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З М І С Т

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МАРКЕТИНГ ТА МЕНЕДЖМЕНТ

ФІНАНСИ

STATE AND MARKET

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PRICE TRENDS IN THE GLOBAL ELECTRICITY MARKET

The relevance of the research topic is determined by the need to adapt to rapid global changes in the electric power industry, which is associated with a change in the structure of the energy balance, the strengthening of geopolitical factors, the impact of climate change, economic globalization, new regulatory requirements, and the rapid development of energy storage technologies and smart networks. These changes lead, on the one hand, to challenges in ensuring energy security, and on the other hand, contribute to significant price volatility in the electricity market. As a result of the influence of

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ЦІНОВІ ТРЕНДИ СВІТОВОГО ЕЛЕКТРОЕНЕРГЕТИЧНОГО РИНКУ

Актуальність теми дослідження визначається необхідністю адаптації до швидких глобальних змін в електроенергетичній галузі, що пов'язано зі зміною структури енергетичного балансу, посиленням геополітичних факторів, впливом кліматичних змін, економічною глобалізацією, новими регуляторними вимогами та стрімким розвитком технологій зберігання енергії та інтелектуальних мереж. Ці зміни призводять, з одного боку, до викликів у забезпеченні енергетичної безпеки, а з іншого – сприяють значній волатильності цін на ринку електроенергетики. Внаслідок впливу глобальних цінових тенденцій і пріоритетів розвитку *global price trends and world energy development priorities on the domestic electricity sector, the study of these trends is of great importance for Ukraine. The aim of the research is to establish the price trends of the global electricity market with the determination of the key factors of price growth in the context of challenges for Ukraine regarding the stabilization of electricity prices. The research is based on the hypothesis that the factors that determine the trajectory of price changes on the international electricity market are also characteristic of the Ukrainian electricity market. The research was conducted using the methods of statistical analysis, synthesis, grouping, tabular and graphical display of results. A retrospective analysis of price dynamics on the global energy market was carried out, which showed a faster pace of price changes for energy products than for other products, with a faster increase in oil prices than for coal. The current trends in the development of changes in electricity prices were analyzed, the reasons for their rapid growth in 2021 were identified, and it was noted that in some countries, such as the USA and China, prices remained stable. Using the example of the EU countries, it has been analytically proven that electricity tariffs depend on the price structure. The factors that affect pricing in the field of electricity in the world are determined: energy prices, global crisis phenomena, the amount of available supply, weather conditions, supply chain problems, grid infrastructure and distribution, the structure of the electricity market, the share occupied by taxes and fees in electricity prices and the purchasing power of the population. The current state of the electricity market of Ukraine is analyzed, which is characterized by a price imbalance, especially in the retail sector, a settlement crisis between the main market participants, a lack of real competition, limited transparency of the market and opportunities for manipulation on it, and the imperfection of the legislative framework. These factors are exacerbated by external negative influences in the form of a full-scale Russian invasion due to the destruction of electric power infrastructure and loss of capacity.*

Keywords: electricity, electricity price, global electricity market, energy security, electricity sector of Ukraine.

світової енергетики на вітчизняний електроенергетичний сектор дослідження цих трендів має важливе значення для України. Мета статті полягає у встановленні цінових тенденцій світового ринку електричної енергії з визначенням ключових чинників зростання цін у контексті викликів для України щодо стабілізації цін на електроенергію. В основу дослідження покладено гіпотезу про те, що чинники, які визначають траєкторію зміни цін на міжнародному ринку електроенергії, властиві також й для українського електроенергетичного ринку. Дослідження проведено з використанням методів статистичного аналізу, синтезу, групування, табличного та графічного відображення результатів. Здійснено ретроспективний аналіз цінової динаміки на світовому енергетичному ринку, який показав швидші темпи змін цін на енергетичні товари, ніж на іншу продукцію, при цьому швидше зростання цін на нафту, ніж на вугілля. Проаналізовано сучасні тренди розвитку зміни цін на електроенергію, ідентифіковано причини їх стрімкого зростання у 2021 р., до того ж зауважено, що в деяких країнах, як-от США та Китай, ціни залишалися стабільними. На прикладі країн ЄС аналітично доведено, що тарифи на електроенергію залежать від структури ціни. Визначено чинники, які впливають на ціноутворення у сфері електроенергетики у світі: ціни на енергоносії, світові кризові явища, обсяг доступної пропозиції, погодні умови, проблеми ланцюга поставок, грід-інфраструктура та розподіл, структура ринку електроенергії, частка, яку займають податки та збори в ціні на електроенергію та купівельна спроможність населення. Проаналізовано сучасний стан електроенергетичного ринку України, який характеризується ціновим дисбалансом, особливо у роздрібному секторі, кризою розрахунків між основними учасниками ринку, відсутністю реальної конкуренції, обмеженою прозорістю ринку й можливостями маніпулювання на ньому, недосконалістю законодавчої бази. Ці фактори посилюються зовнішніми негативними впливами у вигляді повномасштабного російського вторгнення через руйнування електроенергетичної інфраструктури та втрату потужностей.

Ключові слова: електроенергетика, ціна на електроенергію, світовий електроенергетичний ринок, енергетична безпека, електроенергетичний сектор України.

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Introduction

A well-developed energy system is a key factor in social and economic development, which is achieved by ensuring everyone's access to affordable, reliable, sustainable and modern energy. Therefore, the creation of energy policy is one of the most important areas of activity of state authorities.

Between 2010 and 2020, the global level of access to electricity increased significantly from 83 to 91%. The number of people without access to the grid decreased from 1.2 billion in 2010 to 733 million in 2020. In 2020, 76% of the world's population without access to electricity lived in 20 countries, 15 of which were in southern Africa of the Sahara (IEA; IRENA, 2022).

The last 4 years were as a period of almost unprecedented upheavals in the European and global energy markets, a time of great international economic and political instability. First, the 2020 COVID-19 pandemic, which led to a sudden sharp drop in energy demand and energy prices, as lockdown restrictions around the world caused household consumption and industrial production to fall. The gradual opening of society in 2021 and the rapid recovery of demand have contributed to a rapid increase in energy prices – to higher price levels than ever before. The origins of the second of these shocks, the gas supply crisis, were laid back in the summer of 2021, when Russian state-owned Gazprom failed to replenish its gas storage facilities in Western Europe and refused to offer additional supplies of natural gas on European spot markets. The crisis was further aggravated by Russia's preparations for the invasion of Ukraine and its beginning in February 2022. Sanctions and counter-sanctions led to a sudden reduction in Russian gas supplies to the EU, which could not be compensated in time with an additional gas pipeline or LNG gas or other fuel.

The combination of these economic and geopolitical factors has caused gas and electricity prices in Europe to rise to peaks that no one could have previously predicted, with serious consequences for European households, industry, the economy in general and public finances. Together, they have focused an unprecedented level of attention on various aspects of energy policy, especially on security of supply, the competitiveness of European industry, the survival of small and medium-sized enterprises (SMEs) and energy affordability for European households.

The importance of the research topic is enhanced by the fact that in 2021 there was an increase in both energy consumption and prices, which significantly contributed to the growth of household expenses in this area. This can lead to an increase in the number of households at risk of energy poverty (Sharma et al., 2021). Recently, the problem has worsened due to the war in Ukraine. Energy poverty is a serious problem for the EU (European Commission, 2020) as it can lead to further inequities and inequalities, which can have a negative impact on health (Sovacool, 2017).

Electricity is an important determinant of social and economic development (Ouédraogo, 2010). In the long run, this has positive effects on economic development as well as private and public sector development, including education and health (Zhang, 2019). These relationships are often multidimensional (Aklin et al., 2016) and multidirectional (Riva, 2018).

Close attention of foreign scientists is paid to the issue of price trends in the development of the electric power industry. In the work of Dragasevic et al. (2021) investigated the electricity market of Montenegro by applying a regression model, conducted a study of factors affecting the price of electricity, such as electricity production costs, transmission and distribution costs, as well as fees for market organization and electricity supply.

The effect of market deregulation (the purpose of which is to open the market to competitors (another electricity producer)) on reducing the price of electricity was studied by Andersson & Bergman (1995). The authors found that deregulation by default does not mean that individual producers will not affect the market price, which can make the fight against price uncertainty even more intense.

A study of electricity consumption and its impact on demand in various market forms is given in Ying et al. (2017).

Electricity is the second largest source of final energy consumption by households (Eurostat, 2020), which is mostly used for lighting and the operation of household appliances (Cabeza et al., 2014), and is also a source of heating and cooling (Krarti & Aldubyan, 2021).

The literature is described numerous examples of energy injustice and inequality that directly or indirectly affect households. The emergence of energy inequity can lead to uneven distribution of risks and benefits across multiple dimensions, including countries, social groups, and individuals. As stated in the work of Banerjee et al. (2017), energy injustice and inequality can be associated with all forms and stages of energy collection and transformation from collection to final use.

An example of energy injustice and imbalance is the energy burden that occurs when some households pay a disproportionately high percentage of their income to cover the cost of energy services. Bednar & Reames (2020) provide another example of energy poverty, where households cannot afford the energy needed to support daily life.

Recent studies have measured the impact of renewable sources on total energy consumption (Frodyma, 2017; Burgos-Payán et al., 2012; Ćosić et al., 2012; Brand & Zingerle, 2011), but there are relatively few studies that focus on the impact of renewable energy on the price of electricity (Perez & Garcia-Rendon, 2021; Azofra et al., 2015; Moreno et al., 2012) and, as a result, on changing the market structure.

The very price of energy carriers was the subject of many investigations. This is partly influenced by the wholesale market price as well as the distribution fee (Zhimin Wang et al., 2013). The wholesale market price is not fully passed on to the consumer due to various types of surcharges at the national level. For this reason, it is not a fully liberalized market. In the work of Pepermans, you can find a description of the process of liberalization of the electricity market in the EU (2019). The EU's introduction of three directives in this area did not bring significant changes in this regard, for example, it did not reduce concentration or reduce energy prices. As noted by Lave et al., the situation may continue until a suitable competitive market is established (2004).

Therefore, a thorough analysis of foreign sources showed that, along with studies of individual price formation factors and their impact on household incomes, there are few studies devoted to current trends in electricity price dynamics in the context of the causes and consequences of such price shocks. This leads to the need for a scientific search for new ways and answers to the rapid increase in electricity prices in the direction of determining the causes and identifying the factors that lead to such an increase in order to predict and develop appropriate solutions to price shocks.

The energy sector of Ukraine is an important part of the global energy system, so it cannot remain aloof from the main directions of its development. Its priority should not be so much meeting current needs as preparing for the challenges that will determine the future, taking into account global energy trends.

The aim of the research is to establish the price trends of the world electricity market with the determination of the key factors of price growth in the context of challenges for Ukraine regarding the stabilization of electricity prices. The article puts forward a hypothesis regarding the significant impact of price trends on the world electricity market on the formation of electricity prices in Ukraine.

The main methods of research and implementation of the assigned tasks are methods of statistical analysis, synthesis, grouping, tabular and graphical display of results. Analytical and statistical data of Global Financial Data (GFD), European Commission (EC), International Energy Agency (IEA), Eurostat, Low Carbon Ukraine (LCU) project, GMK Center, National Commission for State Regulation in the spheres were used of Energy and Utilities (NCSR).

The structure of the research consists of four sections. The first one is devoted to retrospective studies of the formation of electricity prices in the world, the second section examines the current dynamics of prices on the global electricity market, the third section identifies the factors influencing pricing in the field of electricity, the fourth section defines the current trends of the electricity market of Ukraine.

1. Historical aspects of electricity price formation in the world

Looking back in history, from the 1200s to the 1800s, the main energy resource of the economy was firewood, while coal and lamp oil acted as secondary resources. Each in its own way provided different types of energy for cooking, heating and electricity. Global Financial Data (GFD) data for firewood prices start from 1252, coal prices from 1447, and lamp oil prices from 1272. Although firewood was the main energy source from 1200-x to the 1800s, in the 1800s they were gradually replaced by electricity and gas. This is how energy was introduced directly into the house (Why are electricity prices rising again?, 2023).

In the 1860s, oil was discovered in Pennsylvania, which quickly replaced other sources of energy. At that time, the price of a barrel of oil was 20 dollars. US, but due to oversupply, the price quickly dropped to 10 cents by the end of 1861, making it extremely cheap.

Interestingly, by combining historical data for coal, coal gas, firewood, lamp oil, whale blubber, petroleum oil and natural gas, the GFD has created a commodity energy price index spanning the past 750 years.

Various studies have compared the behavior of energy prices with the prices of agricultural and industrial goods over the last century. Among the three, energy prices have increased the most, more than 500 times over the past 750 years, while manufactured goods have seen the least increase in price. A study of the dynamics shows that there were long periods of hundreds of years when the price of energy hardly changed, in particular between 1350 and 1550 and between 1700 and 1900. However, the 1900s and 2000s turned out to be a wild period, but in general growing changes in prices for energy carriers and other goods. It should be noted that industrial goods, in particular metals and non-food agricultural goods, have consistently increased in price less than other goods. In fact, the fall in the prices of manufactured goods in the 1930s returned the index to the level of the mid-16th century. Since then, prices for industrial goods have risen faster than for agricultural goods, but still not as fast as energy prices. Of the three main commodity indices that the GFD calculates for energy, agriculture and industry, the energy index has grown the most over the past 750 years. Between 1252 and 1970, energy prices increased 60 times.

Over the past 50 years, energy prices have rapidly outpaced agricultural commodity prices, particularly due to significant price increases in the 1970s and 2000s.Commodity prices have changed dramatically since 1970. From 1970 to 2016, the agricultural index increased almost fourfold, the industrial index increased tenfold, and the energy index increased thirtyfold! Thanks to comprehensive research, it is possible to understand the anomalous behavior of commodity prices, which has existed for the past 40 years and has broken the 700-year trend of relatively uniform growth in energy prices in the first place.

Interestingly, three global spikes occurred during wars: the 1810s during the Napoleonic Wars and the Wars of 1812, the 1860s during the American Civil War, and the 1910s during World War I. The first two spikes were followed by forty-year price falls as a return to the peacetime average. After the last two spikes in energy prices in the 1970s and 2000s, there has yet to be a reversion to the mean. While supply-side factors, primarily shortages, caused energy prices to soar in the 1970s, strong demand from China and other countries led to higher prices in the 2000s. and industrial goods have similar prices, while the growth of prices for agricultural products was more stable.

Of course, the interplay between coal and oil prices with respect to the effect on the hindsight of energy prices is remarkable. Over the long term, the price of coal has risen steadily, following a 500-year trend that began in the 1500s. Even more surprising is the fact that the prices of oil and other energy resources showed no upward trend from the late 1500s to the 1930s During the 1900s, both oil and coal prices increased steadily, but over the past 100 years, oil prices have risen five times faster than coal prices due to the increased demand for oil relative to coal.

The dynamics of prices over the centuries demonstrate that the rise in electricity prices is characterized by the globality of the process and periodicity. This process is present in most countries of the world and occurs under the influence of global and country-specific factors. In the framework of tariff increases, states mostly provide assistance to consumers (especially households), which is taken into account in the budget of countries. But, despite this, citizens all over the world face rising energy prices and an increase in the cost of living.

In the world, it is political and economic factors that cause a global energy shortage, such as fluctuations in the prices of coal and oil. This leads to changes in the price of electricity for retailers, and therefore the price of electricity for customers.

2. Current electricity price trends

The reduction in economic activity in 2020 due to the quarantine measures related to COVID-19 led to historically low wholesale electricity prices in 2020: the EU day-ahead average price was €36/MWh.

The economic recovery following the easing of measures related to COVID-19, together with rising tensions with Russia, culminating in the Russian invasion of Ukraine, led to an increase in wholesale electricity prices, which reached an unprecedented level in the EU: average price a day ahead in the first half of 2022 (199 EUR/MWh) is four times higher than the average price in 2010-2020.

In the first half of 2021, the recovery of the global economy was the main driver of wholesale prices, together with increased spending on carbon emission allowances in response to the proposed plans to strengthen the EU energy system under the Commission’s Fit for 55 proposal. The increase in gas prices, partly driven by the preparation Russia before the war, caused an increase in electricity prices from the 3rd quarter. 2021. Limited short-term options for replacing gas-based electricity generation with other fuels, as well as shortages in hydropower (due to low water levels) and nuclear power (both due to unplanned repairs and scheduled shutdowns) also caused prices to remain high for a long period.

Around the world, other regions also saw an increase in electricity prices. Japan has experienced the same price increases as the EU due to its heavy reliance on LNG imports for power generation. Several other G20 countries (South Korea, Turkey, India, South Africa) also showed significant price growth in 2021 (and continued into 2022), but the rest of the G20 did not. For example, prices in the USA remain low and stable compared to the EU (*Figure 1*).

Prices in Japan increased significantly after the 2011 Fukushima accident and the subsequent closure of the nation's nuclear power plants, and remained significantly higher than in the EU until 2016. Between 2016 and 2020, prices were somewhat comparable, although prices remained higher in Japan, even through the peak of Japanese prices in December 2020 – January 2021 due to cold weather, LNG supply shortages and failures in the market mechanism (Koichiro, 2021). In both markets, electricity prices are driven by global LNG prices and followed similar growth trajectories through 2022.

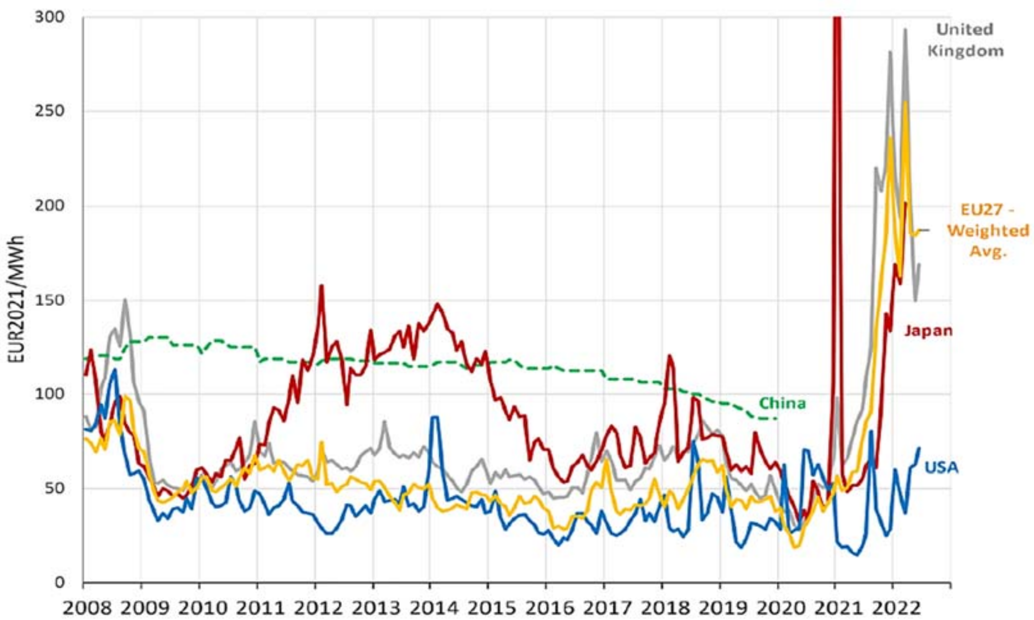

Figure 1. Dynamics of average monthly wholesale electricity prices per day in the EU, the US, the UK, Japan and China

Source: (Study on energy prices and costs, 2024).

China's wholesale electricity markets are still developing, but proxy prices (for large industrial consumers) have been relatively stable with a small continuous decline between 2017 and 2020. Data beyond 2020 are not available, but upward pressure on prices in 2021 and 2022 is considered strong due to rising coal prices (Integral, 2022).

Electricity prices in the United Kingdom have not been much different from the EU average over time, usually being slightly higher than the EU average. Their similarity stems from most of the same market factors, as well as the large capacity (both electricity and gas) between the EU and the UK.

Regarding trends in wholesale electricity prices in other G20 countries (Australia, Brazil, Canada, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, and Turkey), it can be noted that consistently low electricity prices were observed in Canada and Russia between 2008 and 2022. The former are due to a large amount of hydropower and nuclear power generation (they together provide more than 80% of the electricity balance), and the latter are due to artificially low (subsidized) prices. Prices in Brazil and South Korea are highly volatile, reaching peaks between 2012 and 2015.

None of these countries experienced the same price spike as the EU-27 in 2021–2022. However, similar price spikes are evident in many (but not all) other G20 countries, notably India, South Africa, Turkey and South Korea. Prices in other countries did not rise as much, they are mainly correlated with countries that are mostly self-sufficient in fuel for electricity production.

Renewable energy continued to grow in the EU's electricity mix to 36% in 2021, particularly thanks to increased wind and solar generation. Fossil fuel demand for power generation has been slowly declining, but current high gas prices have led to increased use of coal and lignite for power generation and increased LNG imports to offset reduced pipeline gas supplies from Russia.

Also, 2021–2022 a reduction in nuclear power production was noticed, due to plant decommissioning and unplanned maintenance outages (mainly in France), which further contributed to the tension in the supply of electricity in the EU.

Although there are some differences in prices between European regions, prices in all regions showed the same trend of very high prices. The northern region was the only region where prices were significantly lower, but still high, a result of hydropower being often a marginal technology due to advantages, while in most other regions expensive fossil fuel plants are the marginal unit. From 2021 onwards, regions with a high dependence on fossil fuels and limited connectivity, such as Italy and the UK, will consistently have slightly higher prices.

The increase in retail electricity prices for household consumers between 2019 and 2021 is due mainly to the increase in wholesale prices, as already indicated. In the case of households, the average retail price in the EU-27 increased by 8% (+16 EUR/MWh) to 231 EUR/MWh in 2021.

Data for the first half of 2022 showed that retail prices are lagging behind wholesale price trends, with average household prices rising to €311/MWh (+32%). A significant tax cut (by 43%) has helped moderate this increase, with average taxes around €20/MWh lower by mid-2022 than in 2021.

The rapid development of the wholesale electricity market resulted in electricity prices for households being lower than the wholesale price in most EU markets. This shortage is an important factor in the financial difficulties and bankruptcy of some electricity suppliers.

Compared to the international level, retail prices for households in the EU remain higher than in almost all G20 countries. Only prices in Australia, Great Britain and Japan are at a similar level. Industrial prices also rose, except in China and the US. This indicates a deterioration in the global industrial competitiveness of the EU, as prices in the EU were among the highest before the energy crisis.

Electricity prices vary widely around the world, and sometimes even within a country, depending on factors such as infrastructure, geographic location, and politically determined taxes and fees.

Regarding the component prices for households, for example in 2021, the share of energy supply, network costs and taxes in the total price is very different between EU member states. In *Figure 2* shows that while energy and supply costs tend to account for the largest share of the total price, the shares of the various components vary widely. For example, in Germany and Denmark, the costs of energy and supplies are much lower than the costs of taxes and other charges. In countries such as Malta and Greece, the cost of electricity and supply is over 60% of the total. Network costs are the lowest in Bulgaria, Denmark, Portugal and Italy. The highest network costs are recorded in Belgium (€105/MWh), Ireland (€94/MWh) and Sweden (€80/MWh). The lowest component of taxes and fees is in Malta. In the EU-27, the share of taxes and charges in the total price of electricity for households decreased by 4%, while network costs increased by 6% and energy and supply increased by 23% between 2019 and 2021.

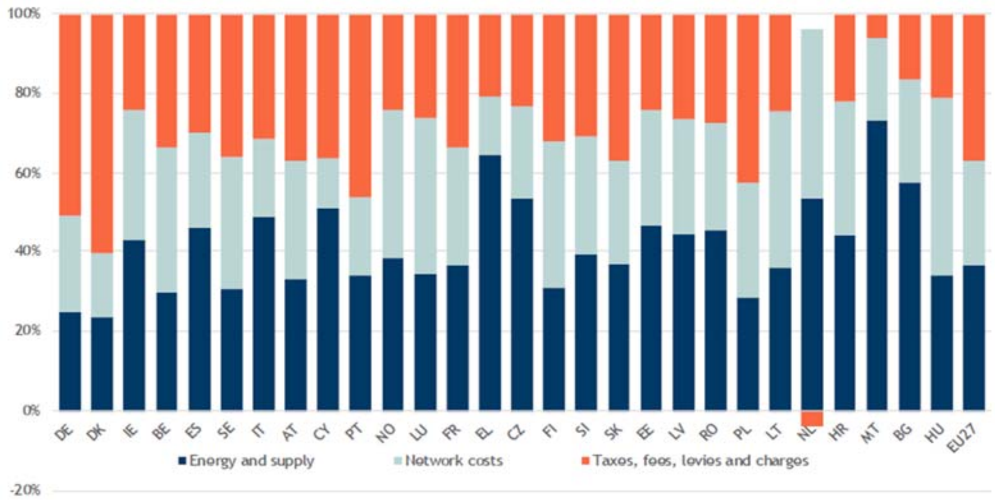

Figure 2. Composition of electricity prices for EU households in 2021, % of total price

Source: (Study on energy prices and costs, 2024)

Thanks to the large production of crude oil and natural gas, countries such as Iran, Qatar and Russia have some of the lowest electricity prices in the world – in these countries, the average family pays less than 0.1 USD. US per kWh. In contrast, countries that depend on imported fossil fuels for electricity production are more vulnerable to fluctuations in market prices. The largest importers of natural gas in Europe in 2022 were Italy and Germany, where this source of energy makes up a significant share in the structure of the energy balance. The countries have some of the highest electricity prices in the world, having been hit by the energy crisis of 2022. Overall, Western Europe is the most expensive region to purchase electricity for households, while many major energy producing countries, such as Russia and Saudi Arabia, offer their residents the cheapest average rates.

The factors that influenced the formation of the electricity price are: the global energy crisis, high inflation and interest rates, the energy transition to net zero and decarbonization, digitalization and decentralization. Along with this, many other common factors underlie these factors, such as weather conditions and market forces, which are mentioned a lot and amplify or offset their effects. These drivers and trends are expected to continue to influence to varying degrees in 2024 and require shaping responses from governments, regulators, utilities and customers. In general, according to the analysis of recent years, a decrease in the demand for electricity in developed economies was predicted due to the permanent consequences of the global energy crisis and the slowdown in economic growth. In 2024, when expectations about the economic outlook show improvement, global electricity demand growth is expected to recover to 3.3% (Raza, 2023, December 31).

Since the beginning of 2024, electricity prices in Europe have been declining significantly. Thus, in February, average monthly wholesale electricity prices per day in major European markets fell, with most of them reaching their lowest level since the first half of 2021:

Sweden – 44.4 EUR/MWh (-45%);

Spain – 39.9 EUR/MWh (-35%);

France – 58.4 EUR/MWh (-23.8%);

Germany – 61.36 EUR/MWh (-19.9%);

Italy – 87.6 EUR/MWh (-11.6% m/m) (Yermolenko, 2024).

In Ukraine, the weighted average price of electricity on the day-ahead market (DAM) in February 2024 decreased by 15.3% compared to the previous month to UAH 3268.6/MWh (EUR 78.6 at the exchange rate of UAH 41.59/EUR). Total demand for the period decreased by 13.16% mom.

According to the data of The European Energy Exchange (EEX), the Central European exchange of electricity and related products, the base settlement price of electricity futures on the German market in March 2024 was 61.27 EUR/MWh, on the French market – 58.81 EUR/MWh h., Spain – 19.83 EUR/MWh, Italy – 84.73 EUR/MWh (Yermolenko, 2024).

From the point of view of maintaining current trends in the future, two logical conclusions can be drawn. First, the prices of energy products are rising faster than the prices of other products. Second, oil prices are increasing faster than coal prices. The reality of supply and demand in the market further reinforces these trends. In developed countries, energy consumption per unit of production is decreasing, and this is to some extent offsetting the increase in energy demand in emerging markets. Countries such as China, which are heavily dependent on oil imports, are reducing their energy dependence through the development of solar energy and improved energy storage. Services play an increasing role in both developed and emerging markets, and as the share of services in GDP increases, the economy's relative dependence on oil and coal will decrease. The overall potential trend of energy supply and demand depends on technology and how quickly solar and innovative technologies can improve, as well as how much fracking and related technologies can increase the amount of oil that can be extracted from the ground. Due to the global warming effect of carbon energy, the world is trying to reduce its dependence on coal and oil, and of course this has an effect on the cost of electricity.

That seems unlikely now, the researchers say, but the system model has shown no signs of change over the past 100 years. Currently, the safest thing is to increase the prices of raw materials, especially energy (Taylor, 2017). As a result of the generalization of the trends of changes in world electricity prices, it is possible to single out the key factors that significantly affect the price change.

3. Factors affecting the price in the electricity sector

The price of fuel is one of the main factors affecting energy pricing and electricity tariffs for the population. The price of oil, natural gas and coal fluctuates depending on global factors such as production volumes, refinery output, tariffs and transportation costs.

Natural gas is one of the most used types of fuel in power plants. The laws of supply and demand, along with regional factors, affect the price of natural gas and other fuels. When natural gas prices rise, electricity prices are likely to rise. As the demand for a commodity like natural gas increases, so does the price. Likewise, when demand decreases, prices can fall.

This is because, thanks to the current market clearing mechanism, electricity prices are determined by the auction clearing price determined by the marginal technology. Previously, this technology was coal, and after several periods of higher demand – gas. The increase in the cost of carbon emissions in recent years has led to higher coal prices and market prices, while lower gas prices have caused lower market prices for gas stations. Consequently, marginal technologies in many markets have slowly transitioned to gas production. This is especially relevant for times of market shortage, when gas installations have become a common high-cost "balancing" unit.

This dependence between electricity prices and gas prices has strengthened in recent years. Compared to previous years, 80% of gas plants in the EU purchase gas under futures contracts. Consequently, gas futures prices, such as those at the Dutch TTF hub, influence prices in electricity markets over many time frames, and often average prices. The Russian invasion of Ukraine demonstrated that there is a close relationship between electricity prices and gas futures prices. You can clearly see this relationship in *Figure 3*, which shows an increase in gas prices, followed by a significant increase in prices in the European electricity market. Economic recovery following the COVID-19 pandemic has also boosted demand for gas and electricity, putting additional demand-side pressure on market prices.

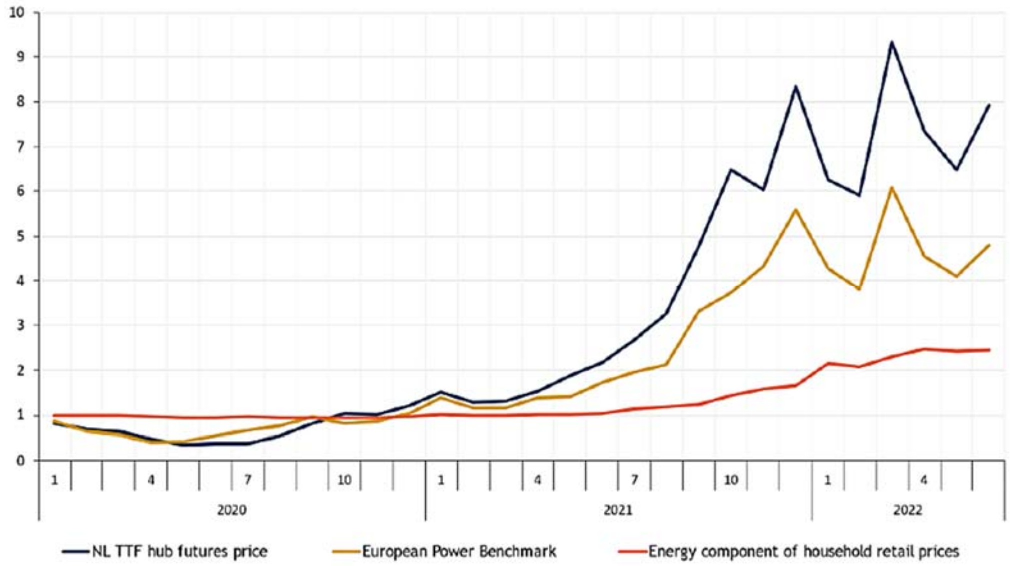

Figure 3. Day-ahead gas prices (NL TTF hub futures), day-ahead electricity prices (European Electricity Benchmark) and the average energy component of retail price development for households since 2020 (index 1 = average price in 2019)

Source: (Study on energy prices and costs, 2024).

The relationship between the price of gas and the price of electricity varies across Europe. By 2020, most gas (96%) in Europe was already purchased using futures contracts, so electricity prices were highly dependent on gas price fluctuations. However, in the Mediterranean (53%), Scandinavia and the Baltics (66%) and South-Eastern Europe (84%) a larger share is traded through indices linked to oil prices (which rose less than oil futures gas). Therefore, the vulnerability of electricity prices in these regions to fluctuations in gas prices was lower.

Another important factor is world events, such as wars or health crises, which can also affect energy prices. If conflict causes large-scale changes in energy demand, it could affect the availability of commodities like natural gas and oil or slow down global supply chains. So average consumers may notice a change in their bill growth.

For example, Russia's invasion of Ukraine led to a significant increase in electricity prices due to concerns about natural gas supplies. During 2022, wholesale energy prices in Europe increased by 237% (Gazzani & Ferriani, 2022). Such price increases are a typical result of global disruptions, but some events can lead to lower demand. For example, during the quarantine due to COVID-19, the demand for electricity fell (COVID-19 impact on electricity, 2021) as a number of businesses closed down, which reduced electricity prices for a while.

Geopolitical conflicts can have a long-term impact on the cost of electricity. In times of uncertainty, investors are less likely to provide capital for grid improvements or renewable energy projects. This hesitancy could delay progress that could make electricity more reliable and cheaper in the future.

The amount of available supply can also affect electricity tariffs. If there is a surplus, prices may fall; and when supplies are scarce, energy prices often rise.

In addition to supply and demand, other factors influence energy pricing. Among other factors that can cause energy prices to rise, the following can be distinguished:

Weather conditions, including extreme temperatures and other changes in weather conditions, are a common cause of power outages and increased energy demand. According to Climate Central, 83% of power outages were weather-related (Surging Weather-related Power Outages, 2022) between 2000 and 2021. This percentage increased significantly in the following decade, with a further increase in weather-related outages from 2011 to 2021 by 78%. Such disruptions could cause an increase in wholesale electricity prices (Wholesale U.S. electricity prices, 2023), which utility companies usually pass on to consumers in the form of higher tariffs.

Extreme temperatures can also cause utility bills to spike. Demand for electricity increases as people turn on energy-intensive appliances, such as furnaces or air conditioners, so prices rise. A vivid example of this was observed in Texas (USA) in the summer of 2023, when prices from the annual average of $101. US per MWh rose to $5,000. USA per MWh.

While consumers can expect some seasonal fluctuations in prices as a matter of course, unpredictable extreme weather events tend to have a much greater impact on electricity costs.

Supply chain problems, which can be expressed by disruptions in the supply of spare parts for turbines and other equipment from the manufacturer to the power plant (Thomson et al., 2022). For example, delivery delays can affect repairs, maintenance, and system improvements because needed parts or equipment could not arrive in time due to a transportation delay.

In addition, limited access to raw materials can stop renewable energy projects. In addition to logistical bottlenecks or high shipping costs, energy companies may have to source materials for solar panels or battery systems from risky countries where transportation is a problem or supply is unstable.

Failure to upgrade or repair systems can delay cost savings and lead to failures or inefficiencies, ultimately driving up energy prices.

Grid infrastructure and distribution. It takes time to add high-voltage power lines and switches to the grid, so supply may not grow as fast as demand. Damage to the network infrastructure, in turn, can limit the amount of electricity available to consumers.

Structure of the electricity market. The rules governing electricity markets vary greatly by location, but there are two main types of market structures in the United States: regulated and deregulated markets (Understanding Electricity Market Frameworks & Policies, 2024). A regulated market is one in which one public utility company controls most of the electricity generation and infrastructure. A deregulated market allows electricity to be bought and sold between different electricity suppliers, with a public entity responsible for only certain aspects of the transmission infrastructure.

Examining the presence of the largest electric power companies by market capitalization from a list of 240 units in the world, it can be considered that the US electric power market is the most deregulated (*Table 1*).

Table 1

Number of the largest electricity companies in the world as of May 01, 2024

Largest electricity companies by country (240 companies)									
Quantity, pcs.	The USA	Great Britain	Germany	France	Spain	Italy	Poland	Turkey	***Uraine***
	80	5	13	3	9	7	3	2	***0***

Source: compiled by the authors according to (Largest electricity companies by market cap, n. d.).

But the impact of this factor cannot be considered unambiguous, as deregulation aims to encourage competition and ultimately lower prices for consumers, but the results in practice vary. A deregulated market tends to have an uneven distribution of electricity and more volatile price swings, and according to a New York Times report, customers in deregulated markets pay an average of $40 more per month than customers in regulated electricity markets (Penn, 2023, January 4).

For the final consumer, an influential factor on the final tariff is the share of taxes and fees in the price of electricity.

In addition, another factor is the purchasing power of the population. Looking at the general trends of global purchasing power, an increasing trend is recorded across countries. A significant drop in opportunities to purchase electricity can be observed on the domestic market. This trend is caused by the increase in electricity tariffs for household consumers from 01.06.2024 by Resolution of the CMU No. 632 dated 31.05.2024, regarding the establishment of a single fixed price for electricity for all residents of Ukraine – 4/32 hryvnias/kWh. regardless of the volume of consumption, and accordingly, a slight increase in the minimum income of citizens. In addition, the incomparable increase in the minimum wage and the fall in the national currency additionally do not provide an opportunity for a progressive increase in purchasing power.

4. Electricity market of Ukraine

Two and a half years of war became a difficult test for energy companies and enterprises that produce, sell, distribute and supply electricity. The main reasons for this were the decrease in consumption by commercial consumers, massive shelling by the Russian occupiers of the energy infrastructure in 2022-2023, and huge debts created as a result of an unbalanced model of assigning special responsibilities to state-owned companies. Analysts of the energy sector emphasize that the existing mechanism for providing the population with electricity (PSO) ensures a low price for electricity for the population at the expense of potentially profitable state-owned companies: mainly "Energoatom", which is the operator of nuclear power plants and "Ukrhydroenergo" which is the operator of hydroelectric plants. Despite the instability of the surrounding conditions, several market participants were able to earn significant profits in 2023.

Electricity prices in Ukraine have gradually increased over the past 10 years: from UAH 0.35 to UAH 1.51 in 2023, and then rapidly to UAH 4.32 per kWh in 2024, i.e. by 186%. Such an increase in the cost of electricity hit Ukrainians hard during the war years: from UAH 1.51 in 2023 to UAH 2.64 at the beginning of 2024, and to UAH 4.32 per kWh from June 2024. Experts state that the sharp increase in electricity bills is caused by several factors, but most of it can be attributed to the huge investment in the country's crumbling energy infrastructure. At the same time, utility providers are working to upgrade and increase generation capacity to keep up with higher demand, which will be driven in part by artificial intelligence.

Until 2019, an inefficient monopolized model of relations in the field of electricity sales operated in Ukraine, where pricing was under the control of centralized management, which negatively affected all market participants. Since July 1, 2019, a new electricity market model based on the rules and standards of the European Union has been implemented in Ukraine. This allowed Ukraine to improve the system of buying and selling electricity, and now the updated market is constantly undergoing qualitative changes (Metelenko et al., 2023).

According to this model of the electricity market in Ukraine, companies that are engaged in: generation (producers); transportation of electricity; direct supply of electricity to the consumer (*Figure 4*).

