКСТІ СТАЛОГО РОЗВИТКУ

У статті досліджено динаміку змін в ентропії, зосереджуючись на ентропійній перспективі переміщення бізнесу в рамках сталого розвитку. Акцентуючи увагу на сталих практиках та довгострокових цілях, для дослідження було використано глибокі інтерв'ю для отримання розуміння поглядів українських підприємств на виклики переміщення. У дослідженні розглянуто тонкощі переміщення крізь призму ентропії. Розкрито сутність ентропійних змін через розуміння складної взаємодії між інноваціями та стабільністю в бізнес-середовищі. Аналізуючи стратегічні рішення в сучасних умовах, дослідження виявляє патерни, що визначають успішні кейси щодо переміщення бізнесу за кордон. У статті розглянуті проблеми, з якими стикалися підприємці під час переїзду, та виокремлені нові можливості. Надаючи розуміння адаптивних стратегій, дослідження допомагає вченим, політикам і підприємствам орієнтуватися в невизначеності глобальних економічних змін. Воно буде корисним для стратегічного й успішного переміщення бізнесу за кордон, оскільки проведено на основі реальних опитувань.

За допомогою описаних ключових характеристик бізнесмени та політики можуть ухвалювати обґрунтовані рішення, які не лише відповідають цілям сталого розвитку, але й сприяють економічній стійкості та зростанню. Крім того, дослідження буде корисним для вивчення розвитку компаній після переміщення, використовуючи досвід тих, які

вже пройшли цей процес. Аналізуючи економічні, соціальні та екологічні аспекти еволюції бізнесів після переміщення, дослідження може розкрити патерни стійкості, інновацій і зростання. З його допомогою можна оцінити ефективність сталих практик, запроваджених під час переміщення, та їхній вплив на довгострокову економічну діяльність.

Ключові слова: ентропійна перспектива, переміщення бізнесу, ретельне планування, стратегічне мислення, міжнародний бізнес, сталий розвиток

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