The electric power system of Ukraine includes the following producers: 4 nuclear power plants; 15 thermal power plants (of which 2 are in uncontrolled territory); 43 thermal power plants (of which 10 are in uncontrolled territory). Hydropower consists of 8 hydroelectric power stations and 3 hydroelectric power stations, the largest of which are 6 large hydroelectric power stations on the Dnipro River and the Tashlytsky hydroelectric power station on the South Bug River. The largest solar power plant in

Ukraine is located in the Dnipropetrovsk region; it has the second largest capacity in Europe. Zaporizhzhia region has the largest wind power plant.

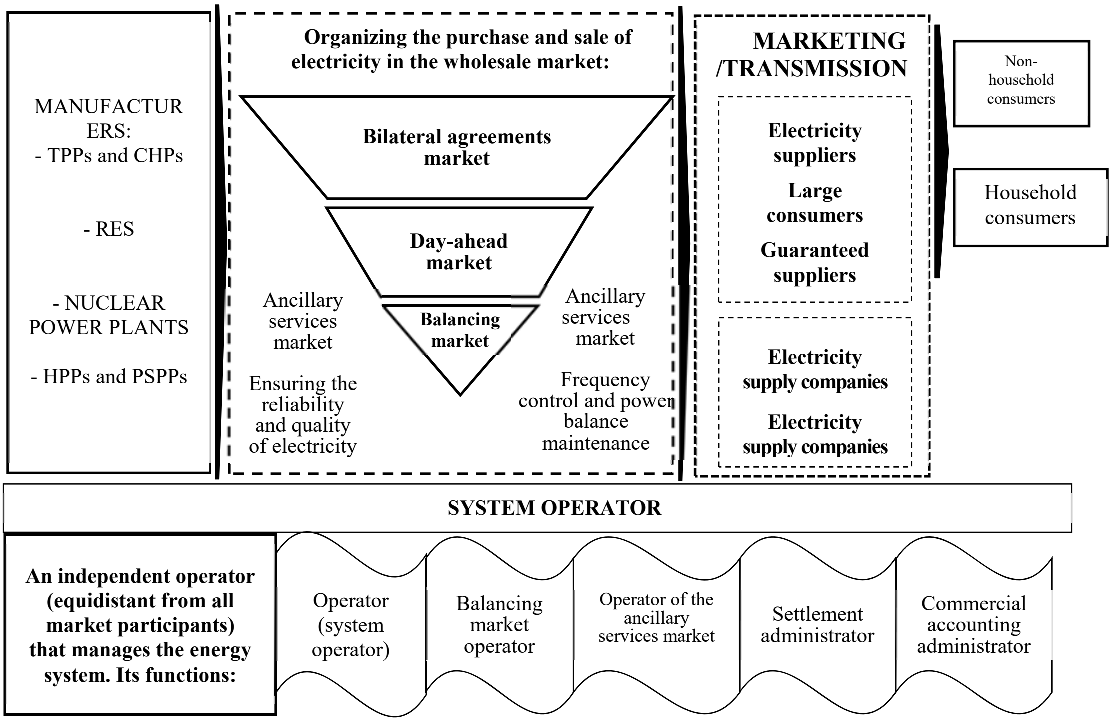

Figure 4. Model of the electricity market in Ukraine

Source: compiled by the authors according to (National Commission for State Regulation of Energy and Utilities, 2018).

A sharp decrease in electricity production in 2022 is caused by a full-scale Russian invasion, temporary occupation of certain territories, and missile strikes. As a result, Ukraine lost about 10 GW of various generation capacities, of which 6 GW is accounted for by Zaporizhzhya NPP. In addition, about 1/4 of the installed capacity of renewable energy sources is currently located in the occupied territories, including 75% of wind farms and up to 15% of solar energy facilities. The demand for energy products has decreased significantly due to the mass evacuation of the population and the suspension of business activities. Previously, the main consumer of electricity was industry, which used 42% of total electricity consumption in the pre-war year. In 2022, this indicator decreased to 33%, and overall industrial consumption decreased by 45%.

In 2022, the share of electricity consumed by the population reached a record 38% of the total volume (in 2021 – 31%). This happened against the background of a significant economic downturn, a significant decrease in production volumes, and other factors. Currently, the population is the largest consumer of electricity in Ukraine.

Demand and supply in the power system must always be balanced to avoid interruptions in the supply of electricity. This creates a need for markets where transmission system operators (TSOs) can purchase the energy needed to balance the grid close to the time of physical delivery – in balancing markets. "Imbalance" trading takes place in this segment. Electricity prices in the balancing market are usually higher than in the day-ahead market, and this market is often characterized by sharp price fluctuations.

Proponents of liberal policies are unanimously in favor of the abolition of price restrictions in all segments of the electricity market, warning that further maintenance of these restrictions may lead to a reduction in foreign investment, a decrease in the necessary reserves and a decrease in the level of energy security. This, in turn, may complicate Ukraine's compliance with the requirements of EU legislation and harm the process of full integration with the EU electricity market. Currently, the situation is such that, on the one hand, energy companies support the idea of completely abolishing price restrictions in order to be able to sell electricity at higher prices. On the other hand, Ukrainian consumer enterprises oppose the increase in electricity prices, as it will increase the cost of their products and reduce competitiveness. For the public, an increase in wholesale electricity prices means an increase in the cost of goods and services.

The market price mostly for consumers and suppliers at free prices (cost of electricity) is formed on the basis of electricity purchase prices and tariffs in four market segments: on the market of bilateral contracts (BCC), where contract prices apply; on the day-ahead market (DAN); on the intraday market (IDR) and the balancing market (BR), which are organized segments with hourly prices (Metelenko et al., 2023). The most transparent segment of the energy market, which best reflects the real ratio of supply and demand, is RDN.

Studies show that the main factors affecting the level of electricity prices for consumers at free prices in the conditions of market pricing are the following: price dynamics in various wholesale market segments; formation of tariffs for services of operators of distribution systems (OSR) and transmission systems (OSP); cost of electricity supplier services; a system of commercial electricity accounting for legal entities, which is based on market principles. The price depends on several factors, such as consumption volumes, payment schedule, payment discipline and consumption schedule during the day.

According to the results of the Report of the Low Carbon Ukraine (LCU) project, which is part of the International Climate Initiative (ICI) and financed by the German government (Low Carbon Ukraine, 2020, September, 4), it is stated that among the main problems of the electricity market of Ukraine is the lack of real competition. High market concentration allows all market participants to adapt. The authors note that in 2020, the final tariff in Europe for the population was much higher than in Ukraine, for small commercial consumers – the same or slightly higher, and for large consumers – sometimes electricity is cheaper in Europe. The reason for this is the market power of individual players, in particular R. Akhmetov's DTEK. This company, which has a share of 75.1%, definitely demonstrates dominance and dominance in terms of proposals among the studied companies. The closest competitor, Ukrhydroenergo, has a market share of only 16.5% (*Table 2*).

Table 2

The most profitable companies of the national electricity market in 2023

Position	Company	Owner	Revenue in 2023, UAH billion	Share, %
1	Ukrhydroenergo	State	48.6	16,5
2	D.Trading	DTEK. Rinat Akhmetov	165.7	56,1
3	DTEK Kyiv power grids		5.7	1,9
4	DTEK Kyiv regional power grids		7.6	2,6
5	DTEK Pokrovska SES		1.7	0,6
6	DTEK Odesa Power Grids		6.9	2,3
7	Kyiv energy services		34.2	11,6
8	Electricity trading group	Tolk. Yuriy Boyko	7.6	2,5
9	ERU Trading	THE E.R.U. Yaroslav Mudryi	13.6	4,6
10	Poltavaoblenergo	Privat. Ihor Kolomoisky	3.9	1,3
In total			295.4	100.0

Source: compiled from (YouControl, n. d.).

Previously, on the Ukrainian electricity market, only one company had the signs of a monopoly – "Energoatom", whose share of production in the total amount of electricity exceeded 50%. But the so-called "state monopoly" in world practice does not abuse its monopoly position and in fact protects the rights to available resources of consumers under the control of the state. From the point of view of the situation that has developed in the electricity market of Ukraine, it is difficult to think about competitive pricing conditions for electricity in the domestic market and protection from the private monopolist.

A possible promising option for reducing the price of electricity in Ukraine may be a nationwide transition to renewable energy sources as an alternative form of energy supply, but this is associated with significant initial costs. Solar and wind farms are still more expensive to build than natural gas generators, although construction costs for all three have fallen in recent years. The expansion of wind and solar power will also require new transmission infrastructure.

In addition, it is hardly possible to build large solar power plants in the urban centers of the country. They must be built in rural areas that require an additional power grid. Utility customers are currently bearing the brunt of these investments, but in the long term, these sources offer financial benefits, namely that they can produce cheaper electricity with less price volatility, which can benefit end users. However, higher future demand presents an increasing challenge. The global acceleration is due to the growth of artificial intelligence. According to The Wall Street Journal, AI demand for electricity in the U.S. could be five to six times the total amount needed to charge American electric vehicles. Analysts say artificial intelligence data processing, not electric cars, is now the "biggest challenge" for grid planners. So, to improve reliability and avoid permanent outages, the North American Electric Reliability Corporation (NERC) recommended expanding the transmission network, adding new power sources and making existing resources more reliable. This will take time and money, which means higher energy bills for consumers in a global environment (Penn, 2023, January 4).

It is noted that in most countries of the world, electricity is supplied through utility companies, which have been granted a monopoly. Economists generally discourage monopolies, but electricity has traditionally been considered a special case. The bottom line is that it is analytically cheaper for one firm to operate several large plants than for many companies to operate smaller plants, and in general the nature of electricity markets favors centralization and large companies. But on the other hand, in today’s world, the improvement of technology has led to the fact that monopolies on electric services have become obsolete. The emergence of smaller, competitive power plants and the reduction of transaction costs between consumers and suppliers make systems of retail choice possible.

In general, the available scientific research unequivocally refutes the idea that a monopoly is the most efficient market structure for the retail sale of electricity. World practices show that electricity prices, for example in the USA, which allow a wide retail choice, are generally lower than they would be under monopolies. Under competitive conditions, prices more accurately reflect marginal costs. In addition, in the States with the most developed retail markets, there is evidence of product differentiation, which can create additional value for consumers. Contrary to natural monopoly theory, no studies have found that retail competition per se has caused price increases, although several studies have found that imperfections in the market structure led to price increases.

Studies of duopolistic competition between utilities that engage in both retail and distribution produce results qualitatively similar to those of states that have introduced retail competition. Econometric studies show that under conditions of duopoly, electricity companies have lower costs and charge lower prices than under conditions of monopoly (Ellig, 2021, September 13).

Therefore, regardless of the form of retail competition, there is no economic justification for the monopolization of retail electricity trade.

Due to today's global challenges in Ukraine, the issue of providing the country's population with high-quality, affordable electrical energy becomes especially urgent. This year, Ukraine is extremely experiencing a significant shortage of electricity, which leads to emergency power outages in the country. If previously power outages affected only industrial or critical infrastructure facilities, now household consumers are affected as well. The problem is that the total capacity of the power plants is not enough to cover the consumption, and the imports are not enough to cover the deficit (due to cold in winter or due to heat in summer).

Due to Russian shelling, Ukraine lost 8 GW of capacity (Visit Ukraine, 2024)[1], which further complicates the situation regarding the provision of electricity to the population. On the one hand, this demonstrates the need to adapt to modern circumstances, speed up restorations, and accumulate actions in the researched direction. On the other hand, a global understanding and reorientation to international practices of regulation of the country's electric energy supply system is necessary in order to be ready for the critical challenges of today and current transformations.

It is advisable for state regulators to ensure that the monopoly on electricity services is limited only where it is economically necessary. The emergence of other competitive market participants and the reduction of transaction costs between consumers and suppliers make retail choice systems possible. The state should encourage consumer choice by reforming traditional monopolies to offer more options through retail choice. Offering more choice will allow consumers to find products that better suit their needs.

Conclusions

Historical global energy commodity price dynamics show periodicity and show that energy commodity prices are increasing faster than other commodity prices, while oil prices are increasing faster than coal prices. It has been established that price growth occurs under the influence of global and country-specific factors. Global energy shortages, caused by a number of political and economic factors, are driving up electricity prices for retailers. Despite the fact that most countries provide budgetary assistance to households in the face of rising tariffs, end consumers around the world face rising energy prices and rising costs of living.

[1] *It was a matter of time: why are the power cuts in Ukraine happening again and are there any schedules*? https://visitukraine.today/blog/3946/it-was-a-matter-of-time-why-are-the-power-cuts-in-ukraine-happening-again-and-are-there-any-schedules

The economic recovery after COVID-19, along with rising tensions with Russia, culminating in the Russian invasion of Ukraine, has led to an unprecedented spike in wholesale electricity prices, especially in the EU. The main reasons for this were the increase in gas prices and the impossibility of replacing it in the short term with other types of fuel, as well as the shortage of hydro and nuclear energy. In addition to the EU, price increases occurred in many countries – Japan, South Korea, Turkey, India, Brazil, South Africa, but in the USA and China and some other countries, which are mostly self-sufficient in fuel for electricity production, prices remained relatively stable.

Electricity prices vary widely around the world, and sometimes even within a country, depending on factors such as infrastructure, geographic location, and politically determined taxes and fees. Among EU member states, the components of the total price vary greatly: the highest component of taxes and fees is in Denmark, Germany and Portugal; Malta and Greece have the highest level of electricity and supply costs, the highest network costs were recorded in Belgium, Ireland and Sweden.

Factors affecting pricing in the field of electricity in the world have been identified. These include: energy prices, global crisis phenomena, the amount of available supply, weather conditions, supply chain problems, grid infrastructure and distribution, electricity market structure, the share of taxes and fees in the price of electricity, and the purchasing power of the population. The close correlation between gas futures prices and electricity prices is substantiated, especially during the Russian invasion of Ukraine. The ambiguity of the factor of deregulation in the electricity market is proven, since the deregulated market is prone to uneven distribution of electricity and sharper price fluctuations.

Ukraine's electricity market, like other sectors of the economy, is currently in a crisis situation. Due to the war, the energy infrastructure was destroyed, causing a shortage of electricity and rising prices. Along with this, the market is characterized by a price imbalance, especially in the retail sector, a crisis of settlements between the main market participants, a lack of real competition, limited transparency of the market and possibilities of manipulation on it, imperfection of the legislative framework, etc. This requires a global approach to understanding problems and a reorientation to international practices of regulating the country's electric energy supply system in order to be ready for today's critical challenges and ongoing transformations.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Aklin, M., Cheng, Cy., & Urpelainen, J. (2016). Factors affecting household satisfaction with electricity supply in rural India. *Nat Energy*, (1), 16170. https://doi.org/10.1038/nenergy.2016.170

Andersson, B., & Bergman, L. (1995). Market structure and the price of electricity: An ex ante analysis of the deregulated Swedish electricity market. https://journals.sagepub.com/doi/10.5547/ISSN0195-6574-EJ-Vol16-No2-5

Azofra, D., Jiménez, E., Martínez, E., Blanco, J., & Saenz-Díez, J. C. (2015). Economical-environmental impact of subsidised renewable energy sources for electricity (RES-E) in the Spanish system. https://doi.org/10.1016/j.esd.2015.09.002

Banerjee, A., Prehoda, E., Sidortsov, R., & Schelly, C. (2017). Renewable, ethical? Assessing the energy justice potential of renewable electricity. *AIMS Energy*, (5), 768–797. https://doi.org/10.3934/energy.2017.5.768

Bednar, D. J., & Reames, T. G. (2020). Recognition of and response to energy poverty in the United States. *Nat Energy,* (5), 432–439 https://doi.org/10.1038/s41560-020-0582-0

Brand, B., & Zingerle, J. (2011), The renewable energy targets of the maghreb countries: Impact on electricity supply and conventional power markets. https://doi.org/10.1016/j.enpol.2010.10.010

Burgos-Payán, M., Roldán-Fernández, J. M., Trigo-García, Á. L., Bermúdez-Ríos, J. M., & Riquelme-Santos, J. M. (n. d.). *Costs and benefits of the renewable production of electricity in Spain.* https://doi.org/10.1016/j.enpol.2012.12.047

Cabeza, L. F., Urge-Vorsatz, D., McNeil, M. A., Barreneche, C., & Serrano, S. (2014). Investigating greenhouse challenge from growing trends of electricity consumption through home appliances in buildings. Renew. *Sustain. Energy Rev*., (36), 188–193. https://doi.org/10.1016/j.rser.2014.04.053

Ćosić, B., Krajačić, G., & Duić, N. (2012) A 100% renewable energy system in the year 2050: The case of Macedonia. https://doi.org/10.1016/j.energy.2012.06.078

Covid-19 impact on electricity. Updated through the end of 2020. (2021). IEA. https://www.iea.org/reports/covid-19-impact-on-electricity

Dragasevic, Zdenka, Milovic, Nikola, Djurisic, Vladimir, & Backovic, Tamara (2021). Analyzing the factors influencing the formation of the price of electricity in the deregulated markets of developing countries, *Energy Reports,* (7), 937–949.

Ekonomichna Pravda (2021, August 23). How Ukraine's economy has changed over the past 30 years of independence https://www.epravda.com.ua/publications/2021/08/23/677115/

Ellig, Jerry. (2021, September 13). Retail Electric Competition and Natural Monopoly: The Shocking Truth https://www.thecgo.org/books/regulation-and-economic-opportunity-blueprints-for-reform/retail-electric-competition-and-natural-monopoly-the-shocking-truth/

European Commission. (2020). Commission Recommendation (EU) 2020/1563 of 14 October 2020 on Energy Poverty C/2020/9600. October 2020. Available online. http://data.europa.eu/eli/reco/2020/1563/oj

Eurostat. (2020). Energy Consumption and Use by Households. https://ec.europa.eu/eurostat/web/productseurostat-news/-/ddn-20200626-1

Frodyma, K. (2017). The analysis of changes in the distribution of renewable energy consumption in the EU countries. In The 11th Professor Aleksander Zelias International Conference on Modelling and Forecasting of Socio-Economic Phenomena. Cracow: *Foundation of the Cracow University of Economics,* 280–289.

Gazzani, Andrea, & Ferriani, Fabrizio (2022). The impact of the war in Ukraine on energy prices: Consequences for firms' financial performance. https://cepr.org/voxeu/columns/impact-war-ukraine-energy-prices-consequences-firms-financial-performance https://doi.org/10.1016/j.egyr.2021.07.046

IEA; IRENA; UN; The World Bank; WHO. Tracking SDG7: The Energy Progress Report; International Bank for Reconstruction and Development/The World Bank: Washington, DC, USA. (2022). Available online: https://www.iea.org/reports/tracking-sdg7-theenergy-progress-report-2022

Integral. (2022). China Raises Cap on Electricity Price: What has Changed and Possible Impact for Business. https://www.integralnewenergy.com/?p=32919

Koichiro. (2021). The Price Surge in the Japanese Wholesale Electricity Market in January and the Lessons for Market Design. https://www.rieti.go.jp/en/special/policy-update/093.html

Krarti, M., & Aldubyan, M. (2021). Review analysis of COVID-19 impact on electricity demand for residential buildings. Renew. *Sustain. Energy Rev*. https://doi.org/10.1016/j.rser.2021.110888

Largest electricity companies by market cap. (n. d.). https://companiesmarketcap.com/electricity/largest-electricity-companies-by-market-cap/

Lave, L.B.; Apt, J.; Blumsack, S. (2004). Rethinking Electricity Deregulation. *Electr. J.*, (17), 11–26. https://doi.org/10.1016/j.tej.2004.09.002

Low Carbon Ukraine. (2020, 4 вересня). Мніторинг віжкриття ринку електроенергії, випуск 5. https://www.lowcarbonukraine.com/wp-content/uploads/20200922_MEMO_5_UKR.pdf

Metelenko, N. G., Silina, I. V., & Radzivilo, I. V. (2023). Functioning of the Modern Electricity Market in Ukraine and Peculiarities of Pricing in its Segments. https://doi.org/10.15802/rtem2023/300012	Метеленко, Н. Г., Сіліна І. В., & Радзівіло, І. В. (2023). Функціонування сучасного ринку електричної енергії в Україні та особливості ціноутворення на його сегментах. https://doi.org/ 10.15802/rtem2023/300012

Moreno, B., López, A. J., & García-Álvarez, M. T. (2012) The electricity prices in the European Union, The role of renewable energies and regulatory electric market reforms. https://doi.org/10.1016/j.energy.2012.06.059

National Commission for State Regulation of Energy and Utilities (2018). On Approval of the Procedure for Formation of Prices for Universal Services. Resolution of 05.10.2018, No. 1177. https://zakon.rada.gov.ua/laws/show/v0308874-18#Text	Національна комісія державного регулювання енергетичних та комунальних послуг. (2018). Про затвердження Порядку формування цін на універсальні послуги. Постанова від 05.10.2018, №1177. https://zakon.rada.gov.ua/laws/show/v0308874-18#Text

Ouédraogo, I. M. (2010). Electricity consumption and economic growth in Burkina Faso: A cointegration analysis. *Energy Econ.,* (32), 524–531. https://doi.org/10.1016/j.eneco.2009.08.011

Penn, Ivan. (2023, Jan. 4). Why Are Energy Prices So High? Some Experts Blame Deregulation. *The New York Times*. https://www.nytimes.com/2023/01/04/business/energy-environment/electricity-deregulation-energy-markets.html

Pepermans, G. (2019). European energy market liberalization: experiences and challenges. *IJEPS* 13, 3–26 https://doi.org/10.1007/s42495-018-0009-0

Perez, A., & Garcia-Rendon, J. J. (2021) Integration of non-conventional renewable energy and spot price of electricity: *A counterfactual analysis for Colombia*. https://doi.org/10.1016/j.renene.2020.11.067

Raza Aftab. (2023, December 31). Trends and Factors affecting Electricity Prices: Transition from 2023 to 2024 https://www.linkedin.com/pulse/trends-factors-affecting-electricity-prices-transition-aftab-raza-2vhvc

Riva, F., Ahlborg, H., Hartvigsson, E., Pachauri, S., & Colombo, E. (2018). Electricity access and rural development: Review of complex socio-economic dynamics and causal diagrams for more appropriate energy modelling. *Energy Sustain. Dev*., (43), 203–223. https://doi.org/10.1016/j.esd.2018.02.003

Sharma, D., Bouchaud, J. P., Gualdi, S., Tarzia, M., & Zamponi, F. (2021). V-, U-, L- or W-shaped economic recovery after Covid-19: Insights from an Agent Based Model. PLoS ONE 2021, https://doi.org/10.1371/journal.pone.0247823

Sovacool, B. K. (2017). Reviewing, Reforming, and Rethinking Global Energy Subsidies: Towards a Political Economy Research Agenda. Ecol. Econ., (135), 150–163. https://doi.org/10.1016/j.ecolecon.2016.12.009

Study on energy prices and costs. *Evaluating impacts on households and industry: 2023 edition*. https://op.europa.eu/en/publication-detail/-/publication/3b43f47c-e1c5-11ee-8b2b-01aa75ed71a1/

Surging Weather-related Power Outages. (2022). https://www.climatecentral.org/climate-matters/surging-weather-related-power-outages

Taylor, Bryan (2017). The Future of Energy Prices: Lessons from 750 *Years of History* https://globalfinancialdata.com/the-future-of-energy-prices-lessons-from-750-years-of-history

Thomson, Jim, Motyka, Marlene, Hardin, Kate, & Nagdeo, Jaya (2022). Electric power supply chains: Achieving security, sustainability, and resilience. https://www2.deloitte.com/us/en/insights/industry/power-and-utilities/supply-chain-resilience-electric-power-sector.html

Understanding Electricity Market Frameworks & Policies. (2024). https://www.epa.gov/greenpower/understanding-electricity-market-frameworks-policies

Visit Ukraine. (2024). *It was a matter of time: why are the power cuts in Ukraine happening again and are there any schedules?* https://visitukraine.today/blog/3946/it-was-a-matter-of-time-why-are-the-power-cuts-in-ukraine-happening-again-and-are-there-any-schedules

Wholesale U.S. electricity prices were volatile in 2022. https://www.eia.gov/todayinenergy/detail.php?id=55139

Why are electricity prices rising again? (2023). https://www.unsw.edu.au/newsroom/news/2023/05/why-are-electricity-prices-rising-again-

Yermolenko, Halina (2024). Electricity prices in Europe fell significantly in February https://gmk.center/en/posts/electricity-prices-in-europe-fell-significantly-in-february/

Ying, C., Hanyu, L., & Wenchao, L., Lixin, T. (n. d.). The demand forecast and equilibrium analysis of electricity consumption – *Take Jiangsu province as an example.* https://doi.org/10.1016/j.egypro.2017.03.728

YouControl. (n. d.). Service of counterparty verification https://youcontrol.com.ua/catalog/company_details/20588716/	YouControl. (n. d.). Сервіс перевірки. https://youcontrol.com.ua/catalog/company_details/20588716/

Zhang, T., Shi, X., Zhang, D., & Xiao, J. (2019). Socio-economic development and electricity access in developing economies: *A long-run model averaging approach. Energy Policy*, (132), 223–231. https://doi.org/10.1016/j.enpol.2019.05.031

Zhimin, Wang, Chenghong, Gu, Furong, Li, Philip, Bale, & Hongbin, Sun (2013). Active Demand Response Using Shared Energy Storage for Household Energy Management, in IEEE *Transactions on Smart Grid*, *4*(4), 1888–1897, https://doi.org//10.1109/TSG.2013.2258046.

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EVOLUTION OF MONOPOLY REGULATION

The monopolistic organization of markets is as deeply rooted as the competitive one. It requires market actors to take this into consideration. It requires national regulators to counteract it or at least to restrict the freedom of monopolists to the extent that they cannot abuse their market power and negatively affect public welfare. Both the ways of monopolization and the ways of counteracting it are evolving, constantly upsetting the balance between competition and monopoly, requiring new ways of regulating monopolies. The authors research the evolution of monopoly regulation: from spot prohibitions of anticompetitive practices in ancient times to the systemic balancing of competitive and state mechanisms of monopoly regulation today. The article is systematized all approaches to monopoly regulation into three groups, such as: antitrust regulation as control and counteraction to abuse of dominant position by a monopolist; direct regulation of permitted monopolies, including licensing, price regulation and regulation of access to a key resource; structural reform of monopolistic industries and introducetion of competition in the potentially competitive segments of it – outside the bottleneck in the value chain, where a key resource of a permitted monopoly is exploited. The combination of the theoretical foundations of state monopoly

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ЕВОЛЮЦІЯ РЕГУЛЮВАННЯ МОНОПОЛІЙ

Монопольна організація ринків має таке ж глибоке коріння, як і конкурентна, що вимагає від ринкових акторів рахуватися з цим, а національних регуляторів цьому протидіяти або принаймні обмежувати свободу монополістів настільки, щоб вони не могли зловживати наявною у них ринковою владою і негативно впливати на суспільний добробут. При цьому як способи монополізації, так і способи протидії їй еволюціонують, постійно порушуючи баланс між конкуренцією і монополією, потребуючи нових способів регулювання монополій. Авторами досліджено еволюцію регулювання монополій: від точкових заборон антиконкурентних практик у стародавні часи до системного балансування конкурентного і державного механізмів регулювання монополій сьогодні. Усі підходи до регулювання монополій систематизовано у три групи: антимонопольне регулювання як контроль та протидія зловживанням домінівним становищем монополістом; пряме регулювання дозволених монополій, що охоплює ліцензування, цінове регулювання та регулювання доступу до ключового ресурсу; структурне реформування монопольних галузей та запровадження конкуренції при реалізації потенційно конкурентних видів діяльності за межами вузького місця у ланцюгу вартості – експлуатації ключового ресурсу дозволеної монополії.

regulation with the practice of such regulation within each approach illustrates the synergy of their joint application and opens up prospects for their exploitation not only for traditional forms of monopoly, but also for neo-monopolies that are emerged in the digital unregulated sector.

Keywords: competition, monopoly, antitrust regulation, key resource of a natural monopoly, access regulation, vertical unbundling.

Поєднання теоретичних засад державного регулювання монополій із практикою такого регулювання у межах кожного підходу ілюструє синергію їх спільного застосування та відкриває перспективи їх експлуатації не тільки для традиційних форм монополії, але й для неомонополій, які формуються у цифровому нерегульованому просторі.

Ключові слова: конкуренція, монополія, антимонопольне регулювання, ключовий ресурс природної монополії, регулювання доступу, вертикальне відокремлення.

JEL Classification: L40, L42, L43 L98.

Introduction

Despite the fact that monopolies were known to ancient societies and were described by the classics of political economy, such as Smith (1776), Ricardo (1817), Mill (1848), Marshall (1890), and others, their systemic regulation is quite young. It started with the Sherman Antitrust Act of 1890. Were there any attempts to regulate monopolies before that? Of course, there were. Among them are the Hammurabi Code of Laws (more than 2 thousands years BC), the Constitution of Zeno (483 BC), the Code of Julian Laws (50 years BC), Diocletian's Edict on Prices (301 AD), Justinian's Code (529 AD), the English Statute of Labourers (1351), etc. However, none of these attempts can be called systemic. They illustrate the struggle against certain manifestations of monopoly rather than monopoly itself.

The Sherman Act has a different nature. Having been drafted in the era of monopolies (at the turn of the nineteenth and twentieth centuries), when the latter no longer just abused their power within individual local markets but began to multiply their influence on a national scale, it was the first attempt to counter monopoly systematically, covering not only the scope of abuse, but also the ways of establishing a monopoly (Sherman Antitrust Act, 1890).

The Sherman Act was the starting shot for both legislative changes in a number of countries and the development of new economic theories that justified these changes and approaches to antitrust regulation. In the more than a hundred years since then, the "Structure-Conduct-Performance Paradigm", theories of market organization, contestable markets, market power, public welfare, efficiency, harm, economic regulation and regulatory capture, and a number of others have been developed, theoretically substantiated and empirically tested. They have formed the basics of antitrust regulation. Among their authors are Nobel Prize winners Stigler (1975), Tirole (1988), Williamson (1975), as well as no less eminent Bergson (1973), Baumol et al. (1982), Gilbert (2023), Woodcook (2023), Mason (1957), Robinson (1933), Rhoades (1985), Page (1980), Posner (1973), Hovenkamp (2024), Shapiro (2021), Davis and Schmalensee (2019), etc. In Ukraine, the problem of monopolies regulation was studied by Bazylevych (2005), Borovyk (2013), Abakumenko et al. (2017), Ihnatiuk (2010), Lagutin (2015), Mykhalchyshyn (2016), Umantsiv (2019), Fyliuk (2009), Yasko (2013). These authors mostly focused their research on certain areas of antitrust regulation, studying in depth certain phenomena of monopolistic behaviour through the prism of various theories mentioned above, as well as the corresponding regulatory practices. However, there is no evolutionary overview of conceptual approaches to monopoly regulation in the economic literature.

In this article, the authors' aim is to systematize the existing conceptual approaches to antitrust regulation, taking into account their evolutionary order and illustrating the interrelation of the theory and practice of antitrust regulation. The article is based on the hypothesis of a dialectical interrelation between the "first and second best" (in the categories of welfare economics and the Lipsey-Lancaster concept) in antitrust regulation, which constant interaction brings the maximizing of public welfare. In order to verify this, the article applies the content analysis of theoretical concepts of monopoly regulation and an empirical analysis of practices of antitrust regulation in retrospect and interconnection. They are the subject to comparative analysis and analytical grouping.

The first section of the article considers antitrust regulation as a component of the state's competition policy with a logical tendency to "first best" – ensuring conditions for competitive self-regulation. The second section reveals alternatives of ensuring the "second best" in cases where monopolistic market organization is prioritized from the standpoint of public welfare. The third section of the article illustrates a compromise between the "first and second best" in monopolized industries on the basis of their structural reorganization. The conclusions summarize the results of the analysis, summarizing the conceptual framework of monopoly regulation and identifying the prospects for regulating monopoly and neo-monopoly.

1. Antitrust regulation as a component of competition policy

The era of monopolies at the turn of the XIX–XX centuries grew out of the era of pure competition of the previous period, which logically led to the idealization of the market mechanism, recently described by Smith (1776). The market mechanism as the "first best" was recognized as the ideal one to be strived for in antitrust regulation, and the regulation itself involved the use of rather harsh tools – up to the destruction of monopolies. An example of the latter is the 1911 split of Standard Oil into 34 independent companies, including ExxonMobil and Chevron (Standard Oil Co. of New Jersey v. United States, 1911). A similar fate befell AT&T in 1982, which was divided into seven independent "Baby Bells" (United States v. AT&T, 1982). However, we should pay tribute to the American regulator, which managed to maintain a balance between competition protection and freedom of enterprise. Neither a hundred years ago nor now, a monopoly was and is not considered an a priori violation, only anticompetitive practices of the monopolist are.

In the 1930s, the Structure-Conduct-Performance Paradigm developped by Harvard Business School economists (Bain, 1956, p. 9–11) was introduced and became the basis of antitrust regulation for many years. The paradigm substantiated the relationship between market structure, conduct of market players and market consequences of their business, effectively untying the hands of small companies and requiring caution in behaviour from large ones. Those firms whose market share exceeds 35/40/60% (depending on the limit set by national legislation), are subject to a number of behavioural restrictions:

- prohibition of imposing unfair purchase or selling prices or other unfair trading conditions;
- prohibition of limiting production, markets or technical development, refusal to purchase/sell goods in the absence of alternative sources of sale/purchase;
- prohibition of price discrimination or price personalization;
- prohibition of making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts;
- prohibition of erecting barriers to market access (exit from the market) or elimination of sellers, buyers, other business entities, etc. (Consolidated version of the Treaty on the Functioning of the European Union, Art. 102, 2012; Sherman Antitrust Act, sec. 3, 1890; Clayton Antitrust Act, sec. 2, 1914; Law of Ukraine "On Protection of Economic Competition", Art. 13, 2001).

Thus, antitrust regulation as an element of competition policy has for many years been characterized by control over the activities of significant market participants to ensure that their actions or inactions comply with the established requirements and to bring them to liability in case of non-compliance, ranging from fines to split, as per the Standard Oil model.

It is obvious that in the almost one hundred years since then, the tools for determining the dominant position as a source of market power of a monopolist, as well as the list of prohibited practices, have been significantly improved. The latter, for example, have been supplemented by the prohibition of self-preferences, blocking of multihoming, etc. (Digital Markets Act, 2022). However, the conceptual approach to regulating a monopoly in a potentially competitive environment has not changed. Another matter is the regulation of natural monopolies or other markets, the monopolistic organization of which is a priority for society compared to a competitive one, whether due to the appropriate balance of demand and costs, or due to national security, social protection, etc.

2. Regulation of permitted monopolies

Tollison and Wagner (1991, p. 483), describing traditional approaches to the regulation of permitted monopolies on the example of natural monopolies, wrote: "there are three options for dealing with a natural monopoly: (1) leave it along and accept the monopoly outcome, (2) regulate it to bring about the competitive outcome, or (3) bring it under public ownership as an alternative way of attaining competitive outcome". Obviously, the first of the proposed options is unacceptable, while the last two are actually aimed at the same thing – ensuring competitive outcome despite the monopolistic market structure. The only difference is in the way it is achieved.

State ownership as a solution to the problem of natural, administrative or any other permitted monopoly was widespread in European countries of the second half of the twentieth century and the USSR. In Ukraine, such naturally monopolistic industries as railroad transportation, water supply and sewerage are still in state / municipal ownership. Meanwhile, the recognition of the lack of efficiency of the state as an owner is a proven fact, confirmed by a number of empirical studies (Bitros, 2003; Megginson & Netter, 2001; Goldeng et al., 2008; Arocena, & Oliveros, 2012; Gakhar & Phukon, 2018; Lazzarini et al., 2021), and Peltzman (1971) in the 1970s empirically proved that public and private monopolies produce the same result in terms of price, indicating the inefficiency of state ownership in solving the problem of natural monopoly. These factors became the main prerequisites for the large-scale privatization of state monopolies in Europe in the late twentieth century, launched by M. Thatcher. However, privatization did not mean choosing the first option proposed by Tollison and Wagner (1991), but rather the second one. Along with large-scale privatization, a large-scale reform of state regulation of natural and similar monopolies began.

Since traditional microeconomic theory defines the competitive outcome (as the aim of state regulation of monopoly) through the parameters of price and output, it is logical that monopoly regulation has long focused on the price segment, having developed a wide range of price regulation methods. Among them:

- *marginal cost regulation*, which ensures maximum approximation to the stated aim of regulation by setting the monopolist's prices at the level of marginal costs. This method ensures allocative efficiency, but does not meet the requirements of X-efficiency, because for a natural monopoly operating on the downward sloping curve of long-run average costs, average costs are usually higher than marginal costs, which means that the regulated price does not cover average costs, requiring subsidization of natural monopoly activities;
- *average cost regulation*, which provides for the coverage of costs and normal profit by deviating from the competitive equilibrium. It is implemented in models of price cap regulation, regulation of profit margins, Ramsey pricing, nonlinear pricing and through application of multi-part tariffs;

• *incentive regulation*, which provides not only for short-term coverage of average costs, but also for creating incentives to reduce them in the long-run by allowing the monopolist to withdraw the savings in a pre-agreed proportion and during the regulatory period (RPI-X and RAB-regulation).

The more revolutionary consequence of the late twentieth century reform was the introduction of *the regulation of access to the key resource of a monopoly* (e.g., a naturally monopolistic network). It is about ensuring the right of independent participants in adjacent markets to use the monopolist's facilities to carry out their own business activities, preventing the leverage of monopoly power between markets.

Seemingly a fairly straightforward legal task, access regulation is actually a complex procedure that includes determining the list of networks and the range of business entities subject to regulation, regulating the range of adjacent services, determining the capacity of the monopoly network, establishing the procedure for servicing users in case of insufficient capacity, etc. The latter in the open access model can be realized in accordance with different concepts: third-party access or public carrier. The former means the monopolist's obligation to provide access to the key resource at the request of a third party only if there is free (unallocated) capacity. The second means the redistribution of the key resource (network capacity) among participants of the adjacent market in proportion to the volume of services provided by them when a new player is connected (Borovyk, 2013, p. 85). The former meets the parameters of X-efficiency, but in the face of a shortage of a key resource, it breaches the parameters of allocative efficiency. The latter, on the contrary, is focused on ensuring allocative efficiency, destroying the foundations of X-efficiency and complicating the planning and implementation of economic activities, giving rise to the risk of non-fulfilment of contracts. It is not difficult to guess that this balance of advantages and disadvantages is increasingly tipping the regulatory scales in favour of the first concept. The institution of short-term access to a naturally monopolistic market (to a key resource), obtained through a competitive process, such as daily, weekly or monthly auctions, is commonly used as a safeguard against the perpetuation of unfair allocation of network capacity.

Finally, the traditional tool for regulating monopolies is *licensing of monopolistic activities*. It is not innovative, but it cannot be omitted from the analysis. Its task is to assess the capacity and ability of a potential licensee to operate in a monopolistic market, guaranteeing the proper level of quality of the monopolistic service and the development of the network as a key resource, and to ensure control over the fulfilment of licensing requirements. And while this tool has not changed much functionally over time, the list of control points has expanded significantly, covering not only basic quality parameters, such as a list of gas/water/electricity supply quality indicators, the procedure and amount of compensation for non-compliance, but also business reputation, parameters of the regulatory compliance program, standard technical requirements for grid connection, etc (Resolution of NCREPU No. 1388, 2017, November 9; Resolution of NCREPU No. 201, 2017, February 16; Resolution of NCREPU No. 307, 2017, March 22).

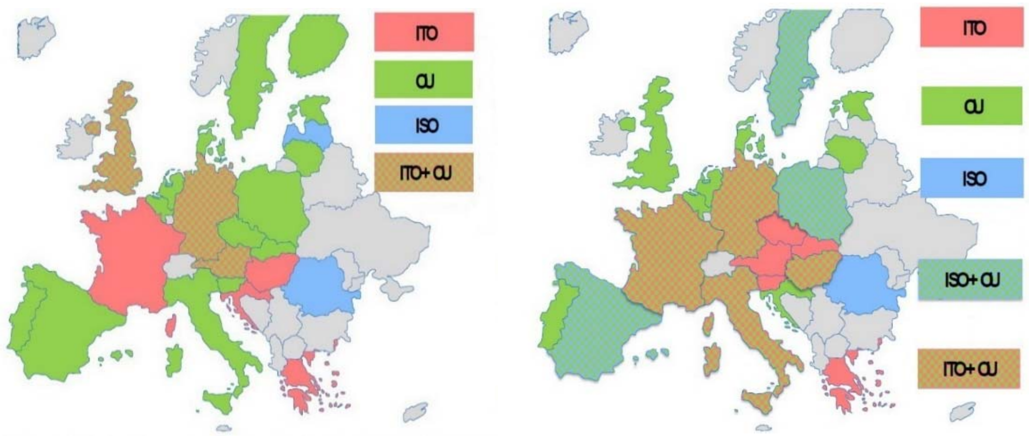
3. Introduction of competition in naturally monopolistic industries

Until the end of the 1960s, the introduction of competition in the natural monopoly industries was considered an oxymoron, until Demsetz in his article Why regulate utilities? (1968) substantiated the feasibility of using a competitive mechanism for the struggle for the status of a natural monopoly. His idea was to introduce auctions for the right to operate in the field of natural monopoly for a predetermined period of time (the so-called franchise bidding). The bidding instrument is not the price of a conditional patent or license that confirms such a right, but the price of a service of a future natural monopoly. The winner is not the one who offers the highest price, but the one who offers the lowest one. Thus, competition at the entrance to a naturally monopolistic industry/market or the so-called competition for the market (Demsetz competition) is a substitute for competition within a naturally monopolistic industry/market, performing the same function that was assigned to state regulation in the face of market failure due to economies of scale – ensuring competitive equilibrium. Of course, there are still risks of bid rigging, reduced incentives to develop a key resource, manipulation of the quality of the service of natural monopoly, etc., but it should be noted that the Demsetz approach is now actively used by independent regulators as an element of the system of state regulation of natural monopolies.

Demsetz's role in the evolution of approaches to state regulation of natural monopolies is not limited to the mentioned above. His breakthrough study was the trigger for criticizing the theory of natural monopoly, the foundations of which have remained unchanged since the time of Mill (1849), while scientific and technological progress has significantly changed the relationship between demand and costs in the public utility sector as a typical natural monopoly. The logical outcome of this criticism was a rethinking of the integrity of the natural monopoly industry. It has become increasingly clear that not all natural monopoly industries, whether in the electricity, gas or railroad sectors, meet the requirements of the natural monopoly and require state protection. Usually, such industries have a bottleneck – a transmission network or a network of railways, which is a key resource of a naturally monopolistic industry, while electricity generation, gas production, their sale on wholesale and/or retail energy markets, as well as rail transporttation could easily be realized on a competitive basis. This means that it is possible to reduce the extent of substitution of "first best" for "second best" by limiting imperfect state regulation to those markets where it is strictly necessary, while other markets in the industry can operate competitively.

The US Congress was the first to listen to these arguments, and by adopting the Energy Policy Act (1992), it launched an era of liberalization of the traditionally naturally monopolistic energy sector on the basis of introducing competition and vertical unbundling. In 1996, a similar reform was launched in the EU, implemented successively in the first three EU energy packages (1998, 2003 and 2009) (EU's Internal Energy Market, 2024), which resulted in the natural monopoly of the transmission and distribution of electricity and gas, while other activities in the industry were fully liberalized and implemented on the basis of competition.

Different European countries have chosen different ways to implement the third energy package. Belgium, Denmark, Estonia, Lithuania, the Netherlands, Portugal, etc. (*Figure*) chose the most stringent liberalization option – ownership unbundling (OU-model), which required previously vertically integrated energy companies to completely alienate their gas and electricity networks. Moreover, no supply or production company is allowed to hold a majority stake in or interfere with the operation of an electricity transmission operator or gas transmission system operator (The Third Energy Package, 2009).



a) electric power industry *b) gas sector*

Models of vertical unbundling in the EU energy sector

Sourse: (CEER, 2016, p. 14–15).

Romania chose the Independent System Operator (ISO) model, according to which energy supply companies retain formal ownership of gas or electricity transmission networks, but must outsource the operation, maintenance and investment in network development to an independent company. France, Greece, Hungary, and Croatia in the electricity sector and Austria, Greece, Slovakia, Slovenia, and the Czech Republic in the gas sector have chosen the Independent Transmission Operator (ITO) model, according to which the energy supply companies can still own and operate the gas or electricity networks, but must do so through a subsidiary. All important decisions must be made independently of the parent company (CEER, 2016).

Equally popular is the combination of several models within a country. For example, Ukraine has a mixed model, where gas and electricity transmission functions are done by independent operators at the trunk level according to the OU-model, and at the distribution level – according to the ITO-model (The Law of Ukraine "On the Electricity Market", Art. 25, 2017; The Law of Ukraine "On the Natural Gas Market", Art. 23, 2015).

The models are different, but the essence is the same: to minimize state regulation under the approaches described in the second section of the article to an extremely limited list of truly naturally monopolistic markets, while maximizing the exemption of potentially competitive markets from state regulation and restoring the competitive mechanism to them.

Conclusions

Summarizing the described evolution, we can state the dialectical interrelation between not only competition and monopoly, but also competitive and state mechanisms of market regulation to prevent monopoly and loss of public welfare. None of the above regulatory approaches contradicts the others. On the contrary, they ensure synergy of their implementation in modern mixed economies: in a limited number of bottlenecks of the national economy, where monopoly organization is more beneficial for society than competitive one, the regulatory approaches described in Section 2 should be applied, and competition should be developed in the rest of the markets, both by controlling abuse and reducing incentives for monopolization, and by structural reforms of highly concentrated industries. This includes not only the natural monopolies used as a model in the article above, but also the neo-monopolies that are growing in the digital space. Google, Microsoft, Apple, Amazon, etc. are vertically integrated giants that have extended their monopoly far beyond the network effect bottlenecks and exploit it in a huge number of adjacent markets that could exist much more efficiently in a competitive environment, while for bottlenecks, there are always licensing, price regulation and access regulation.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Abakumenko, O., Gerasymenko, A., & Pugachevska, K. (2017). Reforming of the Infrastructure Branches of Economics according to Requirements Needed for European Integration. *Scientific bulletin of Polissia*, *4*(12), 1, 8–15.

Arocena, P., & Oliveros, D. (2012). The efficiency of state-owned and privatized firms: Does ownership make a difference? *International Journal of Production Economics*, *140*(1), 457–465.

Bain, J. S. (1956). *Barriers to New Competition*. Harvard Universiry Press.

Baumol, W. J., Panzar, J. C., & Willig, R. D. (1982). *Contestable Markets and the Theory of Industry Structure*. Marcourt Brace Jovanovich, New York.

Bazylevych, V. D., & Fyliuk, H. M. (2005). *Natural Monopolies: Theory and Practice of Regulation*. Znannia.

Базилевич, В. Д., & Филюк, Г. М. (2005). *Природні монополії: теорія і практика регулювання*. Знання.

Bergson, A. (1973). On monopoly welfare losses. *The American Economic Review*, *63*(5), 853–870.

Bitros, G. C. (2003). Firm ownership and economic efficiency. *The Icfai Journal of Managerial Economics*, 7–32.

Borovyk, I. I. (2013). *Regulation of Activities of Natural Monopoly Entities in Adjacent Markets* [PhD dissertation]. Kyiv National University of Trade and Economics.

Боровик Ю. І. (2013). *Регулювання діяльності суб'єктів природних монополій на суміжних ринках* [Дис. на здобуття наук. ступеня канд. екон. наук]. КНТЕУ.

CEER. (2016). *Status Review on the Implementation of Transmission System Operators Unbundling Provisions of the 3rd Energy Package*. C15-LTF-43-04. https://www.ceer.eu/documents/104400/-/-/a6a22f89-3202-4f8b-f9ed-adf705185c33

Clayton Antitrust Act. (1914). https://www.law.cornell.edu/wex/clayton_antitrust_act

Consolidated version of the Treaty on the Functioning of the European Union. (2012). https://eur-lex.europa.eu/LexUriServ/LexUriServ. do?uri=CELEX:12012E/TXT:en:PDF

Demsetz, H. (1968). Why Regulate Utilities? *Journal of Law and Economics*, *11*(1), 55–65.

Digital Markets Act. (2022). https://digital-markets-act.ec.europa.eu/index_en

Energy Policy Act. (1992). https://www.congress.gov/ bill/102nd-congress/house-bill/776

Evans, D. S., & Schmalensee, R. (2019). *Antitrust Analysis of Platform Markets: Why the Supreme Court Got it Right in American Express*. Competition Policy International.

Fyliuk, H. (2009) *Competition and monopoly in the era of globalization*. ZSU I. Franka.

Филюк Г. (2009). *Конкуренція і монополія в епоху глобалізації*. ЖДУ ім. І. Франка.

Gakhar, D. V., & Phukon, A. (2018). From welfare to wealth creation: A review of the literature on privatization of state-owned enterprises. *International Journal of Public Sector Management*, *31*(2), 265–286.

Gilbert, R. J. (2023). Antitrust reform: An economic perspective. *Annual Review of Economics*, (15), 151–175.

Goldeng, E., Grünfeld, L., & Benito, G. (2008) The Performance Differential between Private and State Owned Enterprises: The Roles of Ownership, Management and Market Structure. *Journal of Management Studies*, (45), 1244–1273.

Hovenkamp, H. (2024). *Antitrust's Place in Regulation*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4841731

Ihnatiuk, A. I. (2010). *Sectoral Markets: Theory, Practice, and Regulatory Directions*. National Scientific Center Institute of Agrarian Economics.

Ігнатюк А. І. (2010) *Галузеві ринки: теорія, практика, напрями регулювання*. ННЦ ІАЕ.

Internal Energy Market. (2024). https://www.europarl.europa.eu/ftu/pdf/en/FTU_2.1.9.pdf

Lagutin, V. (2015). Monopoly and Competition Policy: Political and Economic Problems. *Economic Theory*, (4), 89–97.

Лагутін, В. (2015). Монополія та конкурентна політика: політико-економічні проблеми. *Економічна теорія*, (4), 89–97.

Law of Ukraine "On Protection of Economic Competition" (2001). https://zakon.rada.gov.ua/laws/show/2210-14#Text

Закон України «Про зазхист економічної конкуренції» (2001). https://zakon.rada.gov.ua/laws/ show/2210-14#Text

Law of Ukraine "On the Electricity Market" (2017). https://zakon.rada.gov.ua/laws/show/2019-19#Text

Закон України "Про ринок електичної енергії" (2017). https://zakon.rada.gov.ua/laws/show/2019-19#Text

Law of Ukraine "On the Natural Gas Market" (2017). https://zakon.rada.gov.ua/laws/show/329-19#Text

Закон України "Про ринок природного газу" (2017). https://zakon.rada.gov.ua/laws/show/329-19#Text

Lazzarini, S. G., Mesquita, L. F., Monteiro, F., & Musacchio, A. (2021). Leviathan as an inventor: An extended agency model of state-owned versus private firm invention in emerging and developed economies. *Journal of International Business Studies*, *52*(4), 560–594.

Marshall, A. (1890). *The Principles of Economics.* History of Economic Thought Books. McMaster University Archive for the History of Economic Thought.

Mason, E. S. (1957). *Economic Concentration and the Monopoly Problem*. Harvard University Press.

Megginson, W. L, & Netter, J. M. (2001). From State to Market: A Survey of Empirical Studies on Privatization, *Journal of Economic Literature*, *39*(2), 321–389.

Mikhalchyshyn, N. (2016). Competition policy in Ukraine: problems of implementation and directions of their solution. In *Modern mechanisms of implementation of the competition policy of Ukraine in the conditions of globalization* (pp. 68–70). Kyiv.	Михальчишин, Н. (2016). Конкурентна політика в Україні: проблеми реалізації та напрями їх вирішення. У *Сучасні механізми реалізації конкурентної політики України в умовах глобалізації* (с. 68–70). Київ.

Mill, J. S. (1849). *Principles of political economy with some of their applications to social philosophy*. In two volumes. 2nd ed. John W. Parker, West Strand.

NEURC Resolution No. 1388 "On Approval of the Licensing Conditions for Conducting Business Activities in Electricity Transmission" (2017, November 9). https://zakon.rada.gov.ua/laws/show/v1388874-17#Text	Постанова НКРЕП № 1388 "Про затвердження Ліцензійних умов провадження господарської діяльності з передачі електричної енергії" (2017, 9 листопада). https://zakon.rada.gov.ua/laws/show/v1388874-17#Text
NEURC Resolution No. 201 "On Approval of the License Terms for Conducting Business Activities in the Natural Gas Market" (2017, February 16). https://zakon.rada.gov.ua/laws/show/v0201874-17#Text	Постанова НКРЕП № 201 "Про затвердження Ліцензійних умов провадження господарської діяльності на ринку природного газу" (2017, 16 лютого). https://zakon.rada.gov.ua/laws/show/v0201874-17#Text
NEURC Resolution No. 307 "On Approval of the Licensing Conditions for Conducting Business Activities in Centralized Water Supply and Centralized Wastewater Disposal" (2017, March 22). https://zakon.rada.gov.ua/laws/show/v0307874-17#Text	Постанова НКРЕП № 307 "Про затвердження Ліцензійних умов провадження господарської діяльності з централізованого водопостачання та централізованого водовідведення" (2017, 22 березня). https://zakon.rada.gov.ua/laws/show/v0307874-17#Text

Page, W. H. (1980). Antitrust Damages and Economic Efficiency: An Approach to Antitrust Injury. *University of Chicago Law Review*, *47*(3), Art. 3.

Peltzman, S. (1971). Pricing in Public and Private Enterprises: Electric Utilities in the United States. *Journal of Law and Economics*, *14*(1), 109–47.

Posner, R. A. (1973). *Economic Analysis of Law.* Little, Brown and Company.

Rhoades, S. A. (1985). Market share as a source of market power: Implications and some evidence. *Journal of Economics and Business*, *37*(4), 343–363.

Ricardo, D. (1817). *On the Principles of Political Economy and Taxation*. John Murray.

Robinson, J. (1933). *The Economics of Imperfect Competition*. Macmillan.

Shapiro, C. (2021). *Antitrust: What went wrong and how to fix it.* https://api.semanticscholar.org/CorpusID:237300655

Sherman Antitrust Act, 15 U. S. C. § 1–7. (1890). https://www.archives.gov/milestonedocuments/sherman-anti-trust-act

Smith, A. (1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*. In R. H. Campbell, &

Skinner, A S. (Ed.). *The Glasgow Edition of the Works and Correspondence of Adam Smith* (Vol. II). Oxford University Press.

Standard Oil Co. of New Jersey v. United States. (1911). https://www.law.cornell.edu/wex/standard_oil_co_of_new_jersey_v_united_states_(1911)

Stigler, G. J. (1975). *The Citizen and the State: Essays on Regulation*. University of Chicago Press.

The Third Energy Package. (2009). https://energy.ec.europa.eu/topics/markets-and-consumers/market-legislation/third-energy-package_en

Tirole, J. (1988). *The Theory of Industrial Organization*. MIT Press.

Tollison, R. D., & Wagner, R. E. (1991). The Logic of Natural Monopoly Regulation. *Eastern Economic Journal*, *17*(4), 483–490.

Umantsiv, Y., & Zolina, D. (2020) State competition policy under global transformations. *Scientific Bulletin of Uzhhorod University, Series "Economics"*, *2*(56), 52–61.

Уманців, Ю., & Золіна, Д. (2020). Конкурентна політика держави за умов глобальних трансформацій. *Науковий вісник Ужгородського університету. Серія "Економіка"*, *2*(56), 52–61.

United States v. AT&T (1982). https://law.justia.com/cases/federal/district-courts/FSupp/552/131/1525975/

Williamson, O. E. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications*. Free Press.

Woodcock, R. A. (2022). Technology, monopoly, and antitrust from a historical perspective. *Research Handbook on Law and Technology*, 142–159. Edward Elgar Publishing.

Yasko, Y. (2013). Competition policy as a form of state regulation of the economy. *Formation of market relations in Ukraine*, (3), 38–42. SRIIME.

Ясько, Ю. (2013). Конкурентна політика як форма державного регулювання економіки. *Формування ринкових відносин в Україні*, (3), 38–42. ДІНДІІМЕ.

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DETERMINANTS OF LABOR MARKET RESILIENCE

It is noted that the resilience of the labor market is an important category of social and economic development in conditions of permanent shocks and uncertainty. Global challenges, the unpredictability of cyclical fluctuations of the economy, information asymmetry of the market, the influence of behavioral factors often determine the dynamics and movement vectors of various types of markets, including the labor market, raising the question of strengthening its fundamental foundations and effective functioning despite numerical limitations and risks. Hence the need to study all the multifaceted factors and challenges to the functioning of the labor market and to substantiate on this basis the paradigm of resilience of the labor market in conditions of systemic uncertainty. It is substantiated that the determinants of the labor market resilience are cyclical and structural factors that determine the ability of the labor market to avoid, withstand or recover from shock effects. Significant demographic changes in the number, gender-age composition of the population, changes in technological patterns, and introduction of technological innovations, often repeated cyclical economic downturns; military and political conflicts change the sphere of employment of the population in various countries of the world and demonstrate the general internal

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ДЕТЕРМІНАНТИ СТІЙКОСТІ РИНКУ ПРАЦІ

Стійкість ринку праці є важливою категорією соціально-економічного розвитку в умовах перманентних потрясінь та невизначеності. Глобальні виклики, непрогнозованість циклічних коливань економіки, інформаційна асиметрія ринку, вплив чинників поведінкового характеру часто визначають динаміку та вектори розвитку зокрема і ринку праці, ставлячи питання про посилення його фундаментальних основ та ефективне функціонування, попри чисельні обмеження і ризики. Звідси й випливає потреба у дослідженні усієї багатоманітності факторів та викликів функціонуванню ринку праці й обґрунтування на цій основі парадигми стійкості ринку праці в умовах системної невизначеності. Детермінантами стійкості ринку праці є циклічні та структурні чинники, які визначають здатність ринку праці уникнути, витримати або відновитися від шокових впливів. Істотні демографічні зміни в чисельності, статево-віковому складі населення, зміна технологічних укладів, впровадження інновацій, часто повторювані циклічні спади економіки, військово-політичні конфлікти змінюють сферу зайнятості населення у різних країнах світу та демонструють загальну внутрішню чутливість ринку праці до шокових впливів.

sensitivity of the labor market to shock effects. It is emphasized that the task of the state and business is to ensure macroeconomic stability, develop human capital, social protection of the population, increase the level of employment, stable and predictable economic growth, and promote the flexibility of the labor market through the development of various forms of employment, such as remote or part-time. As a result, a favorable market environment will serve as an indicator of the development of innovations, the successful functioning of small and medium-sized enterprises, which will form innovative workplaces in the future and increase the resilience of the labor market as a whole.

Keywords: labor market, resilience, unemployment, employment, Russian-Ukrainian war.

Завданням держави та бізнесу є забезпечення макроекономічної стабільності, розвиток людського капіталу, соціальний захист населення, підвищення рівня зайнятості, стабільне і прогнозоване економічне зростання, сприяння гнучкості ринку праці шляхом розвитку різних форм зайнятості, як-от дистанційна або часткова. Як наслідок – сприятливе ринкове середовище слугуватиме індикатором розвитку інновацій, успішного функціонування малих та середніх підприємств, які формуватимуть інноваційні робочі місця у майбутньому та підвищуватимуть стійкість ринку праці в цілому.

Ключові слова: ринок праці, стійкість, безробіття, зайнятість, російсько-українська війна.

JEL Classification: E24, J21, J60, J68.

Introduction

Conditions of global instability, including financial and economic crises, political and military conflicts, pandemics and other force majeure circumstances, have a significant impact on labor markets, creating new challenges for employers, employees and public institutions.

Ukrainian and foreign scientists are actively studying the issue of ensuring the resilience of labor markets in various countries. A study by Martínez et al. (2023) is devoted to the financial crisis that hit the world economy in 2008 and negatively affected the entire spectrum of European economies, in particular, causing a drop in economic activity, as well as a deterioration in labor market indicators. The analysis by researchers of the labor markets of European countries reveals the existence of certain factors related to its resilience, including economic, social, professional, demographic and political, despite the varying degree of intensity of influence of these factors on European markets and the existence of territorial differences in their functioning.

The work of Mustra et al. (2020) concerns the relationship between regional innovation performance and labor force resilience among EU regions after the Great Economic Crisis. The scientists came to a conclusion about the differentiated effect of innovative influence on different phases of economic sustainability. The authors' approach is based on the heterogeneous trajectory of resilience across EU regions, providing evidence that a regionally tailored innovation approach embedded in a smart specialization strategy is a key to achieving a more resilient workforce.

Diodato & Weterings (2015) investigate the determinants of the resilience of regional labor markets to economic shocks; namely, the localization of the supply network is used to model shock propagation, the possibility of inter-industry and inter-regional labor mobility to analyze post-shock recovery. The authors emphasize that labor markets in central and service-oriented regions have, on average, a higher recovery rate, regardless of the type of shock that affected the economy.

The overall positive impact of cohesion policy in supporting the resilience of European regional labor markets during economic shocks and the presence of regional differences in the resilience of regional labor markets over the past three decades are also a debated topic among scholars (Caro & Fratesi, 2022).

Hijzeni et al. (2017) argue that labor market resilience is crucially dependent on macroeconomic and labor market policies. Macroeconomic policy should be based on limiting the reduction of employment during economic downturns and preventing cyclical unemployment from transforming into structural unemployment. The authors mostly focus on active labor market policies that would respond decisively to limit cyclical unemployment. Instead, excessive employment protection for casual workers reduces resilience by promoting the use of temporary contracts and slowing job creation in the recovery process. According to the authors, the determinants of the resilience of the labor market are coordinated systems of collective bargaining, which contribute to resilience by facilitating the processes of adjusting wages and working hours.

Stimulation of inclusiveness in regional labor markets, namely: the factor of territorial location of the labor market, fundamental changes in the very concept of labor and strengthening of the efficiency of regional management, are recommended to be considered as determinants of the resilience of the labor market (Dijk & Edzes, 2016).

Employment is a factor contributing to the resilience of the labor market. Full-time employment has the strongest effect on resilience, while other employment categories such as self-employment, part-time employment and unemployment have about half the effect. This finding is an important dimension for policymakers to consider, not only in creating macroeconomic conditions conducive to sustainable employment, but also in considering how workplaces can better prepare workers to deal with adverse events (GALLUP, 2024).

Groups of factors that determine the resilience of the labor market are also studied by Ukrainian scientists, such as Blyzniuk & Yatsenko (2023), focusing on economic, social, political, demographic, institutional and technological factors. In their opinion, ensuring the resilience of the labor market requires a complex mechanism of state regulation as a system of levers of influence of an organizational, economic, administrative (normative) and psychological nature. The action of such levers is aimed at balancing supply and demand in the labor market, coordinating the interests of the leading participants in the production process, and mitigating the consequences of unemployment.

Therefore, although many problematic aspects regarding the nature of the resilience of the labor market have already been revealed in the special scientific literature, the issue of determining and evaluating the determinants affecting the resilience of the labor market in Ukraine and the EU, especially during armed conflicts, pandemics, financial instability, large-scale migration processes, needs further attention of scientists. This has become the focus of this research.

The hypothesis of the article is that the level of resilience of the labor market is determined by structural and cyclical determinants, which are ensured by measures of macroeconomic stability, increasing the level of employment, development of human capital, flexibility of the labor market, social protection, development of technologies and innovations, regulation of labor migration.

The aim of the article is to determine the key factors and directions for ensuring the resilience of the labor market in conditions of shock effects.

To achieve the aim of the research, a complex of general scientific and special methods was used: the method of theoretical generalization is to reveal the content of the concept of resilience of the labor market; methods of system analysis and systematization are to identify key global challenges that determine trends in labor market development; statistical method and grouping method are for analyzing the level of resilience of the labor markets of EU countries and Ukraine; the method of scientific abstraction is for substantiating directions for ensuring the resilience of the labor market and conclusions to the conducted research.

The structure of the article is as follows: first, the trends and key challenges of the labor market in conditions of global instability are analyzed; then the level of resilience of the labor markets of EU countries and Ukraine is assessed according to cyclical and structural factors; at the end, directions and measures to ensure the resilience of the labor market are highlighted.

1. Trends and challenges of the labor market in conditions of global instability

In the process of global transformations of the economy, the labor market reacts sensitively and undergoes rapid changes both in its structure and in development priorities. Profound demographic changes, military-political conflicts, and the introduction of technological innovations are changing the spheres of employment of the population of various countries around the world. Countries that managed to realize these trends in advance and adapt to the challenges of the times can not only solve the pressing problems of the labor market with fewer losses, but also provide a stable basis for increasing labor productivity, improving the quality of life of the population, and increasing the efficiency of the national economy in general (Kolot & Gerasimenko, 2020). In the social and economic development of any country, the labor market is almost the most sensitive to changes in the market situation, which is manifested in a quick reaction to manifestations of macroeconomic instability, economic turbulence and challenges of a global nature (*Table 1*).

Table 1

Global challenges of labor markets

Challenges	Consequences
The COVID-19 pandemic	Immediately after the start of the pandemic, many enterprises were forced to stop their activities due to quarantine measures, which led to a significant increase in the unemployment rate. Industries related to tourism, hotel and restaurant business, entertainment and transport were particularly affected. The popularity of flexible work schedules and temporary contracts has increased, which has enabled enterprises to adapt to unstable conditions. The demand for specialists in the field of information technology, logistics, online education and e-commerce has increased
Demographic crisis	The decline in the number of young people leads to a reduction in the size of the working population, which creates labor shortages in many sectors of the economy, especially those that require manual labor or specialized skills. An aging population means that there will be more retirees in need of pension benefits and medical services. This increases the burden on country budgets and social systems financed by taxes on working citizens
Russian-Ukrainian war	Millions of Ukrainians were forced to leave their homes because of the war and seek refuge in European countries. This has led to increased competition in the labor market in refugee-hosting countries. European countries face the challenges of integrating a large number of Ukrainian refugees into their labor markets, which requires additional efforts in the field of training, retraining and social support
Migration crisis	The migration crisis, which became particularly acute after 2015, when refugees from the Middle East, Africa and Asia started arriving in Europe, had a complex impact on European labor markets. The arrival of large numbers of migrants has boosted the working-age population in many European countries, reducing labor shortages, particularly in sectors that have experienced worker shortages such as construction, agriculture, aged care and low-wage services. European countries are increasingly turning to immigration as a way to replenish their workforce. This has both positive effects (reducing labor shortages) and challenges (social integration of migrants)

Source: compiled by the authors.

In the social and economic reality of the 21st century, under the influence of various factors, the labor market acquires a new meaning with its inherent challenges and opportunities. In particular, the COVID-19 pandemic dealt a devastating blow to the economy and the labor sphere in Ukraine and the world, causing triple social and economic consequences and having a significant impact on economic growth in the future.

The first is a supply shock. The bodies of legislative and executive power and local self-government administratively suspended the economic and entrepreneurial activity of a number of sectors of the economy, including tourism, public catering, transport, the sports and entertainment industry. The second is a demand shock. We are talking about the fact that the incomes of economic entities related to the sectors of the economy, the activities of which are suspended, prohibited or limited, have sharply decreased. Thus, the vast majority of households have limited spending due to lower incomes, worsening consumer sentiment and the unpredictability of their future. Household consumption was concentrated primarily on basic necessities. The demand for other goods decreased sharply, which had a negative impact on all spheres of economic activity. The third is the shock of international trade. Restrictions on the free movement of goods and personnel, a significant reduction in migration flows, and tourist trips have led to the disruption of global logistics chains, a shortage of intermediate goods from countries that have suffered the greatest losses associated with the COVID-19 pandemic. This brought significant changes to all components of the global and national labor markets and, as a result, affected the demand, supply and price of labor services (Kolot & Gerasimenko, 2020).

Among the modern trends of a demographic nature that have a manifestation at the global level, the most significant are: a reduction in the rate of population growth, an increase in the average age of the population, a decrease in the share of children and young people in the general structure of the population, an increase in the share of older age groups, an increase in the demographic burden on working people , decrease in the number of able-bodied persons, intensification of migration processes, increase in the share of working pensioners among the labor force. It follows from this that the socio-labor vector of the development of the global labor market in the first decades of the 21st century. is formed taking into account the reduction in the number of young people, the growth among working people of older age, the decrease in the number of working people who are of working age, and the increase in the number of employed persons working pensioners.

EU member states face various demographic challenges. For EU citizens, the most urgent demographic problems are the aging of the population and the reduction of the working-age population and the labor shortage. EU citizens agree that current demographic trends threaten the long-term economic prosperity and competitiveness of the EU and cause labor shortages. Accordingly, 85% of respondents agree that managing demographic change requires close cooperation between all relevant levels of government (EU, national, regional and local authorities) (European Commission, 2023).

Changes in the number and structure of the country's population play a significant role in determining the scale of national production. Demographic resilience is closely related to the efforts of the governments of countries to concentrate on their territory the necessary number of qualified workers for the implementation of national macroeconomic strategies, preserving the usual living conditions for citizens and established communication (Nikolaiets et al., 2023).

In the EU countries, in particular Poland, Hungary, Slovakia, and the Czech Republic, the level of demographic resilience shows generally average values and ranges from 60 to 67% (Shkuropadska et al., 2024). This result is largely influenced by natural demographic processes, in particular, the increase in average life expectancy and the "aging" of the population, which is characterized by an increase in the share of elderly people in the general structure of the population.

In Ukraine, according to the Institute of Demography and Quality of Life Problems of the National Academy of Sciences of Ukraine, at the beginning of 2022, the population, taking into account the annexed Crimea and the temporarily occupied regions of Donetsk and Luhansk regions, amounted to 42 million people. Already at the beginning of 2024, this number has decreased to approximately 35 million. According to the IMF, in 2028, the population of Ukraine will be 36.1 million, while the Institute of Demography calls the number 33.1 million (Khludzynskyi, 2024). This number can be significantly adjusted taking into account demographic transformations under the influence of natural anthropogenic processes, as well as the duration of the Russian-Ukrainian war and its consequences.

The challenges and restrictions caused by the Russian-Ukrainian war for the world economy and the labor market are associated with social and economic destabilization, an increase in inflation and unemployment, the emergence of a food crisis, an increase in world prices for raw materials, and an increase in the migration crisis. The negative impact of the war in Ukraine is felt by many countries of the world, and the destructive effect will depend on its dynamics and duration. The most significant losses caused by the war are human losses, as well as economic problems that are felt far beyond the borders of Ukraine (Dijk & Edzes, 2016). Huge economic losses and a large-scale migration crisis became the main factors in the deterioration of the situation in the labor market of Ukraine. By the end of 2022, the country's GDP has decreased by more than 30%, the national currency has significantly depreciated, prices have risen, and the level of income of the population has fallen significantly. The result of the Russian Federation's full-scale aggression against Ukraine was the mass departure of Ukrainian citizens abroad due to threats to their personal safety. According to experts' estimates, during 2022, almost 8 million people left, almost 5 million became internally displaced persons. An important factor affecting the labor market and employment of the population was the introduction of martial law and general mobilization: the volume of hiring and movement of personnel changed, the shortage of workers of certain categories and groups on the labor market increased. Along with the migration processes, the mobilization directly affected the aggravation of the problem of the shortage of qualified personnel, technical workers, the shortage of which was observed in the labor market of Ukraine even before the full-scale invasion. The process of mobilization expanded the boundaries of informal employment due to the reluctance of some men to go to work and enter into labor agreements in order to avoid mobilization. Such circumstances, according to experts, to some extent supported small businesses in such areas of economic activity as construction, woodworking, and trade. In general, all these factors in a certain sense affect the supply of labor and change the trajectory of the development of the domestic labor market (Sudokov & Lisogor, 2023).

The migration crisis has become a controversial topic in the EU countries in the last decade. It influenced the holding of the Brexit referendum in 2016 and the exit of Great Britain from the European Union as a result. Thus, in 2015, 1.3 million people requested asylum in European countries due to the war in Syria and the seizure of power in certain regions of the country by the Islamic State group. The members of the EU presented different arguments on this issue. In particular, there were discussions about how many refugees each country could accept. Some EU countries expressed confidence that the community is obliged to accept as many refugees as possible, while others, on the contrary, considered it necessary to avoid these processes.

Thus, in 2023, more than 220,000 people applied for asylum in Germany – most of them from Syria, Afghanistan, Turkey, Moldova and Georgia – and about 240.000 people applied a year earlier. However, this number pales in comparison to the 1 million refugees who arrived in Germany in 2015–2016, most of whom were fleeing war and persecution in the Middle East and Afghanistan (Wesolowski, 2023). Since the beginning of the large-scale Russian invasion of Ukraine, more than 8 million Ukrainian refugees have been recorded in Europe, including those citizens who returned home or went to other countries of the world (Apostrof, 2023). The first burst of Ukrainian migration was caused by panic, the second and third by large-scale destruction of Ukrainian cities, as a result of which refugees lost their homes. As of March 3, 2022, one week after the Russian invasion, more than 1 million refugees (2.3% of Ukraine's population) have been forcibly resettled in European countries, including Poland, as well as Hungary, Moldova, and Slovakia. The largest number of Ukrainian refugees is in neighboring Poland – 1.577 million people, in Germany – 922.000, and in the Czech Republic – 502.000. Over 123.000 Ukrainian citizens received protection in Romania, 112.000 in Slovenia, over 173.000 in Italy, more than 171 thousand – in Spain and more than 191 thousand Ukrainians – in Great Britain (Nikolaets et al., 2023).

Despite the difficulties and uncertainty, Ukrainian migrants who arrived in the EU as a result of the Russian-Ukrainian war are adapting well compared to the experiences of other refugee groups. Thus, in 2023, in Poland, where a powerful Ukrainian community already lives, 71% of refugees from Ukraine found work, in Germany the employment rate among refugees was somewhat lower – 24% (Wesolowski, 2023). According to experts, if the Russian-Ukrainian war drags on, many Ukrainians who emigrated from Ukraine will be able to adapt well abroad, as a result of which many men will go abroad with their wives and children after the end of the war (Libanova, 2022). Employment rates for Ukrainians in EU countries are high due to the fact that they got access to the labor market from the first day of their arrival, many of them are highly qualified workers, while there was a labor shortage in the local labor market; in addition, migrants had the opportunity to rely on national communities that had already formed in many countries.

Therefore, modern global challenges not only shape the trajectory of the development of labor markets, but also affect their level of resilience, prompting to adapt to shocks and increase the efficiency of human resources management in order to ensure the resilience of economic systems.

2. Assessment of the resilience level of labor markets

The Global Labor Resilience Index is an annual publication of the international consulting company Whiteshield, which ranks 136 countries of the world according to the level of resilience of their labor markets. A stable labor market is defined as one that creates stable demand for a wide range of occupations and provides quality work. Resilience is defined in terms of the social and economic cost of economic downturns, that is, the ability of the economy to limit permanent deviations of production and labor market outcomes from pre-crisis trends after adverse cumulative shocks (Whiteshield, 2024). Labor market shocks are sudden and unexpected changes that significantly affect employment levels, wages, working conditions, and overall economic stability.

Resilient labor markets are inclusive, stable and able to withstand shocks due to their flexibility and adaptability. Labor market resilience can also be defined as the ability to avoid, withstand and recover from shocks, regardless of their nature. The structure of the labor market resilience index focuses on two determinants: structural and cyclical (*Figure*).

Structural, 33%	**Cyclical, 67%**
• Demography: the share of the population older than the working age • Country's capabilities: the economic complexity factor • Economic development and macroeconomic stability: GDP per capita; share of services in GDP; availability of natural resources; the amount of public debt • Trade vulnerability: export concentration index; diversification of the economy; balance of payments • Inequality: an indicator of income inequality of the population	• Absorptive capacity: support and protection of workers; employment level; promotion of the labor market; inclusiveness of youth; gender inclusiveness; health and well-being of the population • Adaptation possibilities: flexibility of labor policy; business regulation, access to financial regulation, quality of infrastructure, mechanisms of redistribution and flexibility, skills and adaptability of employees, entrepreneurial activity, access to loans • Transformative ability: regulation of the development of information and communication technologies, costs on R&D, protecting intellectual property rights, investing in the future workforce; penetration level of information and communication technologies; innovative environment; innovativeness of trade development; technology and digital economy; green transition ; innovative products ; level of education and qualifications of the future workforce • Institutional capacity: social capital, statistical potential, statistical completeness of the labor market stability index

Structural and cyclical factors (indicators) of the Global Labor Market resilience Index

Source: compiled by the authors from data (Whiteshield, 2024).

The structural component assesses a country's internal vulnerability or protective factors that may interact with shocks to further amplify or reduce their intensity. These factors tend to be more difficult to change in the short term and include, for example, demographics, levels of economic development and macroeconomic stability, country capabilities, trade vulnerability and social inequality.

The cyclical opportunity factor measures the strength of labor markets' response to shocks. The cyclical factor focuses more on how current policies can change the level of disorganization in a given labor market. The cyclical factor is divided into four subcategories of opportunities:

- absorption capacity is defined as the ability to contain shock impact and minimize damage to workplaces and workers;
- adaptive capacity is as the ability to quickly recover and create new jobs;
- transformative capacity is defined as the ability to adapt to future trends and transform long-term stresses into opportunities.

institutional capacity acts as an end-to-end factor that facilitates a sustainable response to all types of disruptions and at all stages of a crisis.

In the *Table 2* it is shown the data of the Global Labor Resilience Index for EU member states and Ukraine in 2024, based on which the overall rating by country and by structural and cyclical indicators was formed.

The Global Labor Resilience Index is measured on a scale from 0 to 100 points, according to which 5 levels are distinguished. A high level of resilience is measured between 80 and 100 points and indicates that countries have very strong labor markets with a high capacity for adaptation and transformation, strong institutions, high levels of innovation, stable economic conditions and effective political systems.

The level above average resistance is from 60 to 79 points. EU countries with this level of labor market resilience in 2024 include Denmark, the Netherlands, Germany, Sweden, Finland, Austria, Luxembourg, France, Belgium, Ireland, Estonia, the Czech Republic, Slovenia, Spain, Slovakia, Portugal, Poland, Lithuania, Hungary, Malta, Italy, Latvia, Cyprus, Croatia. These countries have developed labor markets that demonstrate the ability to respond effectively to shocks, good infrastructure and social protection systems, but may need improvement in some areas.

The average level of resilience of the labor market is measured from 40 to 59 points. In 2024, Romania, Bulgaria, Greece and Ukraine showed such a level of resilience among EU member states. They are characterized by a moderate ability to adapt to shocks. Their labor markets often face certain structural problems that slow down their recovery from crises.

Table 2

Global Labor Resilience Index of EU countries and Ukraine in 2024

Country	General rating (among 136 countries)	Points	Rank by structural indicators	Points	Rank by cyclical indicators	Points	Trend in 2019–2024
Denmark	2	78	2	76	2	79	+2
Netherlands	3	77	3	76	5	78	+6
Germany	5	77	1	77	6	77	+10
Sweden	6	75	5	75	8	76	0
Finland	7	75	22	70	4	78	–2
Austria	8	74	4	76	12	73	+10
Luxembourg	9	74	8	74	11	74	–1
France	11	72	13	73	13	72	+8
Belgium	12	72	12	73	14	72	0
Ireland	15	71	14	72	20	70	+6
Estonia	18	70	25	67	18	71	+6
The Czech Republic	19	70	10	73	23	68	+6
Slovenia	21	69	11	73	24	67	+8
Spain	23	67	24	67	26	67	+16
Slovakia	26	66	18	71	32	64	+4
Portugal	27	66	36	64	25	67	+5
Poland	29	65	17	71	34	62	+4
Lithuania	30	65	34	64	27	66	+4
Hungary	31	65	27	66	30	64	+9
Malta	32	64	39	63	28	65	+3
Italy	34	64	26	67	35	62	+7
Latvia	35	63	44	61	29	64	+3
Cyprus	37	62	54	59	31	64	0
Croatia	40	61	30	65	43	59	+24
Romania	41	59	38	63	47	58	+5
Bulgaria	42	59	55	59	42	59	+29
Greece	52	56	71	55	53	56	+14
Ukraine	55	55	50	60	57	53	–1

Source: compiled by the authors based on data from (Whiteshield, 2024).

The level below the average resistance is from 20 to 39 points. Countries with this level have weak institutions and economic conditions, which hinders the ability of their labor markets to adapt quickly. They have some problems with unemployment and insufficient social support.

Low level of resilience is from 0 to 19 points. Countries with this level of resilience are characterized by very weak labor markets that have virtually no capacity for effective adaptation and recovery. They have significant economic and political problems that hinder their development.

It is worth noting that the Global Labor Resilience Index was also calculated in 2019. The analysis of the dynamics of the index makes it possible to understand how the labor markets, in particular, reacted to the COVID-19 pandemic and the Russian-Ukrainian war. The best results during this period were achieved by Bulgaria (up 29 positions in the ranking), Croatia (+24 positions), Spain (+16), Greece (+14), Germany and Austria (+10).

Ukraine dropped from 54th to 55th place in the rating for 2019–2024. Russia's military aggression and related economic difficulties have significantly affected the labor market in Ukraine. However, the country is taking important steps in the direction of stabilizing the situation, which includes: improving social protection mechanisms for internally displaced persons; ensuring the gradual integration of people who moved from the temporarily occupied territories into the host communities; encouraging unemployed forced migrants of working age to get a job. Due to the significant outflow of the able-bodied population from the labor market, in particular to the ranks of the Armed Forces of Ukraine, territorial defense forces, volunteer organizations, there is a growing need for the most rational use of the workforce and ensuring a favorable level of adaptability of the able-bodied population to changes in the labor market, and this requires balanced state decisions (NISD, 2022).

3. Directions for ensuring the labor market resilience

The resilience of the labor market, under the influence of modern challenges and threats, lies in the plane of modification of relations between the state, the market and the business environment for the approval of a new format of interaction of these institutions in the paradigm of the new economy of the 21st century (Kolot & Herasymenko, 2017). This process includes the redistribution of roles and responsibilities between the participants of the triad, which contributes to increasing the efficiency of economic activity and ensuring stable macroeconomic development. So, the proposed directions for ensuring the resilience of the labor market in the *Table 3*, contain measures that take into account the triad "market – state – business".

The state is actively working to ensure macroeconomic stability, development of human capital and social protection, contributing to an increase in the level of employment and stable economic growth. The market is a catalyst for the development of innovations, supporting small and medium-sized enterprises that create new jobs. The business provides initiative and flexibility in the labor market by developing different forms of employment, such as telecommuting or part-time employment. In addition, the business actively influences the market adaptation of employees by providing training programs, training and retraining of personnel that meet the needs of the modern labor market. Interaction in the triad "market – state – business" is necessary to achieve a balance between social, economic and innovative aspects of development, which ensures the resilience of the labor market.

Table 3

Directions and measures to ensure the resilience of the labor market

Directions	Activities
Macroeconomic stability	Controlling inflation and maintaining a moderate interest rate
	A balanced fiscal policy that prevents large budget deficits
	Ensuring stable economic growth through stimulating investment and entrepreneurship
Increasing the level of employment	Active employment programs, including training and retraining
	Investment in infrastructure that creates new jobs
	Support for small and medium-sized businesses, which are a key source of jobs
Development of human capital	Ensuring access to quality education and training programs
	Developing the skills needed for the labor market, including digital and technical
	Vocational guidance and career counseling for young people and the unemployed
Flexibility of the labor market	Modernizing labor laws to ensure a balance between worker protection and flexibility for employers
	Promoting the development of various forms of employment, including remote work and part-time employment
	Encouraging entrepreneurship and self-employment
Social protection	Development of the social protection system to support the unemployed and low-income people
	Ensuring a minimum level of income and social benefits
	Protection of workers' rights, including occupational safety and health
Innovations and technological development	Stimulation of scientific research and development
	Integration of new technologies into production processes
	Support for startups and innovative companies
Regulation of labor migration	Creation of conditions for legal labor migration
	Integration of migrants in the labor market
	Protection of the rights of labor migrants

Source: compiled by the authors.

In September 2015, at the UN Summit on Sustainable Development within the framework of the 70th session of the UN General Assembly in New York, the global development goals until 2030 were defined. When formulating them, the specifics of national development of countries are taken into account. The following benchmarks have been defined for Ukraine in terms of the functioning of the labor market: provision of comprehensive and fair quality education and provision of lifelong learning opportunities for all categories of citizens; promoting progressive, inclusive and sustainable economic growth, full and effective employment and decent work for all; creation of sustainable infrastructure, promotion of comprehensive and sustainable industrialization and innovation (Decree of the President of Ukraine "On the Goals of Sustainable Development of Ukraine for the period until 2030", 2019, September 30).

The vectors of the transformation of the labor market, which in the future should contribute to the creation of a qualitatively new paradigm of its development in Ukraine and the world, should be:

- implementation of an innovative employment model based on the growth of the tertiary sector of the economy and innovative types of economic activity;
- improvement of regulatory support, organizational and information measures, social responsibility at all levels;
- increasing the level of competitiveness of workplaces and the use of a workforce with high professional competences;
- improvement of the collective agreement regulation regarding the provision of occupational safety and occupational health of personnel based on preventive principles;
- implementation by state bodies, trade unions and employers' organizations of specific practical means for developing joint decisions and reaching agreements based on the concept of decent work;
- improvement of income policy based on modernization of social standards;
- development of a social state model based on the formation of socio-economic prerequisites for a high level of quality of working life;
- in the field of corporate social responsibility, modernization of the policy on strengthening the professional resilience of employees, increasing the efficiency of interaction between companies and stakeholders.

In the conditions of martial law, the labor market of Ukraine needs significant financial support for further recovery and development. According to the Program of financial support of Ukraine from the European Union during 2024-2027, 50 billion euros will be directed to financing the state budget, stimulating investments, as well as technical support in its implementation. The program defines a number of reforms that, in particular, relate to the development of human capital, the sphere of employment and the labor market with the aim of returning citizens to Ukraine. For this you need:

- adopting a new employment policy and creating competitive working conditions;
- creation and expansion of new social housing programs;
- development of an extensive system of professional education, social protection and health care;
- development of labor culture and international relations;
- ensuring gender equality (Ukraine Facility, 2024).

The implementation of these measures will make it possible to create favorable conditions for living and working in Ukraine, ensure stable economic development and increase the level of well-being of the population, which, in turn, will facilitate the return of citizens to their homeland and stop the outflow of labor force abroad.

Conclusions

Large-scale changes at the global level, high turbulence and unpredictability of the economic system actualize the issue of ensuring its resilience. The labor market is an important element of the economic system and reflects its nature, affects the stability, well-being and quality of life of the population, forms the basis for effective reproduction of the workforce.

The trends in the development of the labor market in recent decades are determined by the impact of crises, geopolitical upheavals, globalization shifts, the intellectualization of labor, and the virtualization of social and labor relations under the influence of the COVID-19 pandemic, the transformation of social, economic, political and social network relations. This is accompanied by a weakening of the resilience of the economic system in general and the labor market in particular.

The article identifies the key factors of ensuring the resilience of the labor market in conditions of shock effects. To measure the level of resilience of the labor market, it is necessary to take into account both structural and cyclical factors (determinants). Structural factors such as demography, country capabilities, economic development, macroeconomic stability, trade vulnerability, and social inequality provide an estimate of the internal vulnerability of the labor market to shocks. Cyclical factors are absorptive capacity, adaptation, transformational capacity; institutional capacity determines how the current state policy can change the level of disorganization in a specific labor market.

Directions for ensuring the resilience of the labor market are proposed, which involve the interaction of the state, the market and business in the process of implementing measures:

• macroeconomic stabilization (inflation control, moderate interest rate support, balanced fiscal policy);

• increasing the level of employment (active employment programs);

• development of human capital (development of skills necessary for the labor market, including digital and technical);

• promotion of innovation and technological development (support of startups and innovative companies);

• formation of a flexible labor market (supporting the development of various forms of employment, including remote work and self-employment);

• social protection of seeds (development of the social protection system to support the unemployed and low-income people);

• regulation of labor migrations (protection of labor migrants' rights, creation of conditions for legal labor migration, integration of migrants in the labor market).

Human capital is the most valuable asset of any country, but this is especially felt in the conditions of martial law. The Ukrainian authorities should strive to do everything to ensure that citizens have the opportunity to compete on equal terms in the labor market, to develop skills in accordance with its requirements, including development trends in the direction of digitalization and high technologies. In the light of European integration processes, this will contribute to raising the level and quality of life, improving the demographic situation and economic recovery in general.

The issue of institutional provision of the labor market resilience of Ukraine will be the subject of further scientific research.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Apostrophe. (2023). *How many Ukrainians received protection in the EU: UN data.* https://apostrophe.ua/ua/news/world/europe/2023-04-02/skolko-ukraincev-poluchili-zaschitu-v-es-dannye-oon/294362	Апостроф. (2023). *Скільки українців отримали захист в ЄС: дані ООН.* https://apostrophe.ua/ua/news/world/europe/2023-04-02/skolko-ukraincev-poluchili-zaschitu-v-es-dannye-oon/294362

Blyzniuk, V., & Yatsenko, L. (2023). Ensuring stability of the labor market in the conditions of modern challenges. *Publishing House "Baltija Publishing"*, 23–47. https://doi.org/10.30525/978-9934-26-407-8-2

Caro, P., & Fratesi, U. (2022). The role of Cohesion Policy for sustaining the resilience of European regional labour markets during different crises. *Regional Studies, 57*(12), 2426–2442. https://doi.org/10.1080/00343404.2022.2118252

Decree of the President of Ukraine "On the Sustainable Development Goals of Ukraine for the period until 2030" No. 722/2019 (2019, September 30). https://zakon.rada.gov.ua/laws/show/722/ 2019#Text	Указ Президента України "Про Цілі сталого розвитку України на період до 2030 року" № 722/2019. (2019, 30 вересня). https://zakon.rada.gov.ua/laws/show/722/2019#Text

Dijk, J., & Edzes, A. (2016). Towards inclusive and resilient regional labour markets: challenges for research and policy. *Investigaciones Regionales – Journal of Regional Research*, (36), 169–190. https://www.redalyc.org/journal/289/28966571009/html/

Diodato, D., & Weterings, A. (2015). The resilience of regional labour markets to economic shocks: Exploring the role of interactions among firms and workers. *Journal of Economic Geography*, *15*(4), 723–742. https://doi.org/10.1093/jeg/lbu030

European Commission. (2023). Demographic change in Europe. *Politics and the European Union Society, Culture and Demography Justice and Home Affairs*. https://europa.eu/eurobarometer/surveys/detail/3112

GALLUP. (2024). *Resilience in a Changing World. World Risk Poll 2024 Report.* https://wrp.lrfoundation. org.uk/sites/default/files/2024-06/World%20Risk%20 Poll%20Report%202024%20Resilience%20in%20a%20Changing%20World_1.pdf

Hijzeni, A., Kappelerii, A., Paki, M., & Schwellnusi, C. (2017). Labour market resilience. The role of structural and macroeconomic policies. *OECD*, (1406), 1–38. https://doi.org/10.1787/d5c950fc-en

Khlyudzinskyi, V. (2024). Ukraine is facing a demographic crisis: an expert announced terrible figures. *UNIAN Information Agency.* https://www.unian.ua/society/na-ukrajinu-chekaye-demografichna-kriza-demograf-ozvuchiv-zhahlivi-cifri-12520782.html	Хлюдзинський, В. (2024). На Україну чекає демографічна криза: експерт озвучив жахливі цифри. *Інформаційне агентство УНІАН.* https://www.unian.ua/society/na-ukrajinu-chekaye-demografichna-kriza-demograf-ozvuchiv-zhahlivi-cifri-12520782.html
Kolot, A., & Gerasimenko, O. (2020). The sphere of labor in the conditions of the global social and economic reality 2020: challenges for Ukraine. *Friedrich Ebert Stiftung.* https://library.fes.de/pdf-files/bueros/ukraine/16344.pdf	Колот, А., & Герасименко, О. (2020). Сфера праці в умовах глобальної соціоекономічної реальності 2020: виклики для України. *Friedrich Ebert Stiftung.* https://library.fes.de/pdf-files/bueros/ukraine/16344.pdf

Libanova, E. (2022). Interview with sociology professor on how the war will impact Ukraine's demographics. *The New Voice of Ukraine.* https://english.nv.ua/nation/interview-with-sociology-professor-ella-libanova-on-war-s-effect-on-ukraine-s-demographics-ukraine-50248230.html

Martínez, S., Valia, E., & Garcés, J. (2023). Labour Resilience and Vulnerable Groups in Times of Crisis: A Comparative Study in Eleven European Countries. *European Journal of Marketing and Economics*, *6*(2), 38–61. https://revistia.org/index.php/ejme/article/ view/6101

Mustra, V., Simundic, B., & Kulis, Z. (2020). Does innovation matter for regional labour resilience? The case of EU regions. *Regional Science Policy & Practice,* 12(5), 955–971. https://doi.org/10.1111/ rsp3.12348

Nikolaets, K., Shkuropadska, D., Ozhelevska, T., Shtunder, I., & Khrustalova, V. (2023). Exsternal migration in the conditions of the russian-ukrainian war. *Financial and credit activities: problems of theory and practic, 2*(49), 445–456. https://fkd.net.ua/index.php/fkd/article/view/4005	
Nikolaiets, K., Shkuropadska, D., & Lebedeva, L. (2023). Ensuring the demographic resilience of the EU countries. *Foreign trade: economics, finance, law, 131*(6), 21–41. https://doi.org/10.31617/3.2023 (131)02	
NISS. (2022). *The labor market of Ukraine under martial law: some analytical assessments*. https://niss.gov.ua/sites/default/files/2022-04/oglyad_ rinokpraci_0.pdf	НІСД. (2022). *Ринок праці України в умовах воєнного стану: деякі аналітичні оцінки*. https://niss.gov.ua/sites/default/files/2022-04/oglyad_ rinokpraci_0.pdf
Shkuropadska, D., Lebedeva, L., Shtunder, I., Ozhelevska, T., & Khrustalova, V. (2024). The impact of demographic resilience on the economic development of countries (on the example of the Visegrad group countries). *Financial and credit activities: problems of theory and practice*, *1*(54), 552–563. https://fkd.net.ua/ index.php/fkd/article/ view/4279	
Sudokov, M., & Lisohor, L. (2023). *Labor market of Ukraine 2022–2023: state, trends and prospects*. State Employment Service of Ukraine. https://solidarityfund.org.ua/wp-content/uploads/2023/04/ebrd_ukraine-lm-1.pdf	Судоков, М., & Лісогор, Л. (2023). *Ринок праці України 2022–2023: стан, тенденції та перспективи*. Державна служба зайнятості України. https://solidarityfund.org.ua/wp-content/uploads/2023/04/ebrd_ukraine-lm-1.pdf
Ukraine Facility. (2024). *Програма фінансової підтримки України від Європейського Союзу*. https://www.ukrainefacility.me.gov.ua/	Ukraine Facility. (2024). Ukraine Facility. (2024). Financial Support Program of the European Union for Ukraine. https://www.ukrainefacility.me.gov.ua/
Vesolovsky, T. (2023). *Is the EU tired of Ukraine? Not at all*. Radio Svoboda. https://www.radiosvoboda.org/a/ukrayina-viyna-vtoma-rosiys%CA%B9ka-dezinformatsiya/32734458.html	Весоловскі, Т. (2023). *ЄС втомився від України? Не зовсім*. Радіо Свобода. https://www.radiosvoboda.org/a/ukrayina-viyna-vtoma-rosiys%CA%B9ka-dezinformatsiya/32734458.html
Whiteshield. (2024). *Global Labour Resilience Index 2024. A call for climate-friendly labour markets*. https://whiteshield.com/wp-content/uploads/2024/ 01/ws_glri_2024.pdf	

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DIGITAL TOOLS FOR TERRITORY BRANDING

Territory branding is actively used for the development and promotion of villages, towns, cities, regions, and countries in the modern world. And if earlier traditional marketing tools were enough for effective branding and promotion, today it is mandatory to use digital marketing methods and tools. The aim of the article is to substantiate and systematize digital marketing methods and tools for territory branding. When conducting the research, general scientific and special methods were used: dialectical, analysis and synthesis, induction and deduction, comparative analysis, grouping, structural-logical, logical generalization of results, as well as graphic. The essence, the principles and functions of territory branding have been determined. Segments of the target audience for the promotion of territory brands have been identified, such as: investors, entrepreneurs, the population, tourists. The brand development directions of Ukraine and its territories are outlined. The internal and external factors of the marketing environment of territories are highlighted and the concept of territory branding in the digital environment has been given. Digital channels, methods and tools of territory branding are substantiated and systematized.

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ЦИФРОВИЙ ІНСТРУМЕНТАРІЙ БРЕНДИНГУ ТЕРИТОРІЙ

Для розвитку та просування сіл, селищ, міст, регіонів, країн у сучасному світі активно застосовується брендинг територій. І якщо раніше для ефективного брендингу та просування достатньо було традиційних маркетингових інструментів, сьогодні обов'язковим стає використання методів та інструментів цифрового маркетингу (ЦМ). Метою статті є обґрунтування й систематизація методів та інструментів цифрового маркетингу для брендингу територій. Під час проведення дослідження застосовано загальнонаукові та спеціальні методи: діалектичний, аналізу та синтезу, індукції й дедукції, порівняльного аналізу, групування, структурно-логічний, логічного узагальнення результатів, а також графічний. Визначено сутність та обґрунтовано принципи й функції брендингу територій. Виокремлено сегменти цільової аудиторії для просування брендів територій: інвестори, підприємці, населення, туристи. Зазначено напрями розвитку бренду України та її територій. Розкрито внутрішні та зовнішні фактори маркетингового середовища територій і наведено поняття брендингу територій у цифровому середовищі. Обґрунтовано й систематизовано цифрові канали, методи та інструменти брендингу територій.

Keywords: territory branding, digital branding, digital environment, digital marketing, digital channels, digital marketing methods and tools.

Ключові слова: брендинг територій, цифровий брендинг, цифрове середовище, цифровий маркетинг, цифрові канали, методи та інструменти цифрового маркетингу.

JEL Classification: M31, M37, R22.

Introduction

Territory branding is gaining popularity today, helping villages, towns, cities, regions, and countries determine how to successfully compete for resources, investments, tourists, etc. Through effective branding, territories can turn their unique natural and cultural features into powerful competitive advantages. A successful brand of a territory contributes to its social and economic development, strengthens its authority and image, and improves the quality of life of the population.

Territory branding is becoming particularly relevant today, as most territories are seeking to create their own brand. This also applies to those Ukrainian villages, towns, cities and regions that have suffered from the war. For them, branding is a way to express them and attract investors for reconstruction, return their residents and invite new ones. In today's digitized world, it is not enough to rely on traditional marketing alone; digital marketing (DM) methods and tools must be used to promote territories.

In general, territory branding has been studied in various aspects by both foreign and domestic scholars (Rein et al., 1993; Anholt, 2010; Zaiachkovska, 2011; Bilovodska & Haydabrus, 2012; Kainova, 2014; Borysenko et al., 2019; Makhnachova et al., 2020; Zolyak & Horchikova, 2022; Klimova et al., 2023), but the scientific works of these authors did not consider territory branding in the digital space. The methods and tools of CM have been studied (Oklander et al., 2017; Grosul & Balatska, 2020; Melnyk & Derikolenko, 2020; Tsymbalenko, 2021, October 19; Hrechanyk et al., 2022; Guzenko & Mishchenko, 2023, July 10; Shevchenko, 2023, July 15; Ponomarenko et al, 2024, February 2; Levchenko & Danilenko, 2024; Shvets & Vorontsovskyi, 2024), but these studies did not consider digital methods and tools for the purposes of territory branding either.

The aim of the article is to substantiate and systematize digital marketing methods and tools for territory branding.

To achieve this aim, the article formulates the hypothesis that the use of DM methods and tools promotes the promotion of a territory in the digital environment, increases its recognition, competitiveness and helps to attract resources, investments and tourist flows.

For this hypothesis, the following general scientific and special research methods were used: dialectical, analysis and synthesis, induction and deduction, grouping (to study the DM methods and tools), structural, logical, and logical generalization of results (to study and summarize the theoretical and methodological foundations of territory branding, DM methods and tools), as well as graphic (to visualize the types of territory branding and the marketing environment of the territory).

The main part of the article deals with territory branding, its types, principles, functions and target audiences. The author outlines the directions of development of the brand of Ukraine and its territories. The internal and external factors of the marketing environment of territories are investigated, and the concept of branding of territories in the digital environment is formulated. The main DM methods for branding the territories to which it belongs are identified: BigData, search engine marketing (SEM), which includes search engine optimization (SEO) and search engine advertising (SEA), other types of online advertising, email marketing, social media marketing (SMM), mobile marketing, 3D marketing, traditional marketing methods with the use of digital technologies. According to each method, the author systematizes the DM tools that are used in a comprehensive manner for the purposes of territory branding.

1. The essence, principles and functions of territory branding

The formation of territory marketing and territory branding began in the second half of the twentieth century due to growing competition between cities and countries. The concept of "territory marketing", according to which territories become goods and citizens become consumers, was first proposed by Kotler (Kotler, P., et al., 1993). The founder of "territory branding" Anholt (2010) introduced the concepts of "national branding" and "country branding" and noted that territories can be specifically "branded". However, for the most part, they simply inherited their names, which later became brands.

To clarify the essence and definition of the concept of "branding of territories", the following definitions were analyzed: "brand", "territory brand", "branding", "territory branding".

The concept study of "brand" has made it possible to identify the following features: an identification tool (Zayachkovska, 2011; Sevonkaeva, 2014; Smerichevskyi et al., 2019; Zolyak & Horchikova, 2022); a system of attributes and tools, a symbol (Zayachkovska, 2011; Zolyak & Horchikova, 2022); a successful trademark that creates added value (Pavlenko et al, 2008; Reshetnikova, 2013); intellectual property (Rud, 2021); value for the consumer (Zayachkovska, 2011); promise (Zolyak & Horchikova, 2022); consumer feelings and impressions (Zayachkovska, 2011; Sevonkaeva, 2014; Smerichevskyi et al., 2019; Rud, 2021). Given the essential features analyzed by researchers, two scientific approaches to the essence of the concept of "brand" can be traced:

• identification and differentiation: as a set of identification symbols to distinguish from competitors (Pavlenko et al., 2008; Zayachkovska, 2011; Reshetnikova, 2013; Sevonkaeva, 2014; Smerichevskyi et al., 2019; Rud, 2021; Zolyak & Horchikova, 2022). At the same time, the set of identifiers constitutes the manufacturer’s intellectual property, which has value and brings economic benefits in the future;

• value: as the sum of the properties of a product/service, consumers' experience of using it, the impressions they receive and remember, which creates value in the minds of consumers (Zayachkovska, 2011; Sevonkaeva, 2014; Smerichevskyi et al., 2019; Rud, 2021). Consumers will pay a higher price for a brand for a product/service that is valuable to them.

Thus, from the perspective of these approaches, we note that *a brand is a system of identification symbols of a product/service, provided that it is of high quality and meets the expectations of consumers, which allow them to form value in the minds of the latter and, thanks to user experience, positive associations and impressions, which provides added value for the manufacturer and profitability above the market average due to consumers' willingness to pay a higher price.*

In contrast to the existing definition, this one clearly distinguishes between *value for the consumer* and v*alue for the producer*, as well as the ways in which the producer ensures this value as identification symbols and the quality of the product/service based on the identified consumer expectations. Legal protection of the brand as an intangible asset that constitutes the manufacturer's intellectual property is important.

Creating and developing a successful brand involves a systematic process called branding. Based on the analysis of the definitions of "branding", its essential features are identified: the process of creating and developing a brand (Reshetnikova, 2013; Kuzmak & Shaidiuk, 2020, December; Samodai et al., 2023); a management tool (Sevonkaeva, 2014; Dyadyk, 2020; Studinska, 2020; Urupa, 2023); marketing technology (Tanasiychuk, 2023). It should be noted that any process requires management, so in many definitions branding is interpreted as the process of creating, developing, and managing a brand (Pavlenko et al., 2008; Sevonkaeva, 2014; Studinska, 2020, September 18; Urupa, 2023). Since a successful brand provides the manufacturer with additional value and higher than market average profitability through the creation and launch of a brand and its promotion, it contributes to the increase of brand capital and brand value, which generally contributes to the achievement of goals and increase of business efficiency. Therefore, *branding is the process of creating, promoting and developing a brand in order to achieve the strategic goals of a business entity, increases its profitability and development efficiency*. This definition emphasizes the importance of a strategic approach to the development of a business entity in the long term through the use of a brand. At the same time, branding as a process is managed by brand management. Therefore, it is not necessary to single out management in the definition of "branding" and, in agreement with Tanasiichuk (2023), branding should be considered a marketing technology.

To clarify the essence of the concept of "*territory branding*", it is important to define what a territory is. In the context of the topic and purpose of the study, the territory is a "product/service" (Rein et al., 1993), which makes it possible to apply the branding process to its promotion as a brand to achieve the goals of the territory's development.

The concepts of "marketing" or "branding" are used in the studies of different authors in relation to the territory, its promotion and development. Representatives of the first approach consider the marketing of territories (city, region, country) as a focus on creating an image (Kainova, 2014; TPBO, 2015, June 26) using marketing tools and technologies (Kainova, 2014; Borysenko et al., 2019) to attract the entities in which the territory is interested (Glukha, 2014; Borysenko et al., 2019). Therefore, representatives of this approach refer to branding as a marketing technology.

Representatives of the second approach study the branding of territories as a purposeful process of creating an image of the territory in the minds of people (Makhnachova et al., 2020; Zolyak & Horchikova, 2022; Klimova et al., 2023). The formed image of the territory will increase interest in it, which will help attract investment and resources. This will help promote and develop the area by increasing the number of tourists and the frequency of their visits. The main goal of branding is to create sustainable and recognizable associations about the territory, which will be positively perceived both locally and internationally.

Each territory has geographical limitations, population, history, own natural resources, politics, economy, culture, etc., development goals and opportunities. In this research, *the territory* includes villages, towns, cities, regions, and countries. Under the *territory brand* (village, town, city, region, country), we will note a *valuable intangible asset of the economy of the territory; an image that is formed thanks to positive associations and impressions for internal and external consumers through a system of identification symbols that reflect the natural-geographical, historical, social, cultural, economic and other features of the territory, which creates value for consumers and social, economic benefit for the territory.* This definition takes into account the benefits of territory branding for both consumers and the territory. In addition, it is emphasized the importance of taking into account unique territorial features in identification symbols for the formation of stable positive associations and impressions arising from the mention of this territory.

Territory branding in modern conditions of digitalization of society is understood as *the process of creating, promoting and developing a territory brand (village, town, city, region, country) in the digital environment, taking into account its natural-geographical, historical, social, cultural, economic and other features, which creates value for consumers and social, economic benefit for the territory.* This process is strategic and creates conditions for the long-term development of the territory. Accordingly, management with the involvement of brand management specialists is required.

Building and developing a successful territory brand is a difficult task. Territory branding is a powerful tool that helps create a desired image, promote and popularize the territory, and contributes to the achievement of its development goals.

In Ukraine, territory branding is proposed to be divided into six subtypes (Levytska, 2024, March 14, p. 613) (*Figure 1*). To the specified types of territories (villages, towns, cities, regions and countries) we add territorial communities, which are administrative-territorial units, the achievement of the development goals of which is also facilitated by the branding of territories.

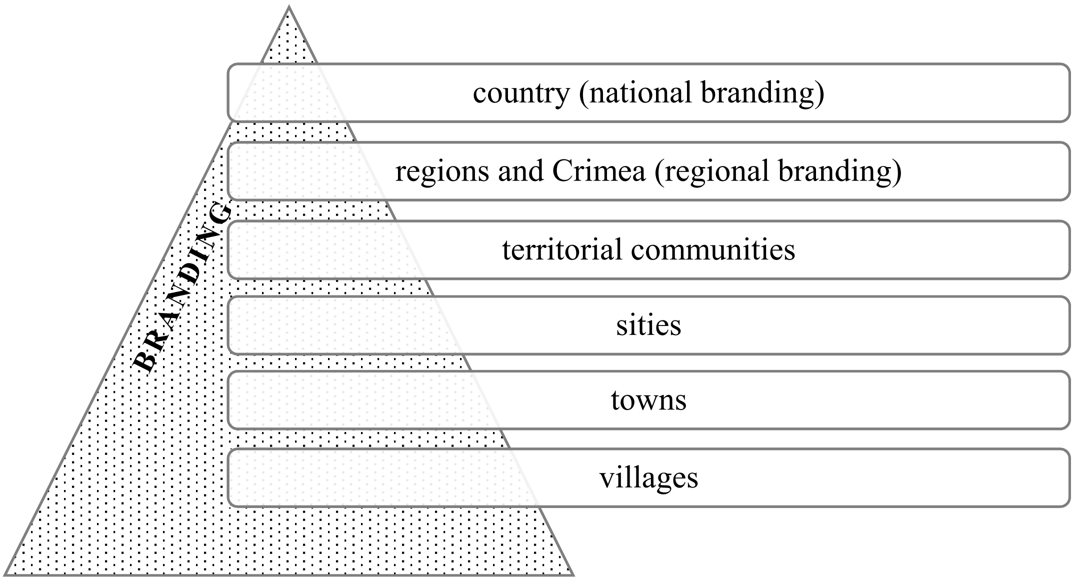

Figure 1. Types of territory branding in Ukraine

Source: compiled by the authors based on (Levytska, 2024, March 14, p. 613).

Territory branding is important both for small villages and towns, and for large cities, regions and countries. However, it is not enough just to create a brand, it is necessary to systematically work on its promotion and development. Branding is aimed at a long-term perspective and creates value for consumers (residents, tourists, investors, etc.) and social and economic benefit for territories. In addition, it is necessary to ensure the presence of the brand in the digital environment to ensure its visibility and increase recognition.

The main principles of territory branding include:

reflection of uniqueness: the brand must reflect the unique characteristics of the territory, its history and culture, traditions and customs, natural features;

honesty/realism: the brand must correspond to reality, reflect the true characteristics and features of the territory, not create false ideas about it;

formation of a unified image: the brand must create a coherent and consistent impression of the territory, ensure unity in communications and marketing activities, maintain a stable image in order to increase recognition;

involvement of residents: for the formation and development of the brand, it is necessary to involve local residents, listen to their opinions and suggestions, as well as promote the territory with their help;

adaptability: the brand of the territory must be flexible and quickly adapt to changes, implement innovations and advanced technologies in order to be relevant and attractive (Gosh, 2021, April 9; Kopchak et al., 2021).

The brand makes the territories more attractive and performs three main functions: a) identifies the country/region/city/town/village among other territories; b) forms in the target audience a sense of attachment to the territory and identity with it; c) acts as a guarantor of the quality of the territory (Bilovodska & Haydabrus, 2012, p. 37). To achieve the desired result, it is necessary that the brand comprehensively fulfills all three functions. In addition, targeting the target audience, which is divided into four main segments, is equally important for the prosperity of the territory:

investors (whom we divide into internal and external in relation to the territory) who are looking for new investment opportunities, therefore the territory should be attractive for investment;

entrepreneurs – looking for better business opportunities, so they will be interested in the labor force, low taxes, better conditions for doing business, new business niches, etc.;

the population (which is divided into existing, potential and former) – is looking for a better life, because people care about jobs, developed infrastructure (especially the presence of schools, kindergartens, hospitals, etc.), the opportunity to spend leisure time in a variety of ways, etc.;

tourists (domestic and foreign) – looking for adventures and new experiences, it is important for them to have comfortable rest conditions, various types of tourism, high level of service, etc. (Bilovodska & Haydabrus, 2012; PROMIS Project, 2019; Vdovichena et al., 2020).

Some scientists also single out the 5th segment of the target audience: authorities or partners (PROMIS Project, 2019; Vdovichena et al., 2020). However, in our opinion, they should not be added to the target audience of territory branding: after all, the government should not be a consumer of the brand, but should help create it and promote the development of the territory. As for partners, they can be attributed to both investors and entrepreneurs, especially since they have similar goals and interests.

Therefore, the development of the brand of the territory should take into account the needs and wishes of the target audience, its own characteristics and resources, and form a single, integrated image of the territory for people. Through a properly created image and positioning, the brand can popularize the territory in the traditional and digital environment and become the driving force of its development.

2. Brand development of Ukraine and its territories

Ukraine has great potential for the development of various types of tourism, in particular: ecological (green); rural; underwater; mountain; baby; youth; family; cultural and cognitive; health and wellness; sports; religious; adventure; hunting; automobile; amateur; for the elderly; for persons with disabilities, etc. (Law of Ukraine "On Tourism", 1995, September 15). All of them can complement each other, so one territory can satisfy several tourist needs of different target audiences at once.

There are also many successful brands in Ukraine that can promote the brand of the territory where they were created. For example, manufacturers of products ("Yagotynske", "Shostka", "Nizhyn", "Zhytomyrski lasoshchi", "Bolgrad", "Kyivhlib", etc.), clothing ("Aviatsia Halychyna"), services ("Credit-Dnipro", "Kyivstar", etc.), entertainment ("Quarter 95"), as well as events (Sorochyn Fair), factories ("Tavria"), etc. can help promote and develop the brand of your village, town, city, region or country in general.

In 2024, the implementation of the "Made in Ukraine" program aimed at promoting the national brand and supporting domestic manufacturers began in Ukraine. This program provides a number of advantages: increased consumption of domestic products; growth in the level of employment; promotion of socio-economic development; development of small and medium-sized businesses; formation of a positive image of Ukraine on the world stage, etc. (Levytska, 2024, April 18).

Ukraine is also becoming known in the world thanks to its people – prominent figures, which live or lived on its territory, were active in our country or have Ukrainian roots. These are outstanding historical and political figures (Volodymyr the Great, Yaroslav the Wise, Bohdan Khmelnytskyi, Pylyp Orlyk, Pavlo Skoropadskyi), writers (Taras Shevchenko, Lesya Ukrainka, Ivan Franko, Ivan Kotlyarevskyi, Lina Kostenko), cultural figures (composer Mykola Leontovych, dancer Serzh Lifar, opera singer Solomiya Krushelnytska, singer Kvitka Tsysyk), artists (Sonya Delaunay, Arkhip Kuindzhi, Kazimir Malevich), scientists (Voladymir Vernadskyi, Boris Paton, Ilya Mechnikov, Ivan Pului, Viktor Glushkov), doctors (Mykola Amosov, Oleksandr Bogomolets, Mykola Pirogov, Boris Todurov), engineers and designers (Yugen Paton, Igor Sikorsky, Serhii Korolev, Oleg Antonov), athletes (Vitali and Volodymyr Klitschko, Andriy Shevchenko, Oleksandr Usyk, Serhiy Bubka, Ivan Piddubny, Vasyl Virastyuk) and many others (Feshchenko, b. d.).

Some cities of Ukraine choose ambassadors for their own promotion – this honorary title is given to people who have authority and achievements in a certain field. The main task of the ambassadors is to support and promote the cities and regions of Ukraine.

Also, our country has great investment opportunities. The interactive platform "Investment Map of Ukraine" (*https://investmentmap.com.ua/ua*) was created to display them. It demonstrates to potential investors available offers for investment in projects in different regions of the country in various spheres of activity. The European Business Association (EBA) created an extraterritorial business association Global Business for Ukraine (*https://www.gb4u.org*) in Ukraine, which is aimed at uniting international business around Ukraine, promoting investments in the country, and providing assistance to global companies in search for partners and clients in Ukraine.

Therefore, Ukraine has a huge potential for the development of the brand of the country and the brands of the territories. The country is rich in cultural and natural resources, which can become the basis for creating a unique image. For example, the Carpathians can be positioned as a place for active recreation and ecotourism, and Kyiv as the cultural capital of Eastern Europe. Branding of territories of our country is especially relevant nowadays, when cities, villages and even streets change their names. For example, Dnipropetrovsk is currently Dnipro, Dniprodzerzhynsk – Kamianske, Artemivsk – Bakhmut, Kirovohrad – Kropyvnytskyi, etc. Therefore, the development of territory branding is necessary for the better promotion of individual villages, towns, cities, regions, and the entire country. It will contribute to the attraction of tourists, the development of the local economy and the increase of the country's prestige.

Because of the war with Russia, there are many destroyed and destroyed territories in Ukraine that need to be rebuilt. And the best way to attract investments for reconstruction will be the branding of territories, which will help determine the target audience, take into account the needs and wishes of existing and potential residents, and help form successful marketing and brand strategies.

The branding of the territories will also contribute to the return of our compatriots who have currently left Ukraine and are considered refugees. At the end of April 2024, according to Eurostat, more than 4.2 million Ukrainian refugees had the status of temporary protection in EU countries (How many?, 2024, June 10). No one can give an exact figure for the number of refugees and the population of Ukraine today. However, according to some experts, the population of Ukraine (taking into account the occupied territories) in 2024 will be about 31 million people (Hajduk, 2024, July 11). A decrease in the number of the population can lead to a demographic crisis and economic decline, so the main task of the state is the return of citizens to their homeland. Branding of territories can also help in this, because the development of villages, towns, cities, regions, and the country will contribute to attracting investments, developing infrastructure, creating new jobs, raising the standard of living of the population, etc. – all this can become a powerful incentive for the return of Ukrainians to Ukraine.

In view of the above, we conclude that for the development of the brand of the territory, it is necessary to pay special attention to the marketing environment of the village, town, city, region or country. After all, taking into account all the factors affecting the territory will ensure the creation of a brand that will not only be attractive and recognizable, but also correspond to the realities and potential of the territory.

3. Marketing digital environment of the territory

Modern territories do not develop in isolation, they constantly interact with others. In addition, any territory is affected by various internal and external factors that form the marketing environment and on which its effective social and economic development depends.
We note that the *marketing environment of a territory (village, town, city, region, country) is a set of internal (micro-environment) and external (macro-environment) factors and driving forces that influence marketing activity, image formation, brand promotion of the territory and its social economic development.* At the same time, internal factors and forces are controllable, and external ones are uncontrolled or poorly controlled. Because of this, the marketing environment undergoes constant changes and requires permanent monitoring. The main components of the marketing environment of the territories are shown in *Figure 2*.

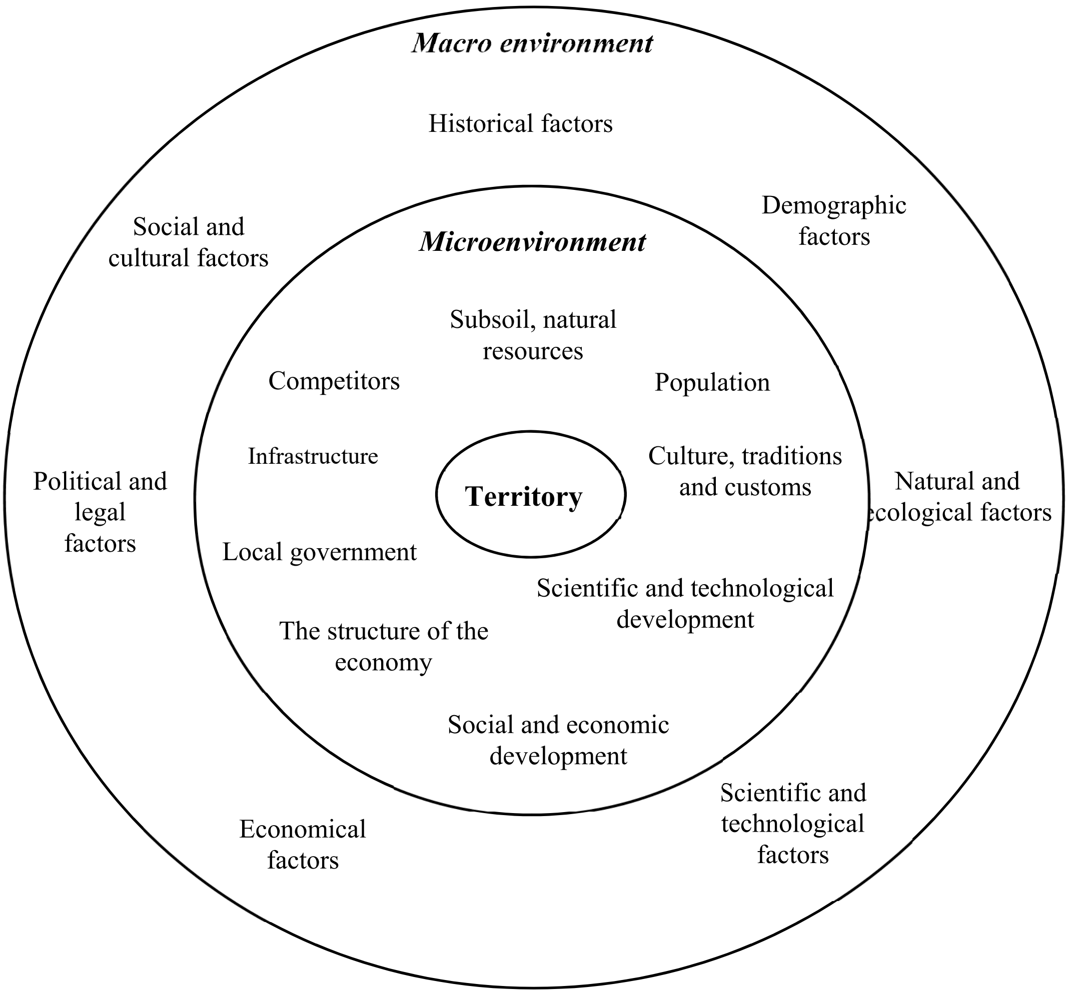

Figure 2. Marketing environment of the territory

Source: compiled by the authors.

As we can see from *figure 2*, the marketing environment of a territory has micro- and macro-environments, each of which is shaped by relevant factors and driving forces.

In the *microenvironment*, the territory (village, settlement, city, region or country) functions directly. In addition to the territory itself, it includes:

subsoil, natural resources: territories have their own subsoil, minerals, water, soil, landscapes, vegetation, animal life, etc., recreational areas, their own climate – all this makes the territory individual and can help its development;

population: residents who permanently or temporarily live in this territory, former and potential residents, guests and tourists;

culture, traditions and customs: each locality has its own customs and traditions, which are passed down from generation to generation, as well as culture, which consists of various spiritual and material values – all this emphasizes the originality of the territory;

scientific and technological development shows progress in the field of science, technology and technology and affects the competitiveness of the territory, the presence of research institutes, the opening of startups, the creation of inventions and innovations;

social and economic development reflects the standard of living of the population, which has various aspects: the level of employment and unemployment, the level of income of the population, social security, the availability of medical and educational services, housing conditions, the quality of the environment (ecology), the criminogenic situation, etc.;

the structure of the economy is a component of the territory, which includes the territorial structural distribution of types of economic activity. The presence and structural distribution of enterprises of those types of activities that take into account the natural and socio-economic features of the territory, affect the employment of the population, the level of income, socio-economic development, etc.;

local government: each village, town, city, region, country has its own government bodies that manage the territory and resolve issues of local importance;

infrastructure: houses, medical institutions, transport, educational and cultural institutions, social welfare facilities, critical infrastructure facilities, etc. ensure the vitality of the territory and its functioning, as well as influence its investment attractiveness;

competitors: like businesses, territories have their competitors: some countries compete with others. Villages, towns, cities and regions compete with both domestic and foreign similar territories – this forces territories to improve, improve the standard of living of the population, develop infrastructure and industry, ensuring socio-economic development (IMD, 2024; The Economist, 2024, 26 June).

The *macro-environment* of the territory surrounds a village, settlement, city, region or country and has a positive or negative impact on the territory, thus creating opportunities or threats to its scientific, technological, social and economic development. The external environment of the territory is affected by a number of factors, the main of which are:

historical: events and achievements of the territory's past; notable events and figures; state and administrative institutions; conflicts, revolutions, wars, etc.;

demographic: population size and density, birth and death rates, age and gender composition of the population, level of urbanization, number of labor resources, migration processes, ethnic diversity, population composition, number of marriages and divorces, household structure, etc.;

natural and ecological: natural and climatic conditions, flora and fauna, level of environmental pollution, natural phenomena, presence of treatment facilities, reserves of minerals, raw materials, natural resources, ecological state of the territory, availability of renewable energy sources, natural disasters, etc.;

scientific and technological: the level of development of science and technology, scientific research activities, the emergence of new technological developments, innovations and inventions, etc.;

economic: income levels, inflation, unemployment and employment, purchasing power of the population, stability of the national currency, rates of economic growth, tax rates, loan interest rates, labor productivity, gross domestic product, gross national product, etc.;

political and legal: level of political and legislative stability, compliance with legal norms, government institutions and authorities, political parties, laws and regulations, antimonopoly regulation, level of corruption of authorities, etc.;

social and cultural: cultural values and traditions, accepted norms of behavior and morality, customs, influence of subcultures, lifestyle, behavioral habits, social mobility, cultural activities and events, art and creativity, etc. (Mazurkevich, 2021; Kosar & Vintonyak, 2023, September 14–16).

To create an effective marketing and brand strategy of the territory, it is necessary to constantly analyze the environment in which it is located and the factors affecting its social and economic development. This will allow you to identify potential threats and opportunities and adapt your marketing and branding strategies accordingly.

In the conditions of total digitalization of the world, modern companies and territories are represented not only in the traditional environment, but also in the digital one. The digital environment is a virtual space that allows users to interact with each other, as well as with companies, brands, goods and services through the Internet and other digital platforms (Description of the Digital Competence Framework of Ukrainian Citizens; 2021). Accordingly, for users to interact with the territory, it must be presented in a digital environment.

Developing the definition of the definition of "territory branding" taking into account the digital environment, *by territory branding in the digital environment we mean the process of creating, promoting and developing the territory brand (village, town, city, region, country) in the digital environment, taking into account its natural, geographical, historical , social and cultural, economic and other features, as well as with the use of digital technologies, channels, methods and tools, which creates value for consumers and social, economic benefit for the territory.*

The advantages of territory branding in the digital environment are: more effective promotion; higher engagement and audience coverage; the ability to precisely target specific segments of the target audience; increasing recognition and loyalty to the territory, etc.

Promoting the territory in the digital environment is helped by DM methods and tools, the choice of which depends on: the target audience; marketing goals; communication messages that need to be conveyed to the audience, the budget for digital marketing.

4. Digital methods and tools of territory branding

On the basis of the analysis of scientific sources, the DM essential characteristics were determined: a part of marketing activity using digital channels, methods, tools and technologies (Godovanyuk & Gerasimova, p. d.; Oklander et al., 2017; Marchuk, 2018; Yankovets, 2019); a set of measures and tactics for promotion in the digital environment (Oklander et al., 2017; Kiwop, 2020, April 16; Bubenets & Slomintsev, 2022; Guzenko & Mishchenko, 2023, July 10; The Investopedia Team, 2024, January 25); a method of marketing communication with the target audience in the digital environment (Oklander et al., 2017; Romanenko, 2019; Poita et al., 2023; Shevchenko, 2023, July 15; The Investopedia Team, 2024, January 25); unconventional platform (Ekiyor & Altan, 2020). Based on these essential features, it is substantiated that *digital marketing is a type of marketing activity aimed at promoting goods and services, brands and personalities, companies and territories in virtual (online) and real (offline) environments, thanks to digital technologies, channels, methods and tools.* In this definition, unlike the existing ones, the objects of promotion are detailed.

DM channels include interactive screens (displays); digital television (Smart TV); POS terminals; Internet; devices that provide access to the Internet; local networks (extranet and intranet); mobile devices; mobile applications; Digital gadgets; website; social networks; touch screens (tablets), readers, etc.; PlayStation, XBox and other game consoles; digital art (Oklander, 2017; Bubenets, Slomintsev, 2022; Guzenko & Mishchenko, 2023; Shevchenko, 2023; Shvets & Vorontsovsky, 2024).

The DM key channels for territories in modern conditions are a website, a mobile device, and social networks.

Creating an official website of a village, town, city, region, and country is a top priority, because every user who wants to learn more about a certain territory will look for information on the Internet. You can also post the necessary information for residents, tourists and investors on the sites.

According to the results of the scientific source analysis, the most common main methods of DM were determined, such as BigData, search marketing (SEM), which has optimization for search engines (SEO) and search advertising (SEA), other types of Internet advertising, email marketing, marketing in social networks (SMM), mobile marketing (Oklander et al., 2017, p. 46; Grosul & Balatska, 2020, p. 9; Tsymbalenko, 2021, October 19, p. 360; Grechanyk et al., 2022; Yankovets, 2022, p. 230). We add 3D marketing to the listed methods, as well as traditional marketing methods using digital technologies.

We note that, for the most part, the methods and tools of digital marketing coincide (Melnyk & Derykolenko, 2020; Yankovets, 2022; Guzenko & Mishchenko, 2023; Shevchenko, 2023; Ponomarenko et al., 2024, February 2; Levchenko & Danilenko, 2024; Shvets & Vorontsovskyi, 2024). In general, DM methods and tools are key components of an effective marketing and brand strategy in the digital space, but they have some differences, that is, the methods answer the question "what to do?", while the tools answer the question "how to do it?". Both components are complementary and important to ensure the effectiveness of digital marketing.

In *Figure 3*, the main channels, CM methods and tools are presented, which are proposed to be used in the territory branding.

Let's take a closer look at each digital method and its tools, which are appropriate to use in territory branding.

Big Data. Huge amounts of data help analyze people's behavior, research their needs and create personalized offers. Based on research, they make it possible to manage the territory more efficiently, develop infrastructure and improve the standard of living of the population. The main tools of BigData are: analytics (helps to analyze the behavior and needs of the audience, create a portrait of it and make predictions and planning in various areas related to the territory) and content marketing (visualization of the received data and presenting it in an accessible form).

Search engine marketing (SEM). Since the main channel for obtaining information about the territory is search engines, accordingly, improving the visibility and positions of the territory's site in search results is an important task. This is facilitated by SEM, which has two main components, namely search engine optimization (SEO) and search engine advertising (SEA).

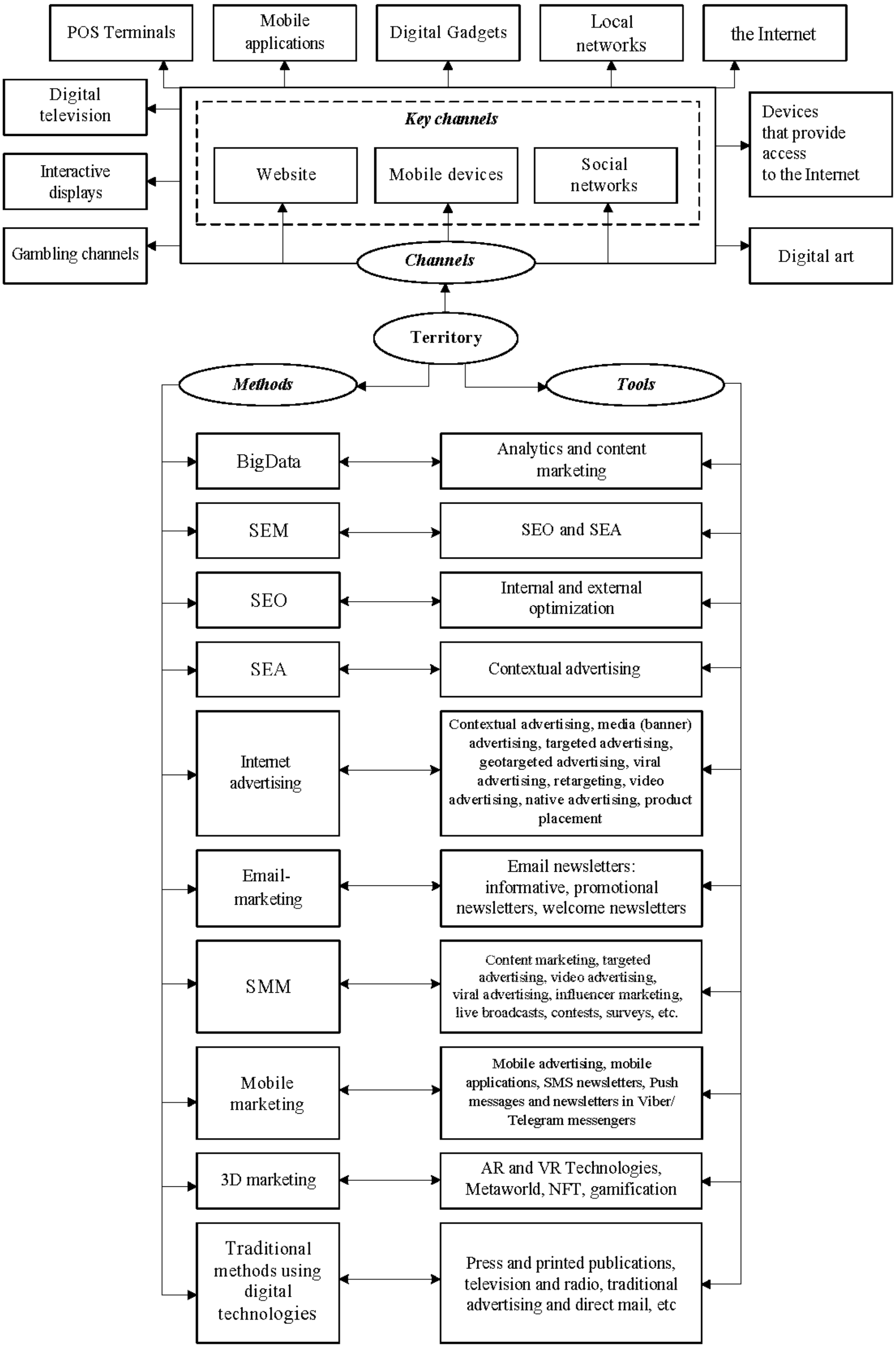

Figure 3. Digital channels, methods and tools of territory promotion

Source: compiled by the authors.

Search engine optimization (SEO) helps to organically raise the ranking of the site and bring it to the first positions of search results. For this, a semantic core is created from keywords, texts are written, content is optimized, and technical optimization of the site is done, etc. Although SEO takes a lot of time, it has a long-term effect and creates trust among users.

SEO tools (Shmychkov, 2022; Iankovets, 2024) are divided into internal and external optimization. Internal optimization is: work with keywords and semantic core, creation and optimization of content (content marketing), usability analysis, as well as optimization of all other site elements (headings, links, metadata, etc.). External optimization includes link building, content marketing, guest publications, etc. In this way, the site of a village/village/city/region/country is popularized, which ensures that its positions are raised in organic search results.

Search Advertising (SEA). Search advertising belongs to the digital marketing method called Internet advertising, because search advertising is also part of its tools. Separately for SEA, such advertising involves the display of contextual ads in search engines to users who have entered a targeted search query related to the territory (events, places of interest, etc. – depends on the purpose of the advertisement). Such announcements are distinguished by the inscription "Advertising" and have a low level of user trust. Search advertising, unlike SEO, is paid and has a short-term effect, because it works as long as there is a payment.

Internet Advertising. Attracts the attention of the target audience, attracts users, increases conversions and popularizes the brand of the territory. Internet advertising covers all possible varieties of online advertising used to promote territories. These are contextual, mobile, targeted, viral advertising, retargeting, video advertising, etc. The peculiarity of Internet advertising is that it is paid and has a short-term effect. As long as it is paid, it works. Let’s take a closer look at each online advertising tool:

contextual advertising allows you to promote the territory in search engines, in particular Google, Bing and others. A user enters a search query related to an area and sees an ad labeled "Advertisement". This tool is suitable for the promotion of places of interest and events, as well as for the development of tourism;

media (banner) advertising: attractive and informative banners attract attention, increase the recognizability of the territory and shape its image. If properly presented, media advertising attracts tourists and investors;

targeted advertising allows you to target advertisements to specific segments of the target audience. These settings are useful if you need to meet the different needs of your target audience. After all, thanks to targeting, you can make personalized offers that will attract both existing and potential residents, tourists, investors, etc.;

geotargeted advertising shows ads to a specific segment of the target audience based not only on the user’s interests and preferences, but also on the basis of his location;

viral advertising is able to quickly spread content to a huge audience and promotes "word of mouth". It increases brand recognition, effectively engages the audience and spreads organically. Among the effective types of viral advertising: tourist videos, flash mobs, social experiments, etc.;

retargeting re-engages users who showed interest in the territory, but did not take any action. Thanks to retargeting, you can remind the audience about the territory: its tourist spots, investment projects, upcoming events, etc. – depending on the user's interests;

video advertising is an effective way to dynamically show the charms and strengths of the territory. Video advertising visualizes the expectations of the territory, attracts attention and is better remembered, and also has a high level of engagement. Examples of videos: overview of the city, pros and cons of living in the region, TOP-5 most visited places in the region, history of the city, etc.;

native advertising allows you to naturally integrate the territory into the content. It is not intrusive and is perceived as friendly advice, so it has a high level of trust among users. Native advertising can be implemented in various formats: articles, videos, publications in social networks, podcasts, etc.;

product placement involves the integration of the territory into films, series, animation projects, TV programs, clips, shows, etc. Media content effectively engages the audience, fuels interest in the territory and has a lasting effect. After all, viewers can watch their favorite movie or program several times and for more than one year. Also, product placement promotes film tourism, because it makes viewers want to personally visit the shown cities, regions or countries. By the way, territories can be present not only in the video sequence itself, but also in the title of the film/series, for example: "Kyiv by day and by night", "Emily in Paris", "Malibu Rescuers", etc.

Email marketing promotes territories via email and informs about events and activities that take place in the village/township/city/ region/country, news, offers, etc., and also conducts email surveys. The disadvantage is that it is necessary to collect a database of contacts to start communication. The main tool of email marketing is email newsletters: informational (convey information about events, news, activities, changes occurring in the village/village/city/region/country); promotional mailings (with personal offers, promotions, advertising of investment projects and tourist destinations, etc.); Welcome newsletters (introducing new subscribers to the territory), etc.

Social media marketing (SMM) helps promote a territory on social media, increase user awareness and improve brand awareness. For this, a village/village/city/region/country account is created and filled with content. At the same time, the profile should interest the user, benefit him and be attractive. Therefore, photos, videos and texts of publications should be of high quality and professional. It is advisable to promote territories in a number of social networks: Instagram, Linkedin, Facebook, YouTube, Xbox, TikTok, Pinterest, etc., to reach a larger number of target audiences. The main SMM tools include: content marketing (photos/videos, publication texts); targeted advertising; video advertising; viral advertising; influence marketing (cooperation with influencers: bloggers and famous personalities), as well as live broadcasts, contests, surveys, etc. These tools will generate interest, engage and engage with your audience.

Mobile marketing is the promotion of territories through mobile devices that have access to mobile communications or the Internet. Since almost everyone now has mobile devices and the time spent on gadgets is increasing, this method is quite effective and allows you to make personalized offers. Mobile advertising should be singled out among mobile marketing tools. Advertising on mobile devices can take many different formats, and its advantage is that people use mobile devices more often and for longer periods of time than computers and laptops, so it reaches a large audience and at the same time precisely targets the right user segments. Among its formats: advertising blocks, videos, announcements, etc., related to the territory; mobile applications (these can be tourist guides; offline and online maps with the designation of interesting and significant places of the village/township/city/region/country; applications with local services and services, in particular "Kyiv Digital"; applications for reservations, etc.); SMS-messages, Push-messages and Viber/Telegram messengers (instant user information; reminders, offers, etc.).

3D Marketing. This is an innovative CM method, which is advisable to use for the promotion of territories. Thanks to it, objects, events, landmarks, architectural monuments, etc. are visualized and the effect of partial or full immersion is obtained. 3D marketing tools include:

technologies of augmented reality (Augmented Reality, AR) complement the physical world by superimposing 3D/2D content on it in real time through smart devices. Demonstration takes place through applications or AR filters to show the historical appearance of places, future buildings, advertising filters, photos, notable events, etc.;

virtual reality technologies (Virtual Reality, VR) allow you to immerse yourself in the digital world. This is 360-degree content that replaces reality. Special VR glasses or VR helmets help to move into the virtual world. Thanks to VR technologies, you can play games, hold events, watch 360° videos, and more. They allow you to dive into the past (for example, walk through the old streets of Kyiv), do something extreme (drift with a parachute over the fields of the Kherson region), see hard-to-reach places (for example, the quarries of Kryvorizhzhia), etc.;

metaworld allows you to create your own game metaspace, similar to the real territory with its architecture, monuments, landscapes, places of interest, etc.;

NFT is the creation of a product in a visual-digital form (for example, landmarks: the Eiffel Tower, the Motherland, a glass pedestrian bridge, etc.) and sell it using a non-fungible token;

gamification engages users in game mechanics with the territory. For example, creating games where events develop in a certain place or interactive crosswords about countries, their culture and customs, etc. (ADVIN, n.d.).

Traditional methods using digital technologies. Traditional methods of promoting territories belong to digital ones only if they contain QR codes, website addresses, links to social media accounts, etc. The tools of traditional methods are press and printed publications (for example, maps, tourist guides, books, etc.) that have a QR code or a link to the territory's website or its social networks; television (when a QR code or link is placed on the screen or a website address is spoken by voice) and radio (when a website address is spoken by voice), traditional advertising and direct mail (provided that QR codes or links are placed that lead from the traditional to the digital environment) etc.

Therefore, the application of digital methods and tools expands horizons and opens new perspectives for territories. Thanks to them, the territory can form its own unique image in the digital environment and attract the audience to interact in various ways.

Conclusions

Branding the territory is a key factor in its development. A strong brand helps to differentiate from competitors and popularize the area both locally and internationally. To do this, it is necessary to clearly define marketing goals, research the target audience, analyze the digital marketing environment, and involve DM methods and tools.

In general, digital marketing provides many advantages and opportunities for the development and promotion of a territory's brand. BigData, search engine marketing (SEM), which includes search engine optimization (SEO) and search engine advertising (SEA), other types of online advertising, email marketing, social media marketing (SMM), mobile marketing, 3D marketing, traditional marketing methods with the use of digital technologies – all these methods, together with their tools, play an important role in the branding of territories. Their complex application helps to create a unique image of the territory (village/settlement/city/region/country) and form an attractive image; promotes the development of tourism and attracts investors and new residents; increases the competitiveness of the territory and, as a result, ensures social and economic development and improves the standard of population living. This confirms the proposed hypothesis.

Future research should be aimed at an in-depth analysis of DM tools for territory branding purposes, as well as research on territory brand strategies in the digital environment.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

ADVIN. (n. d.). *3D marketing is a new marketing trend.* https://www.adv.ua/article/3d-marketing-novij-marketingovij-trend

Anholt, S. (2010). Definitions of place branding – Working towards a resolution. *Place branding and public diplomacy,* (6), 1–10. https://doi.org/10.1057/ pb.2010.3

Bilovodska, O., & Haydabrus, N. (2012). Theoretical and methodological principles of creating a city brand. *Marketing and Innovation Management,* 1, 35–43.	Біловодська, О., & Гайдабрус, Н. (2012). Теоретико-методичні засади створення бренду міста. *Маркетинг і менеджмент інновацій,* 1, 35–43.
Borysenko, O. S., Yarmolyuk, O. Ya., & Fisun, Yu. V. (2019). The scientific basis of the promotion of territorial marketing in Ukraine. *Market infrastructure: electronic scientific and practical journal,* 31, 213–221. Black Sea Research Institute of Economics and Innovation.	Борисенко, О. С., Ярмолюк, О. Я., & Фісун, Ю. В. (2019). Наукове підґрунтя просування територіального маркетингу в Україні. *Інфраструктура ринку: електронний науково-практичний журнал*, 31, 213–221. Причорноморський науково-дослідний інститут економіки та інновацій.
Bubenets, I. G., & Slomintsev, D. M. (2022). Modern aspects of digital marketing: key performance indicators. *Business Inform: international scientific economic journal*, 271–276.	Бубенець, І. Г., & Сломінцев, Д. М. (2022). Сучасні аспекти цифрового маркетингу: основні показники ефективності. *Бізнес Інформ: міжнародний науковий економічний журнал*, 271–276.
Dyadyk, T. V. (2020). Branding and Internet branding are the most important tools for building a company's brand. *Economic space*, (156), 124–128. https://doi.org/10.32782/2224-6282/156-22	Дядик, Т. В. (2020). Брендинг та інтернет-брендинг – найважливіші інструменти формування бренду підприємства. *Економічний простір,* (156), 124–128. https://doi.org/10.32782/2224-6282/ 156-22

Ekiyor, A., & Altan, F. (2020). Marketing Communication and Promotion in Health Services. *Promotion and Marketing Communications*. IntechOpen.

Feshchenko, R. (n. d.). *100 great Ukrainians*. NV. https://nv.ua/ukr/ukraine/events/100-velikih-ukrajinciv-nv-nazivaye-tih-hto-viznachav-perebig-istoriji-50265222.html#100ua	Фещенко, Р. (б. д.). *100 великих українців*. НВ. https://nv.ua/ukr/ukraine/events/100-velikih-ukrajinciv-nv-nazivaye-tih-hto-viznachav-perebig-istoriji-50265222.html#100ua
Framework of digital competence of citizens of Ukraine (DigCompUA for Citizens 2.2). (2021). Diya. Digital education. https://thedigital.gov.ua/ storage/uploads/files/news_post/2021/3/mintsifra-oprilyudnyue-ramku-tsifrovoi-kompetentnosti-dlya-gromadyan/%D0%9E%D0%A0%20%D0%A6%D0%9A.pdf	Рамка цифрової компетентності громадян України (DigCompUA for Citizens 2.2). (2021). Дія. Цифрова освіта. https://thedigital.gov.ua/ storage/uploads/files/news_post/2021/3/mintsifra-oprilyudnyue-ramku-tsifrovoi-kompetentnosti-dlya-gromadyan/%D0%9E%D0%A0%20%D0%A6%D0%9A.pdf
Ghosh, O. (2021, April 9). *Five principles of regional branding.* Reputation Capital Group. https://reputationcapital.blog/2021/04/p-iat-pryntsypiv-brendynhu-rehionu/?lang=uk	Гош, О. (2021, 9 квітня). *П'ять принципів брендингу регіону.* Reputation Capital Group. https://reputationcapital.blog/2021/04/p-iat-pryntsypiv-brendynhu-rehionu/?lang=uk
Glukha, V. (2014). Improvement of the economic mechanism of state regulation of depressed regions by implementing territory branding strategies. *Economy and the State,* 3, 128–130.	Глуха, В. (2014). Вдосконалення економічного механізму державного регулювання депресивних регіонів шляхом впровадження стратегій брендингу територій. *Економіка та держава,* 3, 128–130.
Godovanyuk, A. V., & Gerasimova, T. I. (n. d.). *Digital marketing: trends and benefits.* https://conf.ztu.edu.ua/ wp-content/uploads/2021/01/ 323.pdf	Годованюк, А. В., & Герасимова, Т. І. (б. д.). *Цифровий маркетинг: тренди та переваги.* https://conf.ztu. edu.ua/wp-content/uploads/2021/01/ 323.pdf
Grechanyk, O., Khlebnikova, T., & Temchenko, O. (2022). Digital marketing as a tool for anti-crisis development of enterprises. *Economy and society*, (43). https://doi.org/10.32782/2524-0072/2022-43-78	Гречаник, О., Хлєбнікова, Т., & Темченко, О. (2022). Digital-маркетинг як інструмент антикризового розвитку підприємств. *Економіка та суспільство*, (43). https://doi.org/10.32782/2524-0072/2022-43-78

Grosul, V, & Balatska, N. (2020) Digital marketing as an effective tool for anti-crisis development of the restaurant business during the pandemic and its recession. *Entrepreneurship and Innovation*, *11*(2), 9–12.	Гросул, В., & Балацька, Н. (2020) Digital-маркетинг як дієвий інструмент антикризового розвитку підприємства ресторанного бізнесу в період пандемії та її рецесії. *Підприємництво та інновації*, *11*(2), 9–12.
Guzenko S., Mishchenko S. (2023, July 10) *Digital marketing: basic concepts and tools.* Elit-Web. https://elit-web.ua/ua/blog/digital-marketing-chto-ehto	Гузенко, С., & Міщенко, С. (2023, 10 липня) *Digital-маркетинг: основні поняття та інструменти.* Elit-Web. https://elit-web.ua/ua/blog/digital-marketing-chto-ehto
Hayduk, J. (2024, July 11). *The population of Ukraine in 2024 and methods of solving the demographic crisis: an expert's forecast.* Fakty. https://fakty.com.ua/ua/ukraine/20240507-naselennya-ukrayiny-u-2024-roczi-ta-metody-vyrishennya-demografichnoyi-kryzy-prognoz-eksperta	Гайдук, Ю. (2024, 11 липня). *Населення України у 2024 році та методи вирішення демографічної кризи: прогноз експерта.* Факти. https://fakty.com.ua/ua/ukraine/20240507-naselennya-ukrayiny-u-2024-roczi-ta-metody-vyrishennya-demografichnoyi-kryzy-prognoz-eksperta
Iankovets, T. (2024). Search engine marketing in creating website user impressions. *Scientia·Fructuosa, 153*(1), 40–69. https://doi.org/10.31617/ 1.2024(153)03	
Iankovets, T. M. (2019). Digital technologies to increase the value of brands. *Bulletin of KNTEU*, *4*(126), 85–100.	Янковець, Т. М. (2019). Цифрові технології підвищення вартості брендів. *Вісник КНТЕУ, 4*(126), 85–100.
Iankovets, T. M. (2022). The mechanism of managing digital marketing of the enterprise. *Modern problems of management: materials of the XVIII International Scientific and Practical Conference*, 229–230.	Янковець, Т. М. (2022). Механізм управління цифровим маркетингом підприємства. *Сучасні проблеми менеджменту: матеріали XVIII Міжнародної науково-практичної конференції,* 229–230.
IMD – International Institute for Management Development. (2024). *World Competitiveness Ranking.* https://www.imd.org/centers/wcc/world-competitiveness- center/rankings/world-competitiveness-ranking	
Kainova, T. V. (2014). Marketing of the region as a factor of innovative development. *Academic Review, 2*(41).	Кайнова, Т. В. (2014). Маркетинг регіону як фактор інноваційного розвитку. *Академічний огляд, 2*(41).
Kiwop. (2020, April 16). *Digital Marketing: What it is, what it's for and examples of strategies.* https://www.kiwop.com/en/blog/digital-marketing-what-it-is-and-what-it-is-for-2	
Klimova I., Arkhipova T., & Tarasov I. (2023). Marketing and branding of regions. *Scientific perspectives, 5*(35).	Клімова І., Архипова Т., & Тарасов І. (2023). Маркетинг та брендинг регіонів. *Наукові перспективи, 5*(35).
Kopchak Y. S., Vasyuk I. V., & Hryhoruk A. A. (2021). Territorial marketing as a tool for the effectiveness of the region's functioning. *Scientific perspectives. 11*(17). 270–280.	Копчак Ю. С., Васюк І. В., & Григорук А. А. (2021). Маркетинг територій як інструмент ефективності функціонування регіону. *Наукові перспективи. 11*(17). 270–280.
Kosar, N. S., Vintonyak, A. A. (2023). The influence of factors of the marketing environment on the development of retail trade in Ukraine. *Management and entrepreneurship in Ukraine: stages of formation and development problems, 1*(9), 50–59.	Косар, Н. С., Вінтоняк, А. А. (2023). Вплив факторів маркетингового середовища на розвиток роздрібної торгівлі в Україні. *Менеджмент та підприємництво в Україні: етапи становлення та проблеми розвитку, 1*(9), 50–59.
Kuzmak, O. I., & Shaydyuk, A. S. (2020, December). Modern marketing technologies as a tool of effective management of enterprises in the conditions of globalization. *Scientific notes of the National University "Ostroh Academy", Economics, 19*(47).	Кузьмак, О. І., & Шайдюк, А. С. (2020, грудень). Сучасні маркетингові технології як інструмент ефективного управління підприємствами в умовах глобалізації. *Наукові записки Національного університету "Острозька академія", Економіка, 19*(47).
Law of Ukraine "On Tourism" No. 324/95-VR. (1995, September 15). https://zakon.rada.gov.ua/laws/show/324/95-%D0%B2%D1%80#Text	Закон України "Про туризм" № 324/95-ВР. (1995, 15 вересня). https://zakon.rada.gov.ua/laws/show/324/95-%D0%B2%D1%80#Text

Levchenko, I., & Danilenko, A. (2024) The impact of digital marketing on the development of online stores. *Economic Horizons*, *2-3* (28), 70-79. https://doi.org/10.31499/2616-5236.1(23).2023.273361	Левченко, І., & Даніленко, А. (2024) Вплив digital-маркетингу на розвиток інтернет-магазинів. *Економічні горизонти*, *2-3*(28), 70–79. https://doi.org/10.31499/2616-5236.1(23).2023.273361
Levytska, I. (2024, April 18). "Made in Ukraine" brands as a factor in the development of Ukraine. *Marketing strategies, entrepreneurship and trade: current state, directions of development: Materials V International. science and practice Internet conf. (Kyiv, April 18, 2024): abstracts of reports,* 99–100.	Левицька, І. (2024, 18 квітня). Бренди "Made in Ukraine" як фактор розвитку України. *Маркетингові стратегії, підприємництво і торгівля: сучасний стан, напрямки розвитку : Матеріали V Міжнар. наук.-практ. інтернет-конф. (Київ, 18 квітня 2024 року): тези доповідей*, 99–100.
Levytska, I. V. (2024 March 14). Classification basis of territorial branding in Ukraine. *Brand management: marketing technologies: theses add. VI International science and practice conf.* https://knute.edu.ua/file/MzEyMQ==/a747ab537882fe0bcd259c9528871e1d.pdf p. 612-614	Левицька, І. В. (2024, 14 березня). Класифікаційна основа територіального брендингу в Україні. *Бренд-менеджмент: маркетингові технології: тези доп. VI Міжнар. наук.-практ. конф.*, https://knute.edu.ua/file/MzEyMQ==/a747ab537882fe0bcd259c9528871e1d.pdf c. 612-614
Makhnachova, N. M., Semenyuk, I. Yu., & Remenyuk, Ya. A. (2020). Adaptation of global trends in territory branding to Ukrainian requests. *Public administration: improvement and development,* (10).	Махначова, Н. М., Семенюк, І. Ю., & Ременюк, Я. А. (2020). Адаптація світових тенденцій брендингу територій до українських запитів. *Державне управління: удосконалення та розвиток*, (10).
Marchuk, O. O. (2018). Digital marketing as an innovative management tool. *Economy and society,* (17), 296–299.	Марчук, О. О. (2018). Цифровий маркетинг як інноваційний інструмент управління. *Економіка і суспільство,* (17), 296–299.
Mazurkevich, I. (2021, September 14-16). Study of the structure of the marketing environment of tourism business enterprises. *Socio-political, economic and humanitarian dimensions of the European integration of Ukraine: coll. of science ave. IX Internat. science and practice conf.,* (3), 201–210.	Мазуркевич, І. (2021, 14-16 вересня). Дослідження структури маркетингового середовища підприємств туристичного бізнесу. *Соціально-політичні, економічні та гуманітарні виміри європейської інтеграції України: зб. наук. пр. IX Міжнар. наук.-практ. конф.,* (3), 201–210.
Melnyk, L. G., & Derykolenko, A. O. (2020). Digital marketing tools as a means of promoting the products of domestic industrial enterprises. *Effective Economics*, (3). https://doi.org/10.32702/2307-2105-2020.3.7	Мельник, Л. Г., & Дериколенко, А. О. (2020). Інструменти digital-маркетингу як засіб просування продукції вітчизняних промислових підприємств. *Ефективна економіка*, (3). https://doi.org/10.32702/2307-2105-2020.3.7
Oklander, M. A., Oklander, T. O., & Yashkina, O. I. (2017). *Digital marketing is a marketing model of the 21st century* (monograph). Odesa, Astroprint.	Окландер, М. А., Окландер, Т. О., & Яшкіна, О. І. (2017). *Цифровий маркетинг – модель маркетингу XXI сторіччя* (монографія). Одеса, Астропринт.
Pavlenko, A. F., Reshetnikova, I. L., & Vojchak, A. V. (2008). *Marketing:* KNEU.	Павленко, А. Ф., Решетнікова, І. Л., & Войчак, А. В. (2008). *Маркетинг:* КНЕУ.
Poita, I. O., Mosiychuk, I. V., & Kalinichenko, O. O. (2023). Digital marketing: current state and development prospects in Ukraine. *Business Inform,* (7), 219–224. https://doi.org/10.32983/2222-4459-2023-7-219-224	Пойта, І. О., Мосійчук, І. В., & Калініченко, О. О. (2023). Digital-маркетинг: сучасний стан і перспективи розвитку в Україні. *Бізнес Інформ,* (7), 219–224. https://doi.org/10.32983/2222-4459-2023-7-219-224
Ponomarenko, I. V., Pavlenko, V. M., Morhulets, O. B., Ponomarenko, D. V., & Ukhnal, N. M. (2024, February 2) Application of artificial intelligence in digital marketing. *6th Workshop for Young Scientists in Computer Science & Software Engineering,* 155–166.	
Project PROMIS. (2019). *Branding and marketing of territories. What is the secret of the most successful cities in Ukraine?* Case stages. http://pleddg.org.ua/wp-content/uploads/2019/09/Case_Study_PLEDDG_Regional_BrandingMarketing_2019.pdf	Проект ПРОМІС. (2019). *Брендинг і маркетинг територій. У чому секрет найбільш успішних міст в Україні?* Кейс-стаді. http://pleddg.org.ua/wp-content/uploads/2019/09/Case_Study_PLEDDG_Regional_BrandingMarketing_2019.pdf

Rein, I., Kotler, P., & Haider, D. (1993). *Marketing Places: Attracting Investment, Industry, and Tourism to Cities, States, and Nations.* The Free Press	
Reshetnikova, I. L. (2013). *Marketing [Electronic resource]: cases, situational exercises, test tasks: practicum.* KNEU.	Решетнікова, І. Л. (2013). *Маркетинг [Електронний ресурс] : кейси, ситуаційні вправи, тестові завдання: практикум.* КНЕУ.
Romanenko, L. F. (2019). Digital marketing: essence and development trends. *Scientific Notes of Lviv University of Business and Law,* (23), 80–84.	Романенко, Л. Ф. (2019). Цифровий маркетинг: сутність та тенденції розвитку. *Scientific Notes of Lviv University of Business and Law,* (23), 80–84.
Rud, N. T. (2021). Brand as an intangible asset in the innovation economy. *Economic Forum, 1*(4), 94–100. https://doi.org/10.36910/6775-2308-8559-2021-4-13	Рудь, Н. Т. (2021). Бренд як нематеріальний актив в інноваційній економіці. *Економічний форум, 1*(4), 94–100. https://doi.org/10.36910/6775-2308-8559-2021-4-13
Samodai, V. P., Mashina, Y. P., & Kovtun, G. I. (2023). Methodical principles of brand creation. *Economy and society,* (47).	Самодай, В. П., Машина, Ю. П., & Ковтун, Г. І. (2023). Методичні засади створення бренду. *Економіка та суспільство,* (47).
Sevonkaeva, O. O. (2014). *Marketing communications.* KNEU.	Сєвонькаєва, О. О. (2014). *Маркетингові комунікації.* КНЕУ.
Shevchenko, T. (2023, July 15). *What is digital marketing: basics, channels and tools?* Wizeclub. https://wizeclub.education/blog/shho-take-digital-marketing-osnovi-kanali-ta-instrumenti	Шевченко, Т. (2023, 15 липня). *Що таке digital-маркетинг: основи, канали та інструменти?* Wizeclub. https://wizeclub.education/blog/shho-take-digital-marketing-osnovi-kanali-ta-instrumenti/
Shmychkov, M. (2022). *12 simple stages of SEO site promotion.* Seoquick. https://seoquick.com.ua/ua/seo/	Шмичков, М. (2022). *12 простих етапів SEO-просування сайту.* Seoquick. https://seoquick.com.ua/ua/seo/
Shvets, M., & Vorontsovsky, V. (2024) *What is digital marketing: basic tools, channels and metrics*. ITstatti. https://itstatti.in.ua/internet-marketing/804-shcho-take-digital-marketing.html	Швець, М., & Воронцовський, В. (2024) *Що таке digital-маркетинг: основні інструменти, канали та метрики.* ITstatti. https://itstatti.in.ua/internet-marketing/804-shcho-take-digital-marketing.html
Skil'ky-skil'ky? (2024, June 10). *The share of men among Ukrainian refugees in the EU has increased to 22%.* https://skilky-skilky.info/chastka-cholovikiv-sered-ukrainskykh-bizhentsiv-v-yes-zrosla-do-22	Скільки-скільки? (2024, 10 червня). *Частка чоловіків серед українських біженців в ЄС зросла до 22%.* https://skilky-skilky.info/chastka-cholovikiv-sered-ukrainskykh-bizhentsiv-v-yes-zrosla-do-22
Smerichevskyi, S. F., Petropavlovska, S. E., & Radchenko, O. A. (2019). *Brand management.* NAU.	Смерічевський, С. Ф., Петропавловська, С. Є., & Радченко, О. А. (2019). *Бренд-менеджмент.* НАУ.
Studinska, G. Ya. (2020, September 18). Branding as a tool to overcome the consumerist strategy of the country's development. *Materials of the 1st All-Ukrainian conference "BOHOLIBS'KI CHYTANNYA".* Pereyaslav-Khmelnytsky State Pedagogical University named after Grigory Skovoroda.	Студінська, Г. Я. (2020, 18 вересня). Брендинг як інструмент подолання споживацької стратегії розвитку країни. *Матеріали I Всеукраїнської конференції "БОГОЛІБСЬКІ ЧИТАННЯ".* ДВНЗ "Переяслав-Хмельницький державний педагогічний університет імені Григорія Сковороди".
Tanasiychuk, A. M. (2023). Development of brand communications in the digital environment. *Transformational Economics, 3*(03).	Танасійчук, А. М. (2023). Розробка комунікацій бренду в цифровому середовищі. *Трансформаційна економіка, 3*(03).
The Economist. (2024, June 26). *The Global Liveability Index 2024.* https://www.economist.com/ graphic-detail/2024/06/26/the-worlds-most-liveable- cities-in-2024	
The Investopedia Team. (2024, January 25). *What Is Digital Marketing? Types and Examples.* Investopedia. https://www.investopedia.com/terms/d/digital-marketing.asp	

TPBO. (2015, June 26). *Philip Kotler on Place Marketing, Branding and Why We Need to Rethink Capitalism.* https://placebrandobserver.com/interview- philip-kotler

Tsymbalenko, N. V. (2021, October 19) Peculiarities of marketing activity in the conditions of digitalization of the economy. *Globalization challenges to the development of national economies: theses of the reports of the II International science and practice Conf.*, 358–360.	Цимбаленко, Н. В. (2021, 19 жовтня) Особливості маркетингової діяльності в умовах діджиталізації економіки. *Глобалізаційні виклики розвитку національних економік: тези доповідей II Міжнар. наук.-практ. Конф,* 358–360.
Urupa, I. O. (2023). Theoretical concept of branding in conditions of business relocation. *Problems of modern transformations. Series: Economics and Management,* (9). https://doi.org/10.54929/2786-5738-2023-9-04-04	Урупа, І. О. (2023). Теоретичний концепт брендингу в умовах релокації бізнесу. *Проблеми сучасних трансформацій. Серія: економіка та управління*, (9). https://doi.org/10.54929/2786-5738-2023-9-04-04
Vdovichena, O. G., Shuprudko, N. V., & Vovk, S. V. (2020). Development of regional brands (practice of regions of Ukraine). *Economy and State,* (11), 69–74.	Вдовічена, О. Г., Шупрудько, Н. В., & Вовк, С. В. (2020). Розвиток регіональних брендів (практика областей України). *Економіка та держава*, (11), 69–74.
Zayachkovska, G. A. (2011). The country's tourism brand. *Economy of Crimea, 3*(36), 274–277.	Заячковська, Г. А. (2011). Туристичний бренд країни. *Економіка Криму, 3*(36), 274–277.

Zolyak, V. V., & Horchikova, A. O. (2022). Modern practice of territory branding. *Scientific journal "Scientific notes of TNU named after V. I. Vernadsky, 33*(72), *6*(2), 177–181. https://doi.org/10.32782/2710-4656/ 2022.6.2/30

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CONSTRUCTING A COMBINED BRAND IDENTITY

Identity has acquired the status of a key concept in social, cultural and economic contexts, because it affects the formation of human values, beliefs, preferences and behavior, in particular, consumer behavior. Moreover, consumption itself has long been a stable form of organizing social life, as it focuses on almost all social positions, becoming an almost ideal identifier. Because of this, the research of the target audience is considered the basis of branding, because its coincidence with the brand identity significantly increases consumer loyalty to the brand. On the other hand, brands tend to become part of the consumer's self-concept, influencing his values and lifestyle. It highlights the different roles of identity as an influencer (consumer on the brand) and as an object of influence (brand on the consumer). The search for ways to achieve a balance between consumer identity and brand identity outlined the research hypothesis, that systemic and structural approach will allow taking into account all elements of the consumer's identity in the process of brand identity formation and bring the "brand-consumer" relationship to a new emotional level through the construction of a complex, joint identity. Based on the methods of scientific analysis and synthesis, conceptualization and structural modelling, the key components of consumer

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КОНСТРУЮВАННЯ СПОЛУЧЕНОЇ ІДЕНТИЧНОСТІ БРЕНДУ

Ідентичність набула статусу ключового поняття в соціальному, культурному та економічному контекстах, адже впливає на формування людських цінностей, переконань, вподобань і поведінки, зокрема споживацької. Причому саме споживання давно виступає сталою формою організації соціального життя, оскільки орієнтується практично на всі соціальні позиції, стаючи майже ідеальним ідентифікатором. Через це дослідження ідентичності цільової аудиторії розцінюється як основа брендингу, адже її збіг з бренд-ідентичністю суттєво підвищує лояльність споживачів до бренду. З іншого боку, брендам властиво ставати частиною Я-концепції споживача, впливаючи на його цінності й стиль життя. Це підкреслює різні ролі ідентичності як фактора впливу (споживача на бренд) і як об'єкта впливу (бренда на споживача). Пошуки способів досягнення балансу між ідентичністю споживача і бренд-ідентичністю окреслили гіпотезу дослідження: системно-структурний підхід дасть змогу врахувати всі елементи ідентичності споживача у процесі формування ідентичності бренду та вивести відносини "бренд–споживач" на новий емоційний рівень шляхом конструювання комплексної, спільної ідентичності. На основі методів наукового аналізу та синтезу, концептуалізації і структурного моделювання *identity and brand identity were identified. The structure of the consumer's identity has been improved by supplementing it with goals and ambitions of the consumer. A categorical apparatus of brand management has been developed due to the introduction of the concept of "combined brand identity", the starting condition for the construction of which is the analysis of the consumer's identity. The result of the proposed system-structural approach is a generalized matrix that allows forming a combined brand identity through a combination of different level factors of consumer identity and constituent elements of brand identity. The application of a system-structural approach will provide a detailed analysis of various consumer segments and will allow determining which elements of the consumer's identity should be reproduced in the brand for each segment. This will help to transform the brand's partnership with the consumer into a vital priority based on emotional intelligence*

Keywords: identity, consumer, brand identity, factors, approach, method, emotional connection.

виявлено ключові складові ідентичності споживача та бренд-ідентичності. Удосконалено структуру ідентичності споживача через її доповнення споживацькими цілями та амбіціями людини. Розвинуто категорійний апарат бренд-менеджменту шляхом уведення поняття "сполучена ідентичність бренду", вихідною умовою конструювання якої є аналіз ідентичності споживача. Результатом запропонованого системно-структурного підходу є узагальнена матриця, що дає змогу сформувати сполучену ідентичність бренду шляхом комбінації різнорівневих факторів ідентичності споживача та складових елементів ідентичності бренду. Застосування системно-структурного підходу забезпечить детальний аналіз різних сегментів споживачів і дозволить визначити, які елементи ідентичності споживача доцільно відтворити у бренді для кожного сегмента. Це сприятиме перетворенню партнерських відносин бренду зі споживачем на життєвий пріоритет на основі емоційного інтелекту.

Ключові слова: ідентичність, споживач, бренд-ідентичність, фактори, підхід, метод, емоційний зв'язок.

JEL Classification: B20, B40, D12, M31.

Introduction

The evolution of marketing has demonstrated the need to take into account the consumer, relationships with whom largely ensure the success of the brand and the company's competitiveness in the market. Moreover, having become more knowledgeable, critical and demanding, consumers expect companies to have a deep understanding of their needs, preferences and values, and therefore they are ready to participate in the processes of creating and promoting brands and expect feedback.

Over time, it has also become clear that consumers buy brands or products that match their self-image, thereby buying a certain lifestyle. In other words, consumption becomes a means of demonstrating consumer identity (Ilaw, 2014). That is, the brand is an expectation that lives in the consumer's mind and helps him to define and demonstrate his identity; express his individuality and self-realization; take into account the consumer's characteristics in order to be chosen. On the other hand, a brand can transmit its values to the consumer, participate in the formation of his identity, integrating into the consumer's Self-concept (Saint Clair, 2023) and directly influence his desires and purchasing behavior (Zhang, 2023). In this case, the brand seems to dictate to the consumer that by purchasing it, he at the same time acquires a certain label in society: he belongs to a certain class, is socially responsible, such as "keeps up with the times". Thus, the aim of research interest also includes brand identity as a key component of its DNA, which must be consistent with the identity of consumers through statements about the goals or values of the brand (Michel et al., 2022). This question requires a deeper understanding of the content of consumer identity and the search for ways to reconcile all its components with the brand identity.

Issues of identity were raised in the works of scientists back in the last century, and went beyond the spheres of psychology and sociology in studies of the phenomenon of consumption. Among the significant works that have outlined this research direction, we should recall the theory of consumption divergence (Saunders, 1986), on the basis of which conclusions have been repeatedly drawn that consumption is largely determined by the specifics of the individual, and not just by production processes. Such views led to the activation of an alternative direction of research. Moreover, scientific searches were carried out both to understand consumer preferences and consumer choice of brand (Schneck & Holman, 1980; Heath & Scott, 1993; Ilaw, 2014; Taranenko & Kovshova, 2020), and for the formation of brands that meet the criteria of this choice (Aaker & Joachimsthaler, 2002; Kapferer, 2014; Mindrut et al., 2015; Laburtseva, 2016; Yahelska et al., 2023).

Mihalcea & Catoiu (2008) justify that each person goes through the process of identity formation and looks for symbols with the help of which he can determine his self-esteem, therefore the brand preferences should be based on the correspondence between the brand identity and the individual perceptions of the consumer about himself.

In turn, consumer identity is influenced by consumer culture, which determines consumer choice, so marketers must identify their diverse consumers through an understanding of the relevant culture and produce goods with cultural and prospective identity in mind (Habib & Hossain, 2015).

More recent works also emphasize the importance of reconciling both categories under consideration (von Wallpach et al., 2017; Kristal et al., 2020; Anaza et al., 2021). We are increasingly talking about the fact that not only the consumer's identity influences the brand, being a factor in its formation, but also itself is the object of the brand's influence, adapting to the finished brand and its identity (Bilyavskyi & Doguzov, 2021; Lykholat & Zadorizhna, 2021; Konovalenko, 2018; Iankovets, 2024). Saint Clair provides a good example of brand-based identity building – "I am an "Apple person" (Saint Clair, 2023).

Alvarado-Karste & Guzmán (2020) consider emotional and rational brand identities, which create varying degrees of value depending on the cognitive style of consumers. Consumers internalize the brand's message or identify with what the brand represents. Although this has already been discussed in various sources, the original contribution of this work is that the authors attempted to tie all these concepts together.

Studying the formation of identity, endowment of goods with symbolism and personal consumption, Zhurylo et al. (2023) substantiate that these categories are constantly undergoing changes. Identity formation becomes a more "creative" process and focuses on self-expression through available tools rather than simply following the crowd. Brand symbolism becomes more complex as brands integrate into their positioning the values on which people choose a particular brand.

Accordingly, the issue of balance between identity as a factor of influence and identity as an object of influence in the light of the constant movement of symbols, values, desires and proposals remains relevant. So, in what case the process of researching consumer's behaviour can be suspended and the consumer's identity must be taken as the basis for the formation of a brand identity. In addition, the question of identity components remains: whether all the features of consumer's personal and social identity are taken into account in the brand development process. And vice versa: in what case it can be argued that a brand's identity will allow to integrate into the consumer's Self-concept in the existing format. The search for answers to these questions leads importance to develop a practical approach to harmonize the categories under consideration in brand management and form a single, comprehensive brand identity that would include all elements of consumer identity, which is extremely important in the period of mass customization that we can observe in lately.

The aim of the research is to substantiate the systematic and structural approach to the construction of a combined brand identity. To achieve the aim, the following tasks must be solved:

- to carry out a structural analysis of the consumer and brand identity contents;
- to reveal the content of the combined brand identity as a complex category in brand management based on the definition of the connections between consumer identity and brand identity;
- to develop the methodological principles of constructing a combined brand identity.

The hypothesis is that the systematic and structural approach will allow taking into account all elements of the consumer's identity in the process of forming the brand's identity, and at the expense of their coherence, construct *lovemarks*, moving from partnership to emotional connection. The hypothesis was tested on the basis of the provisions of the classical and modern theory of consumption, the theory of marketing, the results of scientific research on branding, presented in the works of domestic and foreign scientists. In the process of research, the methods of systematization, comparison and generalization, as well as the dialectical method and specification were used to determine the components of consumer identity and brand identity, their features and justify the feasibility of constructing a combined identity as a complex category of brand management; a systematic approach, decomposition, structural analysis and synthesis to justify the methodological foundations of the construction of a combined identity; conceptualization, structural modeling, the method of morphological analysis and the matrix method – in the process of developing a combined brand identity, as well as graphic and tabular methods.

The main part of the article consists of two subsections divided into paragraphs. The first subsection is devoted to the theoretical analysis of identity as a category of brand management; the second is about the justification of the scientific approach and method of constructing a combined brand identity.

1. Consumer identity Vs brand identity

1.1. Consumer identity in brand management: essence and main components

Based on a number of studies (Habib & Hossain, 2015; Saint Clair, 2023), identity can be defined as the way in which a person perceives and understands himself in the context of a social environment, culture, group or brand. That is, the *consumer identity* describes the perception, self-awareness, beliefs and identification of oneself through the consumption of goods, services and brands. It reflects the way in which consumers define themselves, express their values, interests, preferences, social affiliation and personal characteristics through their consumer behavior.

By the *construction of consumer identity* we understand the process of forming and expressing personal identity through interaction with a product, brand or service. Companies' involvement in consumer identity construction relies on understanding how consumers use certain products or brands to construct and express their unique identity.

Understanding how consumers construct their identity through consumption is important for companies, because products and services that meet the needs and desires of consumers and allow them to express their uniqueness will be more sought after in the market. Accordingly, in the context of brand management, understanding consumer identity allows brands to better respond to the needs and desires of their target audiences and build strong connections with consumers. So, on the one hand, consumers independently construct their identity, on the other hand, this process is influenced by many factors, the understanding of which allows companies to indirectly participate in the process of constructing the identity of consumers, helping them to express their uniqueness, demonstrate their values and belonging to certain groups.

Based on Davydova et al. (2018), Kozlovets (2009), Zhadan et al. (2019), *the structure of consumer identity* can be described through the following *aspects:*

- Self-definition (consumer identity helps people define themselves in the context of consumption; it may include such components as values, beliefs, lifestyle, interests and aspirations);
- Self-expression (consumer identity enables people to express their personality and individuality through consumption. Choosing certain brands,

goods or services can be a way to express their preferences, style, taste and social position);

- Social belonging (consumer identity is reflected in social belonging and group identification. People may feel belonging to certain consumer subcultures, communities or groups that reflect their values, interests and lifestyle);
- Identification with brands (a consumer's identity can be associated with identification with certain brands. Consumers can choose brands that match their values, identities and create a sense of relationship with these brands).

In our opinion, another component that can complement the consumer identity is the consumer's goals and ambitions, which gives it a strategic vision. Talk about seeing yourself in the future with different norms of behavior and/or capabilities, belonging to a different social group, switching to other brands, etc.

That is, the consumer is self-determined (somehow sees himself and knows how he wants to be perceived by others), for this he chooses different ways of self-expression (through his actions, behavior, style, appearance, choice of products and services). He feels belonging to a certain social group (community, subculture) and demonstrates this through his consumption choices, in particular, through brands that reflect or emphasize his identity. These are brands that reflect his values, lifestyle or personal characteristics. However, taking into account aspects such as achieving success, status enhancement, self-development, health and well-being, promoting sustainnability or creating change in the world will help to further understanding how the consumer sees his goals and ambitions in the context of his consumption and how these goals influence on his choice and perception of brands. For example, a consumer may seek to purchase health products, sportswear, exercise equipment, or fitness center memberships in order to maintain or improve his health and fitness. Therefore, including consumer goals and ambitions in the understanding of consumer identity will help to better reveal the motivations and values that underline consumer choices in specific areas of consumption.

1.2. Brand identity concept

The identity concept is also applied to the brand. Although the development of the brand identity concept caused the variation of the components of this category (Aaker & Joachimsthaler, 2002; Kapferer, 2014; Kohli et al., 2004; Mindrut et al., 2015; Shiva, 2005; Wheeler & Meyerson, 2024), together they all define the image and character of the brand:

Brand values are values that reflect the principles and beliefs that the brand seeks to embody and share with its consumers. Values can include honesty, style, sustainability, innovation, quality, environmentalism, social responsibility, and others.

Brand personality is a component that determines which characteristic or typicality of a brand consumers associate with it. It can be expressed through attributes that describe the brand, through the "humanization" of the brand – fun, reliable, elegant, adventurous, authentic, etc.

Brand promise is a promise or an offer that a brand makes to its consumers. It defines what specific benefit or value the brand offers to its customers. It can be convenience, innovation, quality, personal care, unique experience, entertainment, etc.

Legend, brand history and heritage reflect the history, roots and heritage of the brand. It can be based on traditions, values, significant events or features that distinguish the brand from others. A brand's history can strengthen its uniqueness and create an emotional connection with consumers.

Brand elements are visual identity and verbal identifiers that distinguish the brand, such as the logo, color scheme, fonts, sound logo, slogans, etc. These elements help create brand awareness.

In the process of interaction, these components form a unique brand identity; help determine how the brand is perceived by consumers, what value it offers and how it differs from competitors. A comprehensive understanding of these components allows brands to develop strategies, communication and products that meet consumer needs and form reliable relationships with consumers.

1.3. Combined identity as a complex category in brand management

Mostly, consumers want to feel a connection with the brand, to be co-owners of its values and identity. When a consumer identity aligns with a brand identity, an emotional connection is created that fosters loyalty, repeat purchases, and positive brand image dissemination.

Consumer identity and brand identity are two distinct but interrelated categories in marketing and brand management (*Table 1*).

Table 1

Meaningful filling of consumer identity and brand identity in terms of their comparative analysis

Criterion	Consumer identity	Brand identity
Essence	It is defined as a set of ideas, beliefs, values and preferences that the consumer associates with himself	It is defined as a set of values, features, image, message and way of identifying the brand
Formation	It is formed through interaction with different social groups, culture, experience and self-perception	It is established by the brand independently as a result of strategic positioning and communication
Influence	Influences consumer behavior, choice of products and services, preferences and loyalty to brands	Influences consumers' perception of the brand, their perception of it, loyalty and purchase decisions
Accent	It focuses on the consumer himself, his values and self-perception	Focuses on the image and way of presenting the brand
Mobility	Flexible because it is personal and individual (consumers can change their interests, attitudes and values over time and this can affect their identity. This is especially important in markets with rapid change or new technologies)	Can be developed strategically with target audience and positioning in mind, can be sustainable and persist over a long period to ensure recognition

Source: compiled by authors based on (Mindrut et al., 2015; GBS.com.ua, n. d.).

Although these two categories are separate, they share certain similarities:

- both categories form a key to creating a connection between consumers and brands;
- consumer identity and brand identity are interconnected and can interact with each other;
- with a successful interaction between the consumer and brand identities, an emotional connection arises, which contributes to brand loyalty and perception.

Based on the above and research on the impact of consumer identity on brand recognition (Sturdy, n.d), it can be summarized that consumer identity affects various aspects of brand management: on brand strategy, on brand positioning, on communication and messages, on trust and loyalty.

The dynamism of consumption and the mobility of consumer identity require flexibility, constant adaptation and innovation in brand management strategies. For example, recently, manufacturers around the world are trying to understand the behavior of representatives of "Generation Z" (according to the theory of generations Howe & Strauss (2000)), habits and characteristics of consumers of this group in order to form effective marketing strategies. Ukrainian consumers have also changed under the influence of the war, because priorities and consumer preferences have changed, interest in domestic goods has increased, environmental and patriotic consciousness has increased.

Consumers often use products or brands that they perceive as a reflection of their values, interests, and personality. In turn, companies try to understand these consumer motivations and create products and organize marketing campaigns that help consumers construct their identities through consumption. This may include creating an impression of prestige, style, individuality or belonging to a particular group. Accordingly, the participation of companies in the construction of the consumer identity in the process of brand management requires a systemic and structural approach that takes into account the relationship of all brand elements with elements of the consumer identity to create a common identity, let's call it a *combined identity*, which characterizes the commonality and convergence between the brand and consumers, reflects not only the idea of cooperation and partnership between the brand and its audience, but also forms a close emotional connection, making the brand a priority in life.

2. Methodological principles of the combined identity construction as a starting condition of branding

2.1. Conceptualization of combined identity in brand management

In order to support the interaction between the brand and the consumer, identity construction in brand management should be based on a number of principles that will help create a connection between both parties and contribute to the further formation of a combined identity.

The main *principles of the combined identity construction* can be formulated based on the general principles of marketing and brand management (Kotler et al., 2009; Bonuke & Charles, 2017; Chukurna & Solidor, 2023):

Cooperation and interaction (studying the needs and opinions of consumers, open dialogue, feedback, involving the consumer in the process of constructing a brand identity)

Personalization (awareness of the uniqueness of each consumer, provision of a personalized approach in communication and services, which allows consumers to feel that the brand understands their individual needs and lifestyle);

Authenticity (consumers appreciate brands that are authentic and truthful. When constructing an identity, it is important to be true to the brand's values and mission, which helps build consumer trust and loyalty).

Innovation and creativity (the implementation of innovative and creative solutions helps to create a unique identity that attracts attention and goes beyond the traditional);

Unification of values (the brand should unite people around common values and beliefs).

Strategic orientation and continuous development (brand identity must be alive and change along with changes in consumer needs and tastes).

Systematicity (adherence to systematicity in communication, image and values of the brand helps maintain the stability of the identity and create recognition among consumers).

From the defined principles, it follows that identity construction is a continuous process that requires adaptation to changes in consumer needs and requirements, as well as to changes in the market and competitive environment. It requires careful planning, systematic updating and improvement to remain relevant and effective, and its complexity is due to a wide range of audiences with different needs and values, the multiplicity of factors of the identity of consumers themselves and the influence on how they perceive and identify brands. The formation of the brand image should be preceded by the research of the target audience and the formation of various identity options, and the implementation of communication strategies for the reproduction of the consumer identity requires analytical support for the purpose of appropriate correction if necessary (*Figure 1*).

Since the platform of identity construction in the process of brand management is consumer research, the first stage provides for the selection of research approaches and methods (*Table 2*).

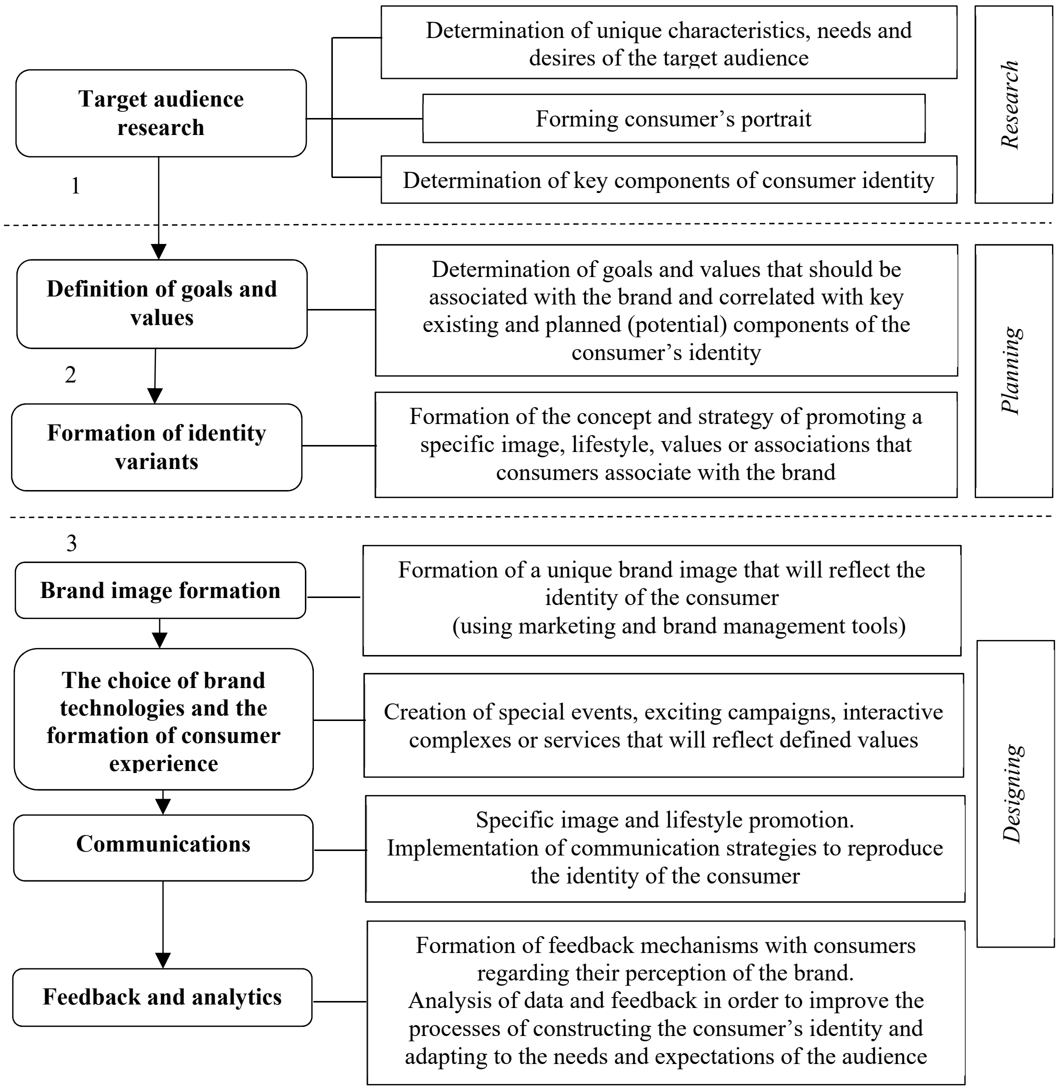

Figure 1. Algorithm for constructing a combined identity in brand management

Source: compiled by the authors.

Table 2

Scientific approaches to research and modelling of consumer behavior

Approach	Content	Methods
Social	Considers the influence of the social environment on consumer behavior	Analysis of group dynamics, influence of social norms, cultural characteristics and other social factors
Psychological	Examines the psychological aspects of consumer behavior, such as perception, imagination, stereotypes, the influence of emotions, individual characteristics and thoughts; is based on psychological theories and research methods, and its goal is to reveal the psychological mechanisms that influence consumer behavior	Psychological theories and research methods, such as questionnaires, observations, interviews, experiments, projection methods (image projection techniques, associative testing, role-playing games, projective drawings, situation construction)

End of the Table 1

Approach	Content	Methods
Motivational	Focuses on the study of motives, values, needs and beliefs that motivate consumers to certain behavior, for example, the purchase of certain goods or services; distinguishes two groups of motives for consumer behavior between people: selfish (aimed at the personal well-being of the consumer) and altruistic (aimed at the collective well-being of the family, social group and society as a whole)	Focus groups, questionnaires, observations, interviews, experiments
Economic:	Focuses on value, benefit and cost analysis in the context of consumer decision making	Factors affecting the rational choice of products and brands are studied
- ordinalist	Consumers are considered capable of making only comparative evaluations of goods and services	Qualitative research methods prevail (the approach does not involve absolutely accurate numerical values, but only an order of importance or satisfaction)
- cardinalist	Consumers are believed to be able to assign specific numerical ratings to their impressions or preferences, allowing accurate comparisons to be made between goods and services	Quantitative methods of research prevail (implies the measurement of utility or satisfaction from the consumption of goods and services in numerical units
Institutional	Consumer behavior is considered irrational; the institutional environment of the consumer market is considered as its regulator	Ethnographic studies, in-depth interviews, sociological surveys, cultural studies
Synergistic	Considers consumers and brands as a dynamic system, the interaction of which leads to unpredictable results. Takes into account that the formation of needs is a process of transition from a state that corresponds to the orientation of consumer behavior to satisfy only the basic needs of existence, to a state where the needs to achieve life goals prevail under the influence of values, interests, inspiration, etc.	Methods that allow you to study dynamic interactions and unpredictable phenomena (system analysis, structural analysis, simulation modeling, agent modeling, content analysis, focus groups and interviews, sociometry)
Motivational marketing	The analysis of consumer behavior goes beyond the ordinary utility of goods and income and takes into account a number of personal and psychological factors (the consumer pays attention to value, price and a number of personal and psychological factors)	Focus groups, in-depth interviews, social studies, experiments, surveys, questionnaires

Source: formed on the basis of (Kolomytseva & Vasylchenko, 2022; Ratsa, 2015; Semenda & Semenda, 2018; Taranenko & Kovshova, 2020).

Choosing consumer research methods, it is important to consider research objectives and available resources. Traditional methods such as surveys, focus groups, interviews, observations and social media analysis are best used in combination. For example, combining a survey with focus groups or interviews with observation can provide a deeper understanding of consumer motivations and needs. The use of non-standard methods will make it possible to better understand consumers and reveal unexpected motivations and preferences, contribute to the discovery of new ideas and opportunities for innovation, which allows brands to differentiate themselves in the market and meet the changing needs and preferences of consumers.

Formation of the consumer's portrait and determination of the key components of his identity is considered as the basis of brand adaptation to the consumer or, on the contrary, the proposal or even "imposition" of certain elements of identification. For example, vapers appeared as a result of the offer of electronic cigarettes, their active promotion and involvement of consumers in the vaping process, as a result of which a whole lifestyle was formed.

To determine the key components of the consumer's identity (both at the stage of research and direct construction), in our opinion, it is advisable to turn to the method of morphological analysis proposed by F. Zwicki, due to the possibility of considering different solutions to the problem by decomposing it and combining possible implementations of individual attributes (Ritchey, 2002). Therefore, combining the main structural elements of identity will make it possible to choose the most appropriate version of it.

Along with, as Nahorna (2011) noted, typology of identities is complicated by their multifacetedness. Thus, each person is aware of himself as a member of several communities at the same time: "identifies himself with a nation, state system, region, language community, social, age or professional group, religious denomination, etc." According to Huntington (2004), along with independent sources of self-identification (age, gender, belonging to an ethnic group, racial belonging), there are also cultural (national, linguistic, religious, civilizational belonging), political (party or factional belonging, ideological priorities), economic (work, profession, belonging to strata or classes), collectivist-group (social status, social roles, family, friends, clubs), territorial (city, region, region) identities. Accordingly, Nahorna (2011) operates with the concepts of identification "core" and "orbit", describing the combination of identities and a person's belonging to social structures, various systems of relationships and cultural values. So, in our opinion, it is expedient to systematize the factors of consumer identity formation by levels.

2.2. Constructing a combined identity: a method of creativity

Based on the outline and developing the ideas of the researchers mentioned above, we can present consumer identity (i) as a complex category reflecting self-definition (A), self-expression (B), social belonging (C), identification with brands (D), consumer goals and ambitions (E) and is determined by a complex of different level factors x_n:

$$\begin{cases} i = A \cdot B \cdot C \cdot D \cdot E, \\ i = f(x_1, x_2, x_3, x_4). \end{cases} \tag{1}$$

The components of identity are not fixed by certain factors and can flexibly respond to their dynamics. As mentioned, we suggest structuring different level factors using a morphological matrix (*Table 3*).

Table 3

Morphological matrix of consumer identity construction

Factors				Identity *(i)*
1. Socio-demographic (x_1)	2. Behavioral (x_2)	3. Psychographic (x_3)	4. Geographical (x_4)	
x_{11}	x_{21}	x_{31}	x_{41}	A. Self-determination
x_{111}	x_{211}	x_{311}	x_{411}	
x_{112}	x_{212}	x_{312}	x_{412}	B. Self-expression
...	...	...	...	
x_{12}	x_{22}	x_{32}	x_{42}	C. Social belonging
x_{121}	x_{221}	x_{321}	x_{421}	
x_{122}	x_{222}	x_{322}	x_{422}	D. Identification with brands
...	...	...	...	
x_{1n}	x_{2n}	x_{3n}	x_{4n}	E. Consumer goals and ambitions

Source: compiled by the authors.

That is, the identity of a conditional consumer based on the example of a morphological matrix (*Table 3*) can be represented as a morphological set (2):

$$\begin{cases} x_{111}\ x_{121}\quad x_{122}\quad x_{1n} \\ x_{211}\ x_{212}\quad x_{221}\quad x_{222} \\ x_{312}\ x_{321}\quad x_{322}\quad x_{3n} \\ x_{411}\ x_{412}\quad x_{421}\quad x_{4n} \end{cases} \tag{2}$$

Developing ideas of Blagopoluchna and Lyakhovska (2022), Escalas & Bettman (2005), Yevtushevska (2016), Zhaldak & Yatsenko (2021), and Nahorna (2011), we will present the factors of construction of the consumer identity in groups of different levels.

The group of social and demographic factors *(x_1)* can consist of the following levels:

x_{11} – age;
x_{12} – gender;
x_{13} – family size;
x_{14} – stage of the family life cycle;
x_{15} – income level per month;

x_{16} – education;
x_{17} – activities;
x_{18} – creed;
x_{19} – nationality;
x_{1n} – etc.

Factor sublevels can be converted to numerical values or described by accepted criteria. For example, behavioral factors *(x_2)* may include the following levels:

x_{21} – expected benefits:
x_{211} – quality:
x_{2111} – perfect;
x_{2112} – adequate;
x_{2113} – predictable;
x_{222} – price:
x_{2221} – high;
x_{2222} – acceptable;
x_{2223} – low;
x_{233} – prestige:
x_{2331} – insufficient (or 1 point);
x_{233n} – prestigious (or up to 5 points);
x_{234} – service:
x_{2341} – basic (or 1 point);
x_{234n} – additional (or up to 5 points);
x_{22} – consumer status:
x_{221} – does not consume;
x_{222} – consumed before;
x_{223} – potential consumer;
x_{224} – regular consumer;
x_{23} – personal behavior:
x_{231} – innovators;
x_{232} – pioneers;
x_{233} – early majority;
x_{233} – late;
x_{234} – laggards;
x_{24} – degree of consumption:
x_{241} – weak;
x_{242} – moderate;
x_{243} – active;
x_{25} – a reason to buy:
x_{251} – for own consumption;
x_{242} – for a gift;
x_{26} – degree of commitment:
x_{251} – an undisputed supporter;

x_{252} – tolerant;
x_{253} – a fickle follower;
x_{254} – "wanderer";
or (absent, weak, medium, strong, absolute);
x_{27} – degree of readiness for perception:
x_{271} – uninformed;
x_{272} – informed;
x_{273} – interested;
x_{274} – willing;
x_{271} – intends to purchase;
x_{28} – attitude to the product / brand:
x_{281} – delighted;
x_{282} – positive;
x_{283} – indifferently;
x_{284} – negative;
x_{285} – aggressive
or according to Rokeach's value scales; Schwartz value scales; the Fishbein model; by the VALS method, etc.

Similarly, psychographic and geographical factors can be described. In general, their main levels can be presented as follows:

Psychographic factors (x_3):
x_{31} – belonging to a social class;
x_{32} – lifestyle;
x_{33} – personality type;
x_{34} – personal values;
x_{35} – personal motives;
x_{36} – interests;
x_{37} – adaptation to the new product.

Geographical factors (x_4):
x_{41} – demography:
x_{411} – regional demography;
x_{412} – economic demography;
x_{413} – ethnic demography;
x_{42} – administrative division;
x_{43} – number of residents;
x_{44} – level of infrastructure development;
x_{45} – climatic conditions;
x_{46} – cultural differences.

At the planning stage, in the process of defining goals and values and further constructing a brand identity for a defined group of consumers and their identity, it is possible to build a matrix of combined identity, which is the result of the ratio of brand identity and consumer identity (*Table 4*):

Table 4

Matrix of combined identity

Consumer identity	Segment 1	Segment 2	Segment 3	Segment n	Brand identity
Self-determination	…	…	…	…	Brand values
Self-expression	…	…	…	…	Brand personality
Social belonging	…	…	…	…	Brand promise
Identification with brands	…	…	…	…	Legend (history)
Consumer goals and ambitions	…	…	…	…	Brand elements

Source: compiled by the authors.

Based on the results of the study, the cells of the matrix are filled, which will indicate how each element of the consumer identity corresponds to each segment and what the elements of the brand's identity should be in order to be chosen by this segment.

For example, segment 1 may include consumers who value sustainability and quality, while segment 2 may include consumers who seek ground-breaking and innovative solutions, so the corresponding cells may be filled with the values and promises offered by the brand.

Conclusions

The conducted research allows us to state the need to ensure the coincidence of the consumer identity with the brand identity in order to create a strong emotional connection and transfer the brand to the category of consumers' life priorities. The improved structure of the consumer's identity at the expense of its addition with consumer goals and ambitions adds to it and, accordingly, the branding of a strategic vision. The analysis and synthesis of the structure of the brand identity using different approaches made it possible to identify its key components, which must be filled depending on the specifics of the consumer identity.

In the search for a way to ensure the coincidence of the consumer identity with the brand identity, the concept of "combined identity" is proposed, which characterizes the commonality and closeness between the brand and consumers, reflects not only the idea of cooperation and partnership between the brand and its audience, but also forms a close emotional connection, translating brand in the status of priority in life.

The conceptualization of the combined identity made it possible to determine a set of its cognitive features in brand management, to formulate the principles and algorithm of its construction. The detailing of individual stages of the construction of a combined identity as a platform determines the research and modelling of consumer behavior, which operates with a wide range of scientific approaches. Based on their analysis, the conclusion has been drawn regarding the feasibility of the classical and non-traditional research methods combination.

The proposed system-structural approach allows for the formation of a combined brand identity through the combination of various factors of the consumer identity and constituent elements of the brand identity and this confirms the proposed hypothesis. The developed concept of the combined identity will allow transforming the partnership of the brand with the consumer into the priority of the brand without the perception of substitutes based on emotional intelligence. The proposed matrices of consumer identity construction and combined brand identity can serve as a tool both for the analysis of different consumer segments and for determining which elements of the consumer identity should be reproduced in the brand identity for each segment. This can contribute to the creation of a brand that better meets the needs and values of a specific target audience on the one hand, and participate in the formation of consumer identity, in particular, national.

The formation of the brand image based on the defined elements of the combined identity will allow taking into account a number of strategic and tactical elements necessary for effective branding, namely: brand architecture, the unique offer of the brand and its place on the market in comparison with competitors, customer orientation, design and emotions, management of the consumption experience, creating consumer trust in the brand by providing quality products and services. The outlined components of the brand may vary depending on the identity of the consumer, the combined identity of a specific brand and its development strategy.

Approbation of the system-structural approach to the construction of a combined brand identity in various business areas is a perspective for further research.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Aaker, D., & Joachimsthaler, E. (2002). *Brand identity – The cornerstone of brand strategy* (pp. 33–50). New York: Free Press.

Alvarado-Karste, D, & Guzmán, F. (2020). The effect of brand identity-cognitive style fit and social influence on consumer-based brand equity. *Journal of Product & Brand Management, 29*(7), 971–984. https://doi.org/10.1108/JPBM-06-2019-2419

Anaza, N. A., Luis Saavedra, J., Hair, J. F., Bagherzadeh, R., Rawal, M., & Nedu Osakwe, C. (2021). Customer-brand disidentification: Conceptualization, scale development and validation. *Journal of Business Research*, (133), 116–131. https://doi.org/ 10.1016/ j.jbusres.2021.03.064

Bilyavskyi, V. M., & Doguzov, R. D. (2021). Brand influence on demand and consumer behavior. In O. M. Pavlova, K. V. Pavlov, L. V. Shostak, & A. M. Lyaluk (Eds.), *Socially Competent Management of Corporations in Behavioral Economics,* (26–28). Volyn National University named after L. Ukrainka. https://er.nau.edu.ua/handle/NAU/49605

Білявський, В. М., & Догузов, Р. Д. (2021). Вплив бренду на попит та поведінку споживачів. У О. М. Павлова, К. В. Павлов, Л. В. Шостак, & А. М. Лялюк (Ред.), *Соціально-компетентне управління корпораціями в умовах поведінкової економіки,* (26–28). Волинський національний університет ім. Л. Українки. https://er.nau.edu.ua/ handle/NAU/49605

Blagopoluchna, A., & Lyakhovska, N. (2022). The influence of external and internal factors on changing the behavior of consumers of hospitality services. *Economic Horizons*, *1*(19), 57–65. https://doi.org/ 10.31499/2616-5236.1(19).2022. 259406

Благополучна, А., & Ляховська, Н. (2022). Вплив зовнішніх та внутрішніх факторів на зміну поведінки споживачів послуг гостинності. *Економічні горизонти*, *1*(19), 57–65. https://doi.org/10.31499/2616-5236. 1(19).2022.259406

Bonuke, R., & Charles, L. (2017). *Principles of Marketing*. The English Press.

Chukurna, O., & Solidor, N. (2023). Strategic principles of brand management in the digital economy. *Ukrainian Journal of Applied Economics*, *8*(1), 99–105. https://www.researchgate.net/publication/ 371821814_STRATEGIC_PRINCIPLES_OF_BRAND_MANAGEMENT_IN_THE_DIGITAL_ECONOMY

Davydova, O. B., Solntsev, M. I., & Zozulyov, O. V. (2018). The consumer in the modern world: problems of identification, self-perception and relationships with the surrounding world. Use in marketing. *Actual problems of economy and management*, (12). http://ape.fmm.kpi.ua/ article/view/130983

Давидова, О. Б., Солнцев, М. І., & Зозульов, О. В. (2018). Споживач у сучасному світі: проблеми ідентифікації, самосприйняття і взаємовідносини з навколишнім світом. Використання в маркетингу. *Актуальні проблеми економіки та управління*, (12). http://ape.fmm.kpi.ua/article/view/130983

Escalas, J. E., & Bettman, J. R. (2005). Self-construal, reference groups, and brand meaning. *Journal of Consumer Research*, *32*(3), 378–389. https://www.scirp.org/reference/referencespapers?referenceid= 1450207

GBS.com.ua. (n. d.). *Techniques of influence on the consumer when developing the identity of a trade mark*. https://gbs.com.ua/ua/blog/18/

GBS.com.ua. (б. д). *Техніки впливу на споживача при розробці ідентичності торгової марки*. https://gbs.com.ua/ua/blog/18

Habib, A. & Hossain, S. (2015). Consumer culture and consumer identity. *Arabian Journal of Business and Management Review (OMAN Chapter), 4*(10). https://www.arabianjbmr.com/pdfs/OM_VOL_4_(10)/1.pdf

Howe, N., & Strauss, W. (2000). *Millennials rising: the next great generation*. Vintage Books.

Huntington, S. P. (2004). *Who Are We? The Challenges to America's National Identity*. Simon & Schuster.

Iankovets, T. M. (2024). Digital Marketing and Content Strategy in Creating Impressions of Brands' Customers. *Business Inform*, (1), 444–454. https://doi.org/ 10.32983/2222-4459-2024-1-444-454

Янковець, Т. М. (2024). Цифровий маркетинг і контент-стратегія у створенні вражень клієнтів брендів. *Бізнес Інформ*, (1), 444–454. https://doi.org/ 10.32983/2222-4459-2024-1-444-454

Ilaw, M. A. (2014). Who You Are Affects What You Buy: The Influence of Consumer Identity on Brand Preferences. *Elon Journal of Undergra-duate Research in Communications, 5*(2), 3/3. http://www.inquiriesjournal.com/articles/1035/who-you-are-affects-what-you-buy-the-influence-of-consumer-identity-on-brand-preferences

Kapferer, J. N. (2009). Kapferer's Brand-Identity Prism Model. *European Institute for Brand Management*, (24), 2014. https://www.academia.edu/ 10977543/Kapferers_Brand_Identity_Prism_model

Kohli, C. S., Harich, K. R., & Leuthesser, L. (2004). Creating brand identity: a study of evaluation of new brand names. *Journal of Business Research, 58*(11), 1506–1515. https://doi.org/10.1016/j.jbusres.2004.07.007

Kolomytseva, O. V., & Vasylchenko, L. S. (2022). Peculiarities of consumer behavior in the conditions of the modern market. *Collection of scientific papers of CSTU*, (64), 90–98. https://doi.org/10.24025/2306-4420.64.2022.255971	Коломицева, О. В., & Васильченко, Л. С. (2022). Особливості поведінки споживачів в умовах сучасного ринку. *Збірник наукових праць ЧДТУ*, (64), 90–98. https://doi.org/10.24025/2306-4420.64.2022.255971
Konovalenko, A. S. (2018). Brand influence on consumer behavior in the baby food market. *Collection of scientific papers of the Tavria State Agro-Technological University (Economic Sciences), 2*(37), 33–39. http://elar.tsatu.edu.ua/handle/123456789/7799	Коноваленко, А. С. (2018). Вплив бренду на поведінку споживачів на ринку дитячого харчування. *Збірник наукових праць Таврійського державного агротехнологічного університету (економічні науки), 2*(37), 33–39. http://elar.tsatu.edu.ua/handle/123456789/7799

Kotler, P. (et al.) (2009). *Principles of Marketing: A Global Perspective*, New Jersey.

Kozlovets, M. A. (2009). *The phenomenon of national identity: challenges of globalization*. State University named after I. Franko.	Козловець, М. А. (2009). *Феномен національної ідентичності: виклики глобалізації*. ЖДУ ім. І. Франка.

Kristal, S., Baumgarth, C., & Henseler, J. (2020). Performative corporate brand identity in industrial markets: The case of German prosthetics manufacturer Ottobock. *Journal of Business Research*, (114), 240–253. https://www.sciencedirect.com/ science/article/abs/pii/S0148296320302514

Laburtseva, O. (2016). Corporate brand identity of retail chains. *Bulletin of KNUTE*, (5), 46–57. http://visnik.knute.edu.ua/files/2016/05/5.pdf	Лабурцева, О. (2016). Ідентичність корпоративного бренду торговельних мереж. *Вісник КНТЕУ*, (5), 46–57. http://visnik.knute.edu.ua/files/2016/ 05/5.pdf
Lykholat, S, & Zadorizhna, I. M. (2021). The brand influence on consumer's behavior in the conditions of COVID-19. *Economy and society*, (26). https://doi.org/10.32782/2524-0072/2021-26-8	Лихолат, С., & Задоріжна, І. М. (2021). Вплив бренду на поведінку споживачів в умовах COVID-19. *Економіка та суспільство*, (26). https://doi.org/10.32782/2524-0072/2021-26-8

Michel, G., Torelli, C. J., Fleck, N., & Hubert, B. (2022). Self-brand values congruity and incongruity: Their impacts on self-expansion and consumers' responses to brands. *Journal of Business Research*, (142), 301–316. https://doi.org/10.1016/j.jbusres.2021.12.032

Mihalcea, R., & Catoiu, I. (2008). Consumer identity and implications for the brand. *Annales Universitatis Apulenis Series Oeconomica*, *2*(10). http://www.oeconomica.uab.ro/upload/lucrari/1020082/50.pdf

Mindrut, S., Manolica A, & Roman, C. T. (2015). Building Brands Identity. *Procedia Economics and Finance,* (20), 393–403. https://doi.org/10.1016/ S2212-5671(15)00088-X

Nagorna, L. P. (2011). *Sociocultural identity: pitfalls of value distinctions*. IPES named after I.F. Kuras of the NASU	Нагорна, Л. П. (2011). *Соціокультурна ідентичність: пастки ціннісних розмежувань*. ІПіЕНД ім. І.Ф.Кураса НАН України.
Ratsa, O. B. (2015). Methodical aspects of the study of the environment in the formation of the economic behavior of the enterprise. *Global and national economic problems*, (6), 992–996. http://global-national.in.ua/issue-6-2015/14-vipusk-6-lipen-2015-r/3372-ratsa-o-b-metodichni-aspekti-doslidzhennya-seredovishcha-pri-formuvanni-ekonomichnoji-povedinki-pidpriemstva	Раца, О. Б. (2015). Методичні аспекти дослідження середовища при формуванні економічної поведінки підприємства. *Глобальні та національні проблеми економіки*, (6), 992–996. http://global-national.in.ua/issue-6-2015/14-vipusk-6-lipen-2015-r/3372-ratsa-o-b-metodichni-aspekti-doslidzhennya-seredovishcha-pri-formuvanni-ekonomichnoji-povedinki-pidpriemstva

Ritchey, T. (2002). General Morphological Analysis A general method for non-quantified modeling. *Swedish Morphological Society*. https://www.swemorph.com/ pdf/gma.pdf

Saint Clair, J. K. (2023). *Consumer Identity: A Comprehensive Review and Integration of Contemporary Research. The Cambridge Handbook of Consumer Psychology,* 179–227. Cambridge University Press.	
Saunders, P. (1986). *Social Theory and the Urban Question*. Routledge.	
Schenk, C. T., & Holman, R. H. (1980). A sociological approach to brand choice: The concept of situational self-image. *Advances in Consumer Research*, (7), 610–614.	
Semenda, D. K., & Semenda, O. V. (2018). Study of consumer behavior in modern market conditions. *Young scientist, 1*(53), 535–540. https://lib.udau.edu.ua/items/d772a803-108d-460c-a24e-f350814b64b2	Семенда, Д. К., & Семенда, О. В. (2018). Дослідження поведінки споживачів в сучасних ринкових умовах. *Молодий вчений*, *1*(53), 535–540. https://lib.udau.edu.ua/items/d772a803-108d-460c-a24e-f350814b64b2
Shiva, N. (2005). An exploration of the brand identity – brand image linkage: A communications perspective. *Journal of Brand Management*, (12), 264–278. https://link.springer.com/article/10.1057/palgrave.bm.2540222	
Sturdy, C. (n. d.). *How Consumer Identity Influence Brand Recognizability*. https://www.loginradius.com/blog/growth/how-consumer-identity-influence-brand-recognizability	
Taranenko, A. O., & Kovshova, I. O. (2020). Study of consumer behavior when creating a company brand. *ΛΌГОΣ. ONLINE*, (9). https://www.ukrlogos.in.ua/10.11232-2663-4139.09.25.html	Тараненко, А. О., & Ковшова, І. О. (2020). Дослідження споживчої поведінки при створенні бренду компанії. *ΛΌГОΣ. ONLINE*, (9). https://www.ukrlogos.in.ua/10.11232-2663-4139.09.25.html
von Wallpach, S. & Hemetsberger, A. & Espersen, P. (2017). Performing identities: Processes of brand and stakeholder identity co-construction. Journal of Business Research, *70*(C), 443–452. https://www.sciencedirect.com/science/article/abs/pii/S0148296316305409?via%3Dihub	
Wheeler, A., & Meyerson, R. (2024). Designing Brand Identity: A Comprehensive Guide to the World of Brands and Branding. 6t Edition. Wiley. John Wiley & Sons, Ltd.	
Yahelska, K., Vasylyshyna, L., & Shkurov, Y. (2023). Development of information and communication technologies of the consumer behavior research in the process of brand management. *Eastern-European Journal of Enterprise Technologies,* 3(13(123), 34–41. https://doi.org/10.15587/ 1729-4061.2023.279615	
Yevtushevska, O. V. (2016). Peculiarities of consumer behavior on the market in modern conditions. *Investments: practice and experience,* (20), 22–24. http://www.investplan.com.ua/?op=1&z =5201&i=3	Євтушевська, О. В. (2016). Особливості поведінки споживачів на ринку в сучасних умовах. *Інвестиції: практика та досвід*, (20), 22–24. http://www.investplan.com.ua/?op=1&z=5201&i=3
Zhadan, I. V., Krasnyakova, A. O., Pozniak, S. I., & Sknar, O. M. (2019). *Mechanisms of civic and national self-identification: transformations of communicative practices: monograph* (V. I. Zhadan, Ed.); Imex-LTD.	Жадан, І. В., Краснякова, А. О., Позняк, С. І., & Скнар, О. М. (2019). *Механізми громадянської і національної самоідентифікації: трансформації комунікативних практик: монографія* (В. І. Жадан, Ред.); Імекс-ЛТД.
Zhaldak, G. P., & Yatsenko, A. M. (2021). Analysis of factors and patterns of consumer behavior. *Problems and prospects of entrepreneurship development,* (27), 145–156. https://dspace.khadi.kharkov.ua/items/8c434bb4-7ef3-4744-a915-88fbe30b6445	Жалдак, Г. П., & Яценко, А. М. (2021). Аналіз факторів та моделей поведінки споживача. *Проблеми та перспективи розвитку підприємництва,* (27), 145–156. https://dspace.khadi.kharkov.ua/items/8c434bb4-7ef3-4744-a915-88fbe30b6445

Zhang, Z. (2023). *Research on the Influence of brands on consumer purchasing behavior.* H. Mallick et al. (Eds.). (pp. 146–153). AEBMR.	
Zhurylo, V. V., Chepurnyi, S. E., & Soyma, S. (2023). Influence of branding on consumer decisions: analysis of important aspects and trends. *Economy and society*, (56). https://doi.org/10.32782/2524-0072/2023-56-150	Журило, В. В., Чепурний, С. Е., & Сойма, С. (2023). Вплив брендингу на рішення споживачів: аналіз важливих аспектів і тенденцій. *Економіка та суспільство*, (56). https://doi.org/10.32782/2524-0072/2023-56-150

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OUTSOURCE PROCESSING UNDER STAFF SHORTAGE

During the war, Ukraine has faced numerous challenges, one of the most threatening of which is the personnel shortage. The full-scale war caused large-scale labor migration, a significant number of the able-bodied population was mobilized into the ranks of the Armed Forces of Ukraine, and this became an important factor that led to a shortage of qualified workers. For many economic entities, this situation becomes critical and requires immediate and effective solutions to ensure stable work. One such solution is outsourced processing which is the transfer of certain business processes to external companies that have the necessary resources and expertise. Insufficient research on outsourcing causes a low level of business awareness of its strategic effectiveness. It is hypothesized that the use of outsourced processsing is an effective adaptive solution to overcome the personnel shortage in the war in Ukraine, which will enable business entities to optimize costs, ensure continuity and flexibility of activity, and attract highly qualified specialists. The research was carried out using the methods of analysis, comparison, systematization, empirical studies and case studies, as well as horizon scanning and logical modeling. The challenges of outsourced processing in the conditions of war are analyzed, examples of its successful application in conditions of personnel shortage are provided. The conducted studies form scientifically based approaches to determining the directions of integration of outsourced processing in the activities of business entities. The concept of outsourced processing is based on the quality selection of the outsourcer and its establishment of effective partnership relations; creates

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АУТСОРС-ПРОЦЕСИНГ В УМОВАХ КАДРОВОГО ДЕФІЦИТУ

За воєнного часу Україна стикається з численними викликами, серед яких одним з найзагрозливіших є кадровий дефіцит. Повномасштабна війна спричинила масштабну трудову міграцію, значна кількість працездатного населення мобілізована до лав Збройних сил України, і це стало важливим чинником, що зумовило нестачу кваліфікованих працівників. Для багатьох економічних суб'єктів ця ситуація стає критичною й потребує негайних та ефективних рішень для забезпечення стабільної роботи. Одним з таких рішень є аутсорс-процесинг – передача певних бізнес-процесів зовнішнім компаніям, які мають необхідні ресурси та експертизу. Недостатнє дослідження аутсорсингу спричиняє низький рівень обізнаності бізнесу у його стратегічній ефективності. Висунуто гіпотезу, що застосування аутсорс-процесингу є ефективним адаптаційним рішенням для подолання кадрового дефіциту в умовах війни в Україні, що дасть змогу суб'єктам бізнесу оптимізувати витрати, забезпечити безперервність і гнучкість діяльності, залучити висококваліфікованих спеціалістів. Дослідження виконано з використанням методів аналізу, порівняння, систематизації, емпіричних досліджень та кейс-стаді, а також сканування горизонту й логічного моделювання. Проаналізовано виклики аутсорс-процесингу в умовах війни, надано приклади успішного його застосування в умовах кадрового дефіциту. Проведені дослідження формують науково обґрунтовані підходи до визначення напрямів інтеграції аутсорс-процесингу в діяльність суб'єктів бізнесу. Концепція аутсорс-процесингу базується на якісному виборі аутсорсера та встановленні ним ефективних *advantages in innovativeness and flexibility of business; creates conditions for optimizing time, effort and resources; makes it possible to attract the physical and intellectual potential of external companies, in particular to cover the shortage of personnel.*

Keywords: outsourcing, outsource-strategy, personnel management, business innovations, communication, scanning the horizon

партнерських відносин; формує переваги в інноваційності та гнучкості бізнесу; створює умови для оптимізації витрат часу, зусиль та ресурсів; дає змогу залучати фізичний та інтелектуальний потенціал зовнішніх компаній, зокрема для покриття дефіциту кадрів.

Ключові слова: аутсорсинг, аутсорс-стратегія, управління персоналом, інновації в бізнесі, комунікації, сканування горизонту

JEL Classification: M12, M54, L22, L83, H56, O31.

Introduction

The large-scale mobilization and migration of the population caused by the war in Ukraine aggravated the problem of outflow and shortage of personnel and, as a result, the lack of competent personnel in all spheres of the economy, which necessitates the search for effective management approaches. Due to the development of digital technologies, "personnel hunger" is covered by the remote work of personnel and the use of artificial intelligence in certain operational cycles. An effective solution to overcoming military challenges is also the implementation of outsourced processsing, which allows you to delegate part of the company’s internal functions or processes to external performers. Focusing on the main business goals and competencies, reducing costs, covering the insufficiency of own resources and capacities, increasing efficiency and gaining access to external knowledge and technologies are the key advantages of its application. Therefore, the analysis of the current situation and the development of outsourced strategies for overcoming trend challenges by Ukrainian companies are relevant areas of research.

The concept of outsourced processing has many vectors aimed at different types of business processes that are delegated to other business entities and form certain efficiencies: saving efforts and resources on processes, using more professional competencies and quality work (quality service), concentration on the main goals and transfer of secondary functions to individual performers. Therefore, the attention of scientists and businesses to outsourcing in recent years is quite understandable, in particular in the difficult conditions of martial law in Ukraine.

Quite a lot of works are devoted to the study of outsourcing, which focuses on the justification of concepts and practical approaches. Regarding the theoretical aspects, scientific views are focused on the study of types of outsourcing: public institutions and services, IT outsourcing, logistics outsourcing, HR outsourcing, etc. Accordingly, scientists Sokolyuk & Lyashenko (2020) paid attention to the study of the determinants and causes of logistics outsourcing, from the point of view of Ukrainian manufacturing companies, who stated the optimality of a mixed system that combines the use of own and third-party capacities, mostly for Ukrainian manufacturing companies. The works of Morphet (2021) with the characteristics of the outsourcing of central public services, their features and advantages are also decisive in this perspective. Hansen (2023) studied the impact of outsourcing on staff effectiveness. Interestingly, he compared the results for outsourced workers and civil servants in similar positions and concluded that outsourcing has significant adverse effects: it causes low engagement and high levels of employee burnout.

In turn, the practical approvals of outsourcing are considered in the article by Oakie (2021) in the context of assessing the expediency of partnerships with outsourcers, the features of concluding agreements and forming an outsourcing strategy. The author recommends using outsourcing at all stages of strategic development as a means of joint (company and outsourcer) strengthening of weaknesses and use of strengths. Management approaches are analyzed in the publication of Markina et al. (2020), which substantiates the theoretical and methodological foundations of outsourcing as one of the most promising areas of resource-saving development of agri-food enterprises. Disadvantages and risks, as well as areas of application of outsourcing in banking are described in the article by Kogut et al. (2023). It is worth noting the study of outsourcing in business practice as an element of a complex business system from the point of view of systems theory and graph theory, interpreted by Ustimenko & Prokhorenko (2023). Scientists have described the complex organization of business with the aim of sustainable and long-term increase of its fundamental value thanks to two types of graphs: material and information flows, at the tops of which information processing and management decision-making processes are carried out.

Analytical studies by Landay & DeArmond (2018) dedicated to the outsourcing of specific tasks and personnel processes are valuable for researching aspects of the application of outsourcing processing in conditions of personnel shortage. The authors note that the lack of work effort caused by personnel turnover due to numerous absenteeism, sick days and vacations, non-compliance with established deadlines, causes the need for the substitution of certain operational functions of personnel. We also find useful insights in the writings of Budyakova (2020), which presents an analysis of the legal, economic, and organizational advantages and disadvantages of personnel outsourcing; and Hadetska (2020), where the volume of the Ukrainian outsourcing services market is analyzed, the types and directions of application of various outsourcing services by enterprises in Ukraine are determined, and the advantages and disadvantages of HR outsourcing integrations are argued.

As the analysis of the sources showed verified data on the loss of personnel potential in Ukraine in terms of certain factors and in general are practically absent. In turn, available scientific research on outsourcing processing has formed a theoretical basis; however, certain provisions require rethinking taking into account the realities of the growing shortage of personnel under the threat of escalation of hostilities. In addition, the digital aspects of relations in the field of outsourcing need a new look, which strengthens the scientific and practical value of the mentioned research topic.

The aim of this article is to determine the effectiveness of outsourced processing as a tool for overcoming the personnel shortage during wartime in Ukraine. At the same time, the key tasks are the analysis of the impact of military operations on the personnel situation in Ukrainian companies, examples of the successful use of outsourcing processing by Ukrainian business entities in various industries; as well as the main advantages and challenges that companies face when implementing outsourcing solutions; as well as the formation of practical recommendations for business regarding the effective implementation of outsourcing processing in conditions of personnel shortage.

It is hypothesized that outsourcing processing is an effective solution in the most difficult conditions of war and personnel shortage. The methodology of its confirmation was the operationalization of information sources through analytical tools and scientific research methods.

The information base of the research is scientific literature on outsourcing, personnel management, and online platforms of companies.

In the process of developing theoretical material, general scientific methods were applied, in particular analysis (comparative analysis to determine the definition of "outsourcing") and synthesis of theoretical assumptions and findings. Thanks to the method of comparison and systematization, the advantages of outsourcing integration into business processes, which have been successfully tested by Ukrainian business entities, have been formulated. The horizon scanning method helped identify trends in the development of outsourcing and demonstrated positive prospects for its integration to overcome the shortage of personnel in the war and post-war periods; the modeling method was used to interpret the main stages of outsourcing strategy formation, as well as to build a road map for domestic business structures to overcome the "personnel famine" during the war.

The scientific novelty consists in the development of the concepts of "outsourced processing" and "outsourced strategy", as well as the modeling of a roadmap for the integration of outsourced services into the business processes of economic entities, which will allow covering the "personnel shortage" in Ukraine.

Limitations in the research are the lack of reliable data on the loss of personnel potential in Ukraine in terms of certain factors and in general. In the perspective of future research, it is planned to consider the compilation of outsourcing and design management as a symbiotic model of personnel management of Ukrainian companies. This will make it possible to create an innovative approach to anti-crisis management, taking into account modern aspects of overcoming psychological and physical exhaustion, shortage of competent personnel and other problems.

The content structure of the main part of the article consists of four sections: the first describes the causes of personnel shortages in wartime conditions; the second one interprets the theoretical basis of the research and determines the role of outsourcing in overcoming "personnel hunger"; the third argues the advantages of outsourcing for business; the fourth chapter provides practical insights into the implementation of the outsourcing strategy in the business processes of Ukrainian business entities.

1. Reasons for personnel shortage in wartime conditions

In wartime conditions, personnel shortages become a serious problem for many sectors of the economy, so analyzing the causes and finding effective tools for attracting and managing personnel is an important step to overcome this challenge. In order to understand in more detail the justifycation of directions for solving personnel problems, it is worth determining the key reasons for the shortage of labor in the labor market of Ukraine in modern conditions (*Table 1*).

Table 1

Reasons for personnel shortage in Ukraine in the war time frame

Factor	Characteristics
Mobilization of the population	Military operations lead to the mobilization of a significant part of the working population, which reduces the number of available workers for the civilian economy
Migration	Many people are forced to leave their places of residence due to hostilities, military threats and military evasion, which leads to a significant reduction in labor resources
Fatal losses	Irreversible loss of a significant portion of the country's labor potential
Psychological factors	Stress, anxiety and uncertainty have a negative impact on the performance and motivation of employees
Economic instability	It reduces the attractiveness of work in certain economic sectors and administrative regions
Destruction of infrastructure	The destruction of the production capacities of business entities and infrastructure objects makes it difficult for people to return to work
Problems in the educational environment	Stoppages of educational processes, distancing of communications and a decrease in the quality of control over the development of educational components reduce the number and professional level of new specialists
Gaps in traditionally male professions	Mobilization causes downtime and stoppages in business, in particular, the problem of ensuring the functioning of critical infrastructures and strategically important sectors of the economy is urgent

Source: compiled by the author.

Today in Ukraine, the need for security and resistance to military invasion is extremely acute. Therefore, due to the mobilization that began in 2014 and intensified in 2022 with the start of a full-scale war, the country is losing a significant share of the economically active population, its physical and intellectual potential. The exact number of mobilized and dead servicemen is not made public for security reasons, but every year the front needs a significant number of defenders. In addition, according to business estimates, the shortage of personnel in Ukraine has already reached almost 40% (Lytvyn, 2024).

One should also take into account the significant migration flows since the beginning of the full-scale invasion of Russia, which causes threatening prospects for the labor market in Ukraine. Thus, as of February 1, 2022, the number of available population (excluding Crimea AR) was 41.1 million people (State Statistics, 2022). According to the Population Division of the United Nations Department of Economic and Social Affairs, the population of Ukraine in 2023 was 36.74 million people (UN, n.d.). At the same time, over 7.8 million border crossings by Ukrainians were recorded in the first 4 months of 2024 (Opendatabot, 2024), of which 1.5% did not return to Ukraine (VU, 2024). Arithmetic calculations show a decrease in the population by 4.477 million people, or about 10.9%. Despite the fact that there are about 11.7 million economically active people, but approximately 9–9.3 million of them actually work (Ukrinform, 2023), the losses of the economic potential of the Ukrainian labor market are significant and demonstrate negative forecasts and expectations.

Thus, the above calculations demonstrated the deepening of the crisis in the labor market, which causes the need to find and involve new approaches to human resource management in Ukrainian companies, capable of overcoming the problem of personnel outflow and attracting new personnel prospects, in particular through the integration of outsourced processing into the operational activities and processes.

2. The role of outsource- processing in overcoming staff shortages

Outsourcing takes many forms and can include various business processes, from manufacturing to IT services and human resource management. Comparativistics of scientific sources demonstrates several approaches to determining the definition:

- the company’s strategic decision to reduce costs and increase efficiency by hiring another person or company to perform tasks, provide services, or perform operations that were previously performed by employees within the company (Markina et al., 2020; Oakie, 2021; Kogut et al., 2023; CFI, 2024);
- the business practice of hiring a third-party company to provide services or create goods that were traditionally provided by the company’s own employees and personnel (Morphet, 2021; Ustymenko & Prokhorenko, 2023; Twin, n. d.);
- business practice, when the company hires a third party to perform tasks, operations or provide services (Gadetska, 2020; Budyakova, 2020);
- an agreement under which one company hires another company to be responsible for a planned or existing activity that is performed or may be

performed internally (Jasińska, 2018; Sokolyuk & Lyashenko, 2020; Inbound Logistics, 2023).

As we can see from the considered approaches, outsourcing is a contractual business practice of hiring external organizations or individuals (the outsourcer) to perform certain tasks, manage certain values (products, resources, knowledge), provide services or manage operations in order to save money, time and achieving efficiency (productivity) of the business entity (client) (author's interpretation).

Outsourcing can relate to both simple administrative tasks (such as data entry) and complex projects such as the design and management of facilities, networks, order processing and sales organization, etc. The use of outsourcing by a business entity initiates the implementation of outsourced processing – a complex of analytical and production operations, service products, delegated for execution to professional outsourcers, which helps to focus the management of the client company on its core competencies, optimize costs, increase the quality and efficiency of work, as well as creates opportunities to use the expertise and resources of outsourcers (author's interpretation).

From the above, it can be concluded that the concept of outsourced processing is based on the formation of relations between the supplier (outsourcer) and the client. The key aspects here are the client company's need for certain services and the outsourcer's offer to provide such service products/services through its own capabilities and competencies. Accordingly, the value creation potential of outsourcing relations constitutes the target orientations of the contractual relations between the supplier and the client (*Figure 1*).

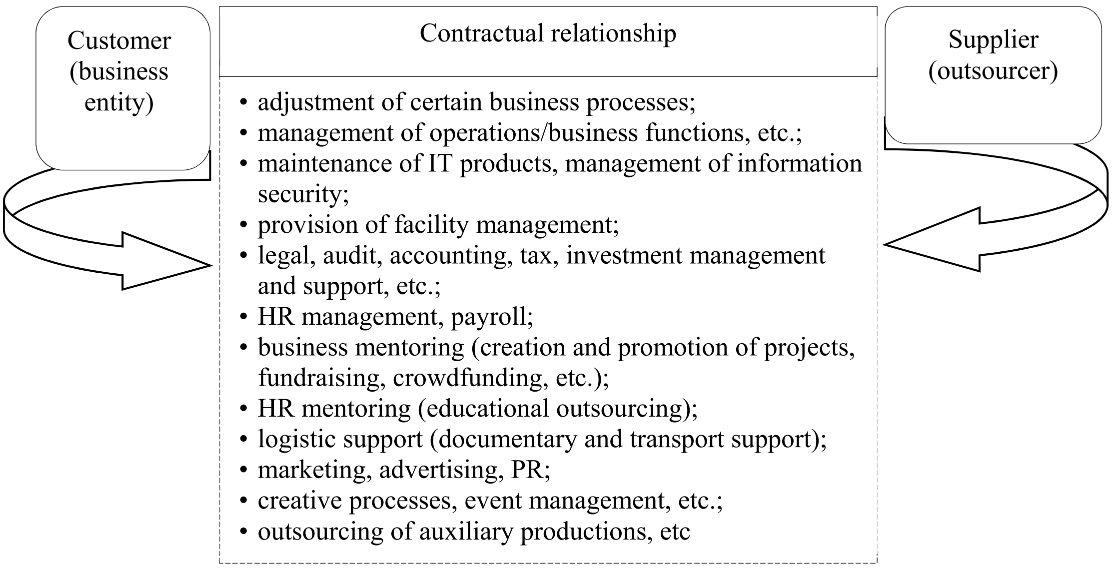

Figure 1. Main components of outsourcing relationships

Source: compiled by the author according to (Solli-Sæther & Gottschalk, 2010; Inbound Logistics, 2023).

The determinant that forms the value proposition of outsourcing is the characteristic of the business entity (client) and its understanding of the processes of managing resources/operations that it does not own. The second factor is the outsourcer's own capabilities (external contractor or third-party supplier of personnel/material and technical support). The formalization of their interaction is a contract (contract) containing the subject and conditions, as well as the coordination of interests.

One of the aspects worth paying attention to is staff outsourcing (Staff Outsourcing or Employee Outsourcing), a practice in which a company transfers the management of its human resources to an external provider. This type of outsourcing will include the hiring of temporary workers, contract management, payroll processing, recruiting, and other HR functions (*Table 2).*

Table 2

Concepts of personnel outsourcing

Concept	Characteristics
Temporary Staffing	Hiring temporary workers for short-term or seasonal assignments to cover peak business periods, holiday seasons, etc.
Permanent Staffing	Outsourcing of recruiting services to fill vacant positions (permanent employees)
Workforce Management	Delegation of HR management, including work scheduling, vacation accounting, performance management, etc
Payroll Outsourcing	Payroll processing outsourcing to ensure payment accuracy and compliance with legislation
Recruitment Process Outsourcing (RPO)	Using RPO to attract candidates, conduct interviews, and select the best candidates

Source: Compiled by author from (Half, 2024; ManpowerGroup, 2024; ADP, n.d.; Davis, 2024).

Despite the attractiveness of using personnel outsourcing, it is worth noting possible challenges that the business entity needs to solve independently:

quality control: in particular, compliance with corporate culture and quality standards when outsourcing management;

communication barriers: possible difficulties in interaction with external service providers;

data privacy and cyber security: ensuring the protection of personal data of employees.

Therefore, when making a decision to implement outsourced process-sing, it is worth considering the benefits and risks for the company and the possible impact on the company's brand.

So, outsourced processing is potentially able to fill the gaps in the staffing of Ukrainian business for the considered business processes and operations. However, one should be aware that the implementation of outsourced processing may also carry certain risks for users of outsourced services. First, the loss of control over key processes can lead to a decrease in the quality of services or products, which will negatively affect the reputation of the user company. Second, reliance on an outsourcer increases the risk of data privacy loss, as well as financial instability if the outsourcer runs into trouble. Third, the user company's fear of losing unique knowledge or competencies that may be critical to its competitiveness. Therefore, it is likely that some entrepreneurs will avoid outsourcing processing because of these risks.

3. Benefits of outsource – processing under martial law

The war is depleting Ukraine's material, financial, and human resources. Accordingly, during the war period, the main tasks are focused on ensuring the stable functioning of the state and business in conditions of increased risks and restrictions. Among such tasks, adaptation to the regime of air alerts, curfews, blackouts, as well as the prompt restoration of infrastructure and the minimization of damage caused by Russia's military aggression are of primary importance. The problem of staff shortages is already apparent, but mostly concerns temporary and critical needs related to security and business continuity. However, it acquires new dimensions and features in the post-war period.

It is predicted that in the post-war period, long-term recovery problems will become key, where the lack of personnel necessary for the full restoration of production capacities and social relations will come to the fore. Added to this is the need for adaptation and rehabilitation of demobilized workers, many of whom may require special rehabilitation and compensatory measures to return to professional life.

Outsourcing in this sense can be particularly useful and creates certain advantages for business and government structures in certain aspects.

Business continuity. Outsourcing enables companies to maintain operational continuity even in difficult conditions. Hostilities can affect local businesses, causing disruptions. Transferring part of the functions to external organizations helps to avoid a stoppage of activity.

Cost reduction. During a war, costs can increase due to the destruction of infrastructure, increased resource prices, etc. Outsourcing helps reduce personnel, equipment and other operating costs because external suppliers can offer more competitive prices.

Flexibility and adaptability. Outsourcing allows companies to quickly adapt to new conditions and requirements. External providers can quickly scale their services according to business needs, which is especially important in times of war when the situation can change rapidly.

Access to specialized resources and knowledge. In wartime, difficulties may arise with qualified personnel and the development of resources. Outsourcing provides access to specialized knowledge and technology that may not be available domestically.

Risk reduction. Outsourcing helps spread the risks associated with doing business in wartime. Companies can avoid direct losses due to destructtion of property or infrastructure by delegating some operations to external organizations located in safer regions and locations.

Focus on core business competencies. Outsourcing enables companies to focus on their core competencies and strategic tasks by delegating support functions to external specialists. It helps to increase efficiency and productivity in crisis conditions.

For a clearer understanding of the practical implementation of the benefits of outsourcing processing, it is worth investigating the key aspects of outsourcing to determine the main trends and perspectives of outsourcing processing. For this purpose, we will apply the method of scanning the horizon, which involves a systematic study of potential events and their consequences (*Table 3*).

Table 3

Scanning the horizon for outsourced processing prospects

Key aspects	Scanning the horizon	Drivers
The global COVID-19 pandemic, distancing relations	Pandemic and post-pandemic period: the pandemic has forced many companies to switch to remote work, which has led to an increase in demand for outsourcing IT services and customer service. Increasing demand for flexibility and adaptability	The need for flexibility, information security and adaptation to new conditions
Analysis of current labor market trends	Wartime Outsourcing Trends: - increase in demand for outsourcing of all types due to shortage of personnel; - increased attention to socially responsible outsourcing that implements social initiatives, environmental sustainability and energy efficiency	security policy, remote work, physical security, cyber security, business relocation, ensuring business continuity and sustainable development
Development of information technologies and communications, labor market tools	Global outsourcing trends: - integration with new technologies and social requirements of the modern world (digitalization and automation, inclusive outsourcing, robotic process automation (RPA) and cloud services are becoming an integral part of many outsourcing contracts); - global distributed workforce; - outsourcing based on results (pay-for-result models, focusing on key competencies); - personalization of services, creation of personalized products	Development of technologies and communications, creation of jobs for vulnerable population groups and compliance with ethical standards, price advantages, qualified workforce, need to focus on core activities, optimization of business processes
Internationalization of the business environment and changes in business models and the structure of the labor market	Predicative trends of post-war outsourcing in Ukraine: further development of outsourcing is expected thanks to: - attracting international outsourcing partners to rebuild businesses and the economy as a whole; - recruitment of personnel from other countries (personnel outsourcing); - growing importance of sustainable development and social responsibility, inclusiveness of services	Infrastructure restoration, social rehabilitation, economic transformation and investment boom, international integration, changes in market conditions, regulatory requirements
Adaptation of business to the new realities of the world economy, technological progress and changes in the rights and expectations of employees	Predictive global outsourcing trends: further development of outsourcing is expected thanks to: - integration of artificial intelligence, automation and blockchain technologies; - growing demand for specialized services (niche outsourcing, focus on quality, not just cost); - growing importance of sustainable development and social responsibility, inclusiveness of services; - adaptability and flexibility (flexible work methods, flexible contracts)	Sustainable development, automation, personalization of services, cyber security, changes in market conditions, regulatory requirements

Source: compiled by the author according to (Mazaraki et al., 2022; Shields, et al., 2022; Mederos, 2021; Galal et al., 2012).

As we can see from *Table 3*, businesses are gradually adapting to the new realities of the domestic and global economy, technological progress, and changes in the rights and expectations of employees. Accordingly, outsourcing trends reflect the transition from a cost optimization model to a strategic partnership that takes into account current challenges and opportunities.

The advantages of outsourcing are its ability to address many operational and strategic challenges that companies cannot meet on their own. It allows companies to maintain operational continuity even in difficult conditions. Military operations and numerous blackouts can affect local businesses, causing interruptions in operations. Transferring some functions and operations to external organizations for processing helps to avoid business interruption. In addition, outsourcing distributes the risks associated with doing business. Companies can avoid direct losses due to the destruction of property or infrastructure by delegating some operations to outsourcers from safer regions of Ukraine or the world. Outsourcing also helps to overcome difficulties in accessing specialized knowledge and technologies through in-house resource potential. Therefore, the integration of outsourcing can mobilize the joint efforts of the client company and the outsourcer to reduce costs, increase efficiency, and allow them to focus on their core competencies. This is the main advantage of outsourced processing.

4. Practical insights into the implementation of outsourcing strategy in the operational processes of business entities

As already mentioned, in the context of the uncertainty of the military timeframe, business entities need strategic decision models that will allow them to use their own resources more efficiently, focusing on key areas of activity and engaging external experts to overcome operational and personnel problems. Therefore, developing and integrating an outsourcing strategy into the company's overall development strategy is an effective foresight step.

An outsourcing strategy should be viewed as a comprehensive approach to business management that involves the transfer of certain functions, tasks or processes to external organizations in order to increase efficiency, reduce costs and focus on the company's core competencies, which has a number of components (*Figure 2*).

As it can be seen, the implementation of the outsourcing strategy goes through the stages of constant monitoring of outsourcing needs, control over its effectiveness and risk management.

To understand the expediency of using an outsourcing strategy, let's consider real cases of companies that used outsourcing to overcome personnel shortages during the war (*Table 4*).

Determination of goals and objectives
a clear understanding of the goals that the company seeks to achieve through outsourcing

Analysis of internal processes
identification of processes and functions that can be efficiently outsourced

Selection of appropriate suppliers
evaluating potential suppliers based on their experience, reputation, technological capabilities and ability to meet the company's requirements

Conclusion of contracts
Drafting and concluding detailed contracts that define the scope of work, quality of services, deadlines, and the system of rewards and penalties

Monitoring and compliance control of outsourced processing
Setting up a control system to monitor the performance of tasks by external suppliers and ensure that their work meets certain standards

Implementation of outsourcing strategy and risk management
Identification of possible risks associated with outsourcing; development of plans to minimize/avoid them, possible responses to force majeure and negative events; adjustment of strategic actions and operational decision-making

Figure 2. Formation of an outsourcing strategy of a business entity

Source: compiled by the author according to (Mendela & Rumyantseva, 2020; Hopkalo et al., 2024).

Table 4

Case studies of Ukrainian companies that have used outsourcing strategies to overcome staff shortages and mitigate military risks

Company	Strategic decision	The results
XYZ IT company	Services of outsourcing companies from Poland and India to support their projects	The pace of software development has been maintained, the costs of hiring new employees have been reduced and access to specialists with a high level of competence has been obtained
Myronivsky Hliboproduct	Use of external companies for logistics, IT services and accounting	Helped maintain production levels, reduce downtime and reduce financial losses
PrivatBank	Use of external companies for IT support, cyber security and data processing	Costs for hiring and training new employees have been reduced, competitiveness in the market has been preserved
InterContinental Kyiv Hotel chain	Auditing, accounting services, IT support and customer service services	Uninterrupted work was ensured, reliable audit reports were formed
Premier Hotels and Resorts Hotel chain	Management of IT services, marketing, cleaning	Uninterrupted operation of the hotel was ensured and costs for training new employees were reduced
"Puzata Hata Restaurant complex Kanapa Restaurant	Services of outsourcing companies to provide cooks and waiters from other regions of Ukraine and from abroad	Contributed to avoiding work stoppages, reducing costs for recruiting and training new personnel

Source: compiled by the author based on websites, social media pages, and company management data (XYZ, n. d.; MHP, n. d.; PrivatBank, n. d.; Premier Hotels and Resorts, n. d.; Puzata Hata, n. d.; Kanapa, n. d.).

Due to the threat of war, many employees of Ukrainian companies moved to other safer regions, left the country or were mobilized, which led to a significant shortage of personnel. We can summarize based on the information from the *Table 3*, that the business orientated itself in the possibilities of outsourcing and effectively integrated it into operational processes, maintaining a high level of service, which is especially important in crisis conditions.

Arguments for the expediency and perspective of outsourcing in Ukraine during and after the war also serve as expert assessments, which form the following statements:

• it is important to choose outsourcing companies from countries that have a stable political situation and developed infrastructure to support business processes (Oshri et al., 2009; Semyonov, 2024);

• communication and relationship management are key success factors when working with outsourcers. Regular meetings and clearly defined goals help to avoid many problems (Deloitte, 2019; Antonyuk, 2024);

• outsourcing not only helps solve the problem of personnel shortage, but can also become a source of new ideas and innovations for business (Bunyak, 2021; Antonyuk, 2024);

• outsourcing is an effective tool for reducing the costs of training and maintaining personnel, reducing the number of tasks for employees, and also for ensuring flexibility in times of crisis (Lading, 2022; Lyskanych, 2023; Fillin, 2024).

Thus, taking into account the studied theoretical and analytical aspects, the experience of the considered companies and the recommenddations of experts, we will model a road map for overcoming the personnel shortage during the war in Ukraine and in the post-war period (*Figure 3*).

ANALYSIS OF THE CURRENT SITUATION

- assessment of personnel losses: determination of the number and quality of personnel lost due to mobilization, migration and other reasons;
- identification of key shortages: identification of industries and regions where the greatest personnel shortage is observed

ATTRACTING ADDITIONAL RESOURCES

- outsourcing and outstaffing: using external companies to perform specialized tasks or hiring temporary workers;
- expansion of women's participation: encouraging women to work in traditionally male fields;
- use of foreign workers: attraction of foreign specialists;
- change of threshold values of working age

INCREASE OF QUALIFICATIONS AND REQUALIFICATION

- organization of training programs: launch of retraining programs for employees who have lost their jobs in other industries;
- cooperation with educational institutions: expanding cooperation with universities and professional educational institutions to train the necessary specialists

IMPROVEMENT OF WORKING CONDITIONS

- flexible working conditions: introduction of remote work and flexible schedules to reduce the burden on employees;
- psychological support, HR-mentoring: provision of psychological support and mentoring for employees, especially those working under stress and onboarding.

AUTOMATION AND DIGITALIZATION

- the introduction of new technologies: the use of automation and digital technologies to reduce the need for labor;
- integration of ERP systems: implementation of innovative company management systems to increase the efficiency of business processes.

STATE SUPPORT AND GRANTS

- regulatory changes: adoption of legislative acts that simplify hiring procedures and ensure protection of employees' rights;
- financial assistance: provision of financial support for businesses that have suffered significant losses due to the war through subsidies, grants, tax breaks

Figure 3. Roadmap for overcoming the staff shortage during the war in Ukraine

Source: compiled by the author according to (Bosovska & Bovsh, 2021; Deloitte, 2023; Cabinet of Ministers of Ukraine, 2024; ILO, 2024).

The positions described in the roadmap should be correlated and updated with data from official websites of state/regional/local authorities, recruitment agencies, online media, outsourcing companies, and scientific research to jointly monitor human resources issues and overcome labor market challenges.

Therefore, outsourcing processing is an effective strategic solution for integration into the company's operational activities and project development, forms auxiliary and supporting operations that ensure a high level of service, establish effective external and internal communications, optimize costs and ensure management flexibility in times of crisis, in particular in conditions of shortage of personnel.

Due to the fact that the structure of the modern Ukrainian labor market is changing according to gender and age, we draw attention to research on the possibilities of involving women and teenagers (with the permission of parents or guardians) in certain labor operations. After all, gender and aging substitution – the involvement of women and representatives of different age groups in traditionally male professions – can become an effective way to overcome the personnel shortage. This approach not only fills vacancies, but also helps create an inclusive work environment where everyone can realize their potential, regardless of gender or age. Of course, such an innovative approach will require the creation of adaptive programs, flexible working conditions, mentoring support and encouragement. However, the author sees this as the future trend of the Ukrainian labor market and aims to analyze these aspects from a legal, socio-economic and ethical point of view in future scientific studies.

Conclusions

In the Ukrainian scientific and business environment in recent years, there have been tendencies to rethink management approaches and personnel management. The Transformation Trendbook has three markers that have impacted HR: the COVID-19 pandemic, artificial intelligence, and war. Pandemic limitations of physical communications (2019–2022) initiated the development of digital innovations and the organization of remote work, online offices, cloud businesses, and created the need for cyber protection of information, client and corporate data. So, one of the principles of business facilitation was formed as flexibility and remote work. Artificial intelligence has created opportunities to replace physical (robots, cobots, robotic hands) and intellectual work (creating texts, animations, videos, etc.). The war provoked the outflow of labor resources: the mobilization and migration of the population, creating a situation of shortage of personnel in many areas of the economy. Therefore, the research is aimed at finding effective ways to overcome this problem.

At the same time, the hypothesis that outsourcing is an effective solution in the most difficult conditions of war and personnel shortage is partially confirmed by analytical sources, a study of practical insights of business entities, and expert assessments in the field of outsourcing. Identified risks for the business recipient of outsourcing services, among which the loss of control over key processes, dependence on the quality of work and financial stability of the outsourcer, risks of data privacy protection, loss of unique knowledge or competencies of the outsourcing recipient can be highlighted.

The research has been analyzed the impact of military actions on the personnel situation in Ukrainian companies: the reduction of competence and quantitative parameters of the potential of the labor market outlined future trends towards aging and gender substitution. Outsourcing showed the potential ability to partially overcome the problem of personnel shortage, as evidenced by the monitoring of successful insights into outsourced process-sing of Ukrainian business entities in various industries. After all, despite the advantages of outsourcing integration into business, there are also numerous challenges that stop entrepreneurs from implementing outsourcing solutions.

However, awareness of the prospects that form outsourcing in accordance with domestic and global predicative trends continues to contribute to its development, in particular, in overcoming problems with a lack of qualified personnel.

The considered approaches to the definition of outsourcing and outsourced processing, the determination of the main components of outsourcing relations determined the main directions of the formation and implementation of the outsourcing strategy of a business entity in the crisis conditions of the labor market. It was established that the outsourcing strategy as a comprehensive approach should be formed both at the macro level (social policies of local authorities, territorial communities, the state), and at the macro level – in the contractual relations of business entities regarding the outsourcing of knowledge, personnel, technologies, competencies, etc.

The approbation component of the research was the development of a road map for overcoming the personnel shortage, which worsens with the prolongation of martial law and the corresponding demographic iterations for an indefinite period of time. However, obstacles to implementation remain relevant, in particular due to the reluctance of entrepreneurs to take risks, as well as the problems of ensuring cyber security and the security of confidential data.

In the perspective of future research, it is planned to consider the compilation of outsourcing and design management as a symbiotic model of personnel management of Ukrainian companies. This will make it possible to create an innovative approach to anti-crisis management, taking into acco-unt modern aspects of overcoming psychological and physical exhausttion, shortage of competent personnel and other problems. In addition, the study of the features of gender and aging substitution – the use of the potential of women and representatives of different age groups in traditionally male professions, which can become an important factor in the stabilization and development of the economy in wartime conditions – is also considered a target scientific perspective.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

ADP. (*n. d.*) Workforce management. https://www.adp.com/what-we-offer/time-and-attendance/workforce- management.aspx

Antonyuk, D. (2024). In order not to lose IT workers, Ukrainian companies rent them out. Megogo and the owner of Prom are already testing this model. *How it works.* Forbes. https://forbes.ua/innovations/shchob-vryatuvati-aytishnikiv-megogo-ta-evo-viddayut-ikh-na-autsors-yak-tse-vidbuvaetsya-i-v-chomu-problemi-08042022-5360

Антонюк, Д. (2024). Щоб не втратити айтішників, українські компанії віддають їх в оренду. Megogo та власник Prom уже тестують цю модель. *Як вона працює. Forbes.* https://forbes.ua/ innovations/shchob-vryatuvati-aytishnikiv-megogo-ta-evo-viddayut-ikh-na-autsors-yak-tse-vidbuvaetsya-i-v-chomu-problemi-08042022-5360

Bosovska, M., & Bovsh, L. (2021). Mentoring in the HR management of the hotel. *University Scientific Notes, 3*(81), 76–86.

Босовська, М., & Бовш, Л. (2021). Менторинг у HR-менеджменті готелю. *Університетські наукові записки, 3*(81), 76–86.

Budyakova, A. (2020). Peculiarities of using outsourcing in the personnel management system. Economy. Finances. Law, *4*(2), 10–13. https://doi.org/10.37634/efp. 2020.4(2).2

Будякова, А. (2020). Особливості застосування аутсорсингу в системі управління персоналом. *Економіка. Фінанси. Право, 4(*2*),* 10–13. https://doi.org/ 10.37634/ efp.2020.4(2).2

Bunyak, N. (2021). Innovative outsourcing as an enterprise management tool. *Economy and society,* (26). https://doi.org/10.32782/2524-0072/2021-26-49

Буняк, Н. (2021). Інноваційний аутсорсинг як інструмент управління підприємством. *Економіка та суспільство*. (26). https://doi.org/10.32782/2524-0072/ 2021-26-49

Davis, K. (2024). RPO Workshop: How to Build and Grow a Recruitment Process Outsourcing Business. https://www.rpoassociation.org

Deloitte. (2023). 2023 Global Shared Services and Outsourcing Survey. *Executive summary.* https://www2.deloitte.com/ content/dam/Deloitte/us/Documents/process-and-operations/us-2023-global-shared-services-and-outsourcing-survey-executive-summary.pdf

Deloitte (2019). Alternative employment. https://www2. deloitte. com/content/dam/Deloitte/ua/Documents/ human-capital/Deloitte-Global-Human-Capital-Trends-2019-1.pdf

Deloitte. (2019). Альтернативна зайнятість. https://www2.deloitte.com/content/dam/Deloitte/ua/ Documents/human-capital/Deloitte-Global-Human-Capital-Trends-2019-1.pdf

Fillin. (b. d.). Staff outsourcing in Ukraine. https://fillin.ua/nashi-uslugi/autsorsing (accessed 15.07.2024).

Fillin. *(б. д.).* Аутсорсинг персоналу в Україні. https://fillin.ua/nashi-uslugi/autsorsing (дата звернення 15.07.2024).

Gadecka, Z. (2020). Implementation of modern HR outsourcing technologies at enterprises. Market Infrastructure, (39). https://doi.org/10.32843/infrastruct39-66

Гадецька, З. (2020). Впровадження сучасних персонал-технологій hr-аутсорсингу на підприємств. *Ринкова інфраструктура*, (39). https://doi.org/ 10.32843/infrastruct39-66

Galal, K., Richter, A., & Wendlandt, V. (2012). It Consulting And Outsourcing Firms: Evolution, Business Models, And Future Prospects', in Timothy Clark, and Matthias Kipping (eds), *The Oxford Handbook of Management Consulting.* https://doi.org/10.1093/oxfordhb/9780199235049.013.0006

Half, R. (n. d.). Contract talent: Bring in skilled professionals in a flash. https://www.roberthalf.com/ us/en/hire-talent/flexible-staffing

Hansen, G. E. (2023). Why Is Outsourcing Good for Some Employees and Bad for Others? How Demands and Resources Moderate the Outcome. *Review of Public Personnel Administration*. https://doi.org/ 10.1177/0734371x231214967

Hopkalo, L., Bovsh, L., Rasulova, A., Rasulov, R., & Kompanets, K. (2024). Foresight of the development of rural tourism in Ukraine in the post-war period. *Agricultural and Resource Economics*, *10*(2), 5–30. https://are-journal.com/are/issue/view/38

ILO (International Labour Organization). (n. d.). Resources. https://byjus.com/free-ias-prep/ilo

Inbound Logistics. (2023). What is outsourcing? *Definitions, benefits and examples*. https://www.inboundlogistics.com/ articles/what-is-outsourcing/

Jasińska, A. *(*2018*).* Rotation related problems of personnel services in outsourcing companies. *Production engineering archives 20(*2018*),*20–25. https://doi.org/10.30657/pea.2018.20.05

Kanapa. (n. d.). https://www.instagram.com/kanapa.kyiv/

Kogut, M., Sodoma, R., & Dubynetska, P. (2023). The impact of outsourcing on business performance: an analysis of benefits and risks. *Economy and society,* (57). https://doi.org/10.32782/2524-0072/ 2023-57-33

Когут, М., Содома, Р., & Дубинецька, П. (2023). Вплив аутсорсингу на ефективність бізнесу: аналіз вигод і ризиків. *Економіка та суспільство*. (57). https://doi.org/10.32782/2524-0072/ 2023-57-33.

Lading. (2022). Is it worth outsourcing your warehouse? 7 expert opinions. https://lading.ua/news/chi-varto-viddavati-svij-sklad-na-autsorsing-7-dumok-ekspertiv	Lading. (2022). Чи варто віддавати свій склад на аутсорсинг? 7 думок експертів. https://lading.ua/news/chi-varto-viddavati-svij-sklad-na-autsorsing-7-dumok-ekspertiv
Landay, K., & DeArmond, S. (2018). Recruitment Process Outsourcing and Recruiter and Hiring Firm Characteristics. *Journal of Personnel Psychology*, *17*(4), 183–192. https://doi.org/10.1027/1866-5888/a000206	
Lyskanych, H. (2023). Outsourcing: pros and cons. Club of Business People of Ukraine. https://bc-club.org.ua/guidebook/articles/autsorsyng-vsi-za-i-proty.html	Лисканич, Х. (2023). Аутсорсинг: всі "за" і "проти". *Клуб Ділових Людей України.* https://bc-club.org.ua/guidebook/articles/ autsorsyng-vsi-za-i-proty.html
Lytvyn, O. (2024). The shortage of personnel in Ukraine is already up to 40%: which industry suffers the most and what are employers doing. https://lb.ua/society/2024/02/22/599858_oon_identifikuvala_10_582_zagiblih.html	Литвин, О. (2024). Дефіцит кадрів в Україні доходить уже до 40%: яка галузь потерпає найбільше і що роблять роботодавці. https://lb.ua/society/2024/02/22/599858_oon_identifikuvala_10_582_zagiblih.html
ManpowerGroup. (n. d.). Permanent Recruitment & Staffing Solutions. https://www.manpowergroup.co.in/permanent-recruitment.html	
Markina, I., Lopushynska, O., & Lopushynskyi, E. (2020). Outsourcing of business processes as a management mechanism for resource-saving development of agro-food enterprises. *Scientific Bulletin of the International Humanitarian University* 74–78. https://doi.org/10.32841/2413-2675/2020-45-12	Маркіна, І., Лопушинська, О., & Лопушинський, Є. (2020). Аутсорсинг бізнес-процесів як механізм менеджменту ресурсозберігаючого розвитку підприємств агропродовольчої сфери. *Науковий вісник Міжнародного гуманітарного університету,* 4–78. https://doi.org/10.32841/2413-2675/2020-45-12
Mazaraki, A., Melnychenko, S., Bovsh, L., Tkachuk, T., Zikiy, N., & Romanchuk, L. (2022). Financial and investment predicates of security of hotel real estate development. *Financial and Credit Activity Problems of Theory and Practice*, *6*(47), 182–196. https://doi.org/10.55643/fcaptp.6.47.2022.3912	
Mederos, L.A. (2021). The Outsourcing Manifesto: The History, Rise, and Potential Fall of the Outsourcing Industry. In: *The Future of Outsourcing. Palgrave Studies in Accounting and Finance Practice*. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-030-71407-9_1	
Mendela, I., & Rumyantseva, I. (2020). Strategy of the hotel business enterprise. Management of economic processes at the macro- and micro-level: problems and prospects for solution: materials of the 4th International Scientific and Practical Internet Conference of Young Scientists. Department of Lviv Polytechnic, 80–81.: https://www.conf.inem.lviv.ua/wp-content/uploads/2020/05/Conf_NTSA_INEM_2020.pdf	Мендела, І., & Румянцева, І. (2020). Стратегія підприємства готельного бізнесу. *Управління економічними процесами на макро- і мікрорівні: проблеми та перспективи вирішення: матеріали IV Міжнародної науково-практичної інтернет-конференції молодих учених. Вид-во Львівської політехніки.* 80–81. https://www.conf.inem.lviv.ua/wp-content/uploads/2020/05/Conf_NTSA_INEM_2020.pdf
MHP (Myronivskyi Khliboprodukt). (n. d.). https://mhp.com.ua/uk/partners (date of application: 15.072024)	МХП (Миронівський Хлібопродукт). (б. д.). https://mhp.com.ua/uk/partners (дата звернення: 15.07.2024)
Morphet, J. (2021). Outsourcing Central Government Services. *Outsourcing in the UK*, 103–118. https://doi.org/10.1332/policypress/9781529209600.003.0007	
Oakie, W. (2021). Developing an Outsourcing Strategy. *Outsourcing*, 9–19. https://doi.org/10.1201/9781003076025-3	
Opendatabot. (2024). How many Ukrainians have crossed the border since the beginning of the great war. https://opendatabot.ua/analytics/emigration-trend- 2024-4	Опендатабот. (2024). Скільки українців перетнуло кордон від початку великої війни. https://opendatabot.ua/analytics/emigration-trend-2024-4
Oshri, I., Kotlarsky, J., & Willcocks, L. P. (2009). The Handbook of Global Outsourcing and Offshoring. *Palgrave Macmillan.* https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=e9860df418b4a3109fa91f c54fdd9266a67865dc	
Premier Hotels and Resorts. (n. d.). https://www.phnr.com/ua	
PrivatBank. (n. d.). https://privatbank.ua/	
Puzata Hata. (n. d.). https://www.instagram.com/puzatahata.ua/ (дата звернення: 15.07.2024).	
Semyonov D. (2024). IT Outsourcing Survival Strategies in War: How to Win Clients. https://elbuz.com/ ua/yak-it-autsorsingu-otrimuvati-klientiv-v-umovakh-vijni-strategii-pozionuvannya-t	Семьонов, Д. (2024). Стратегії виживання IT-аутсорсингу в умовах війни: як залучати клієнтів. https://elbuz.com/ua/yak-it-autsorsingu-otrimuvati- klientiv-v-umovakh-vijni-strategii-pozicionuvannya-t

Shchytov, D., Mormul, M., Shchytov, O., Romanchuk, L., & Chupilko, T. (2022). Outsourcing of it services in Ukraine. *Information Technologies and Computer Engineering*, *55*(3), 85–90. https://doi.org/10.31649/1999-9941-2022-55-3-85-90	Щитов, Д., Мормуль, М., Щитов, О., Романчук, Л., & Чупілко Т. (2022). Аутсорсинг ІТ-послуг в Україні. *Інформаційні технології та комп'ютерна інженерія*, *55*(3), 85–90. https://doi.org/10.31649/1999-9941-2022-55-3-85-90
Sokoliuk. K., & Lyashenko. A. (2020). Priority Types of the Enterprise Logistic Activities for Outsourcing. *Modern Economics*, *24*(2020), 189–193. https://doi.org/10.31521/modecon.V24(2020)-30.	Соколюк, К., & Ляшенко. Г. (2020). Пріоритетні напрями логістичної діяльності підприємства для передачі на аутсорсинг. *Modern Economics*. № *24*(2020), 189–193. https://doi.org/10.31521/modecon.V24(2020)-30.
Solli-Sæther, H. & Gottschalk, P. (2010). *Outsourcing Performance*. IGI Global. https://doi.org/10.4018/978-1-60566-796-6.ch008	
State Statistics Service (2022). Demographic situation in January 2022. *Express issue*. https://ukrstat.gov.ua/express/expr2022/03/27.doc	Держстат. (2022). Демографічна ситуація у січні 2022 року. *Експрес випуск*. https://ukrstat.gov.ua/express/expr2022/03/27.doc
The Cabinet of Ministers of Ukraine. (2024). On the approval of the Government's priority action plan for 2024. https://www.kmu.gov.ua/npas/pro-zatverdzhennia-planu-priorytetnykh-dii-uriadu-na-2024-rik-137r-160224	*Кабінет міністрів України.* (2024). Про затвердження плану пріоритетних дій Уряду на 2024 рік. https://www.kmu.gov.ua/npas/pro-zatverdzhennia-planu-priorytetnykh-dii-uriadu-na-2024-rik-137r-160224
Twin, A. (n. d.). Outsourcing: How It Works in Business, With Examples. *Investopedia,* https://www.investopedia.com/terms/o/outsourcing.asp	
Ukrinform. (2023). Only about 11.7 million people are economically active in Ukraine. https://www.ukrinform.ua/rubric-economy/3732011-v-ukraini-ekonomicno-aktivnimi-e-lise-blizko-117-miljona-ludej.html	*Укрінформ.* (2023). В Україні економічно активними є лише близько 11,7 мільйона людей. https://www.ukrinform.ua/rubric-economy/3732011-v-ukraini-ekonomicno-aktivnimi-e-lise-blizko-117-miljona-ludej.html
UN (United Nations). (n. d.). Total population by sex. Ukraine. https://population.un.org/dataportal/data/indicators/49/locations/804/start/1990/end/2023/table/pivotbylocation?df=af944412-cefc-4e18-a7db-a2efb720ce5f	
Ustymenko, O., & Prokhorenko, O. (2023). Outsourcing from the standpoint of systems theory. *Interscience. Ser.* Economic Sciences, (4), 17. https://doi.org/10.25313/2520-2294-2023-4	Устименко, О., & Прохоренко, О. (2023). Аутсорсинг з позиції теорії систем. *Інтернаука. Сер. Економічні науки,* (4), 17 https://doi.org/ 10.25313/2520-2294-2023-4
VU (Visit Ukraine) (2024). About 1.5% of Ukrainians left and did not return to Ukraine in 2024: details. https://visitukraine.today/uk/blog/4149/about-15-of-ukrainians-left-and-did-not-return-to-ukraine-in-2024-details	*VU (Visit Ukraine).* (2024). Близько 1,5% українців виїхали та не повернулися в Україну у 2024 році: деталі. https://visitukraine.today/uk/blog/4149/about-15-of-ukrainians-left-and-did-not-return-to-ukraine-in-2024-details
XYZ. (n. d.). https://www.linkedin.com/company/xyz-company/about/	

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ANTI-CRISIS ADAPTATION OF THE UKRAINIAN TOURISM INDUSTRY

With the development of tourism, a tourism companies or destinations become as dependent as possible on a wide variety of political, social and economic events, and this actualizes a number of risks and increases vulnerability to a potential crisis. The set of crises that befell Ukraine throughout the 21st century, each time destabilized the progressive development of the tourism sector, pushed entrepreneurial initiatives back into the past. Mitigating the impact of crisis phenomena on the development of tourism cannot be imagined without a detailed statistical analysis of these impacts and the level of adaptability of tourism as a whole and its individual branches. The purpose of the article is to reveal the impact of several large-scale crises of the 21st century on Ukrainian tourism and study the degree of adaptability of its industries through a number of indicators, including the economic and financial results of the relevant business entities. The main hypothesis of the study was that different sectors of the economy, the enterprises of which are part of the tourism sector, are characterized by different degrees of adaptability to large-scale crises. When writing the article, the results of several state statistical observations and expert assessments were used. The article examines in detail the ways in which crises and upheavals have shaped and changed

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АНТИКРИЗОВА АДАПТАЦІЯ ТУРИСТИЧНОЇ ГАЛУЗІ УКРАЇНИ

З розвитком туризму туристична компанія або дестинація стає максимально залежною від найрізноманітніших політичних, соціальних та економічних подій, а це актуалізує цілу низку ризиків і збільшує вразливість до потенційної кризи. Сукупність криз, що спіткала Україну впродовж XXI ст., щоразу дестабілізовувала поступальний розвиток секторів сфери туризму, відкидала назад у минуле підприємницькі ініціативи. Пом'якшення впливу кризових явищ на розвиток туризму неможливо уявити без детального статистичного аналізу цих впливів та рівня адаптивності туризму в цілому та його окремих галузей. Метою статті є розкриття впливу кількох масштабних криз XXI ст. на український туризм та вивчення ступеня адаптивності його галузей через низку індикаторів, включаючи економічні та фінансові результати діяльності відповідних суб'єктів господарювання. Основною гіпотезою дослідження стало те, що різні галузі економіки, підприємства яких є частиною сфери туризму, характеризуються різним ступенем адаптивності до масштабних криз. При написанні статті використані результати кількох державних статистичних спостережень та експертні оцінки. Детально розглянуто способи, якими кризи та потрясіння сформували та змінили туристичний ландшафт України за *the tourism landscape of Ukraine in recent years. The study highlights the tangible, measurable consequences of major shocks – from a sharp decrease in the number of tourists and their behavior patterns to sharp changes in the economic results of the sector's enterprises. The work aims to provide a detailed understanding of the sustainability and adaptability of the two main sectors of tourism - the hospitality and tour operating sectors. This analysis highlights the factors that have enabled certain tourism sectors to withstand the crises of recent years, while others may have struggled to adapt and recover. By carefully cataloging these trends and patterns, research provides information that can help design mitigation strategies.*

Keywords: tourism, tourism statistics, crisis, crisis trigger.

останні роки. Дослідження висвітлює відчутні, вимірювані наслідки великих потрясінь – від різкого зниження кількості туристів і їх моделей поведінки до різких змін у економічних результатах діяльності підприємств сектору. Дослідження повинно на меті забезпечити детальне розуміння стійкості та адаптивності двох основних секторів туризму – гостинності та туроперейтингу. Висвітлено фактори, які дозволили певним секторам сфери туризму витримати кризи останніх років, тоді як іншим, можливо, було важко адаптуватися та відновлюватися. Ретельно каталогізуючи ці тенденції та закономірності, дослідження дає інформацію, яка може допомогти розробити стратегії пом'якшення наслідків.

Ключові слова: туризм, статистика туризму, криза, тригер кризи.

JEL Classification: E27, L83, R58.

Introduction

Tourism is perceived by scientific and public mind as a significant catalyst for the economic and social transformation of countries and regions. The development of international relations, business and intercultural understanding, strengthening of global community and local economies, improvement of living standards, preservation of heritage and traditions are not the only reasons why countries and certain communities are interested in intensifying the tourism. At the same time, it can be argued that with the development of tourism, a travel company or destination becomes highly dependent on a wide variety of political, social and economic events, which updates a number of risks and increases vulnerability to a potential crisis. The set of crises that Ukraine faced throughout the 21st century destabilized the progressive development of the tourism sector at both the national and local levels, and set back all public and business initiatives. Mitigating the impact of crisis phenomena on tourism development requires the development of anti-crisis strategies, and this is impossible without a detailed statistical analysis of these impacts and the level of adaptability of tourism as a whole and its individual sectors.

The impact of crises of various genesis on the tourism industry has always been the focus of research. It should be noted that scientific research on crisis phenomena in tourism began in the 70s of the 20th century (Jianchun Yang et al., 2021) and intensified with the growth of crises of various origins on a global, national or local scale, reaching their maximum in 2020 due to COVID-19 pandemic. All studies were quantitative or qualitative analyses of the impact of specific crisis events on tourism industries or destinations of various levels. Back in 2004, the well-known tourism researcher Brent Ritchie argued that there was a lack of research on crisis or disaster phenomena in the tourism industry, on the impacts of such events on both the industry and specific organizations, and the analysis of response of the tourism industry to such incidents (Ritchie, 2004). The beginning of the 21st century was marked by a number of interesting studies of crisis phenomena in tourism, and the attempts to consider the crisis as a turning point for a tourist destination and business on its territory (Faulkner, 2001). A fairly common approach in science is when research focuses on a specific event that caused a crisis, such as a tsunami or other natural phenomena, climate change, terrorism, economic and financial crises, or political conflicts. As for the global COVID-19 crisis, which caused a large-scale suspension of international travel, a large number of studies by foreign and Ukrainian scientists were devoted to its impact on various aspects of tourism development at the global, national and local levels. Particularly noteworthy are the works of Nepochatenko (2020), Bondarenko & Duhienko (2020), Danylina et al. (2020), Haisheng Hu et al. (2021) and others, whose works deal specifically with the problems of pandemic-related crisis situations in the tourism sector.

Russian aggression against Ukraine caused a number of crisis phenomena in the tourism sector, which also became the focus of scientific research. Thus, the works of Roik & Nedzvetska (2022), Tsviliy et al. (2022), Bobeka et al. (2023), Zarubina et al. (2022), Yermachenko et al. (2024) focus on the losses of Ukrainian tourism and the prospects for its recovery.

The purpose of this article is to reveal the impact of several large-scale crises of the 21st century on Ukrainian tourism and to study the level of adaptability of its sectors through a number of indicators, including the economic and financial performance of relevant business entities.

The hypothesis of the study was that different economic sectors, the enterprises of which are part of the tourism sector, are characterized by different levels of adaptability to large-scale crises.

The article covers secondary and primary sources. When writing it, the results of several state statistical surveys were used: "Main Indicators of Economic Activity of Enterprises of the Non-Financial Services Sector", "Structural Changes in the Economy of the Country and its Regions", administrative data of the Administration of the State Border Guard Service of Ukraine on the passage of persons and vehicles across the state border of Ukraine, departure of Ukrainian citizens abroad, entry of foreigners and stateless persons into Ukraine, and data of the State Fiscal Service of Ukraine on the tourist tax amount. Comparative values are analyzed using descriptive statistics on the parameters of arrival of international tourists, number of business entities, employment in the tourism sector, sales volumes of business entities, and their efficiency and profitability. The dataset used covers the period from 2010 to 2022. The quantitative analysis is supported by expert opinion. It should be added that in their study, the authors relied on the conceptual position expressed by UNWTO and supported by the Methodological Recommendations for Compiling the Tourism Satellite Account in Ukraine, approved by the Order of the State Statistics Service of Ukraine No. 359 of December 29, 2017, according to which the tourism sector includes, among others, such types of business as hotels and similar accommodation, holiday and other short-stay accommodation, camping grounds, recreational vehicle parks and trailer parks, other accommodation, tour operators, travel agencies, other booking services and related activities.

The authors set themselves the task of recording the main crisis moments in the Ukrainian economy in the 21st century and analyzing the responses of tourism industries, in particular, hospitality and tour operation, to each of the crises by a number of statistical indicators (number of tourists and businesses, number of employees, taxes, sales, profits and profitability). Based on this data, it was planned to determine the level of adaptability of the industries, that is, their ability to overcome the crisis.

1. Tourism and crisis

Rather than using a clear scale or quantitative approach, UNWTO (2022) defines a crisis (as it relates to tourism) as "any unexpected event that affects traveler confidence in a destination and interferes with the ability to continue operating normally". Sönmez et al. (1999) use the broader term "tourism crisis" to describe circumstances that can threaten the normal operation and conduct of tourism related businesses; damage a tourist destination’s overall reputation for safety, attractiveness and comfort by negatively affecting visitors’ perceptions of that destination; and, in turn, cause a downturn in the local travel and tourism economy and interrupt the continuity of business operations for the local travel and tourism industry by the reduction in tourist arrivals and expenditures. Given these definitions, it becomes obvious that, *firstly*, a tourism crisis can be triggered by events of various origins; *secondly*, an important sign of a tourism crisis is the negative impact of these factors on the destination’s image and reputation; *thirdly*, changes in the image or reduction in the attractiveness of a destination(s) directly affect the performance of enterprises involved in serving visitors to certain territories.

At the same time, Bierman argues that while the entire tourism sector is highly sensitive to any turbulence and instability, and no destination or enterprise can be completely immune to a crisis, some destinations and market sectors remain more resilient than others (Bierman, 2003). While it is impossible to eliminate all risks, their mitigation should be based on the initiatives to reduce business vulnerability that are aligned with effective crisis management at the national and local levels.

2. Crisis and adaptability of tourism

In his 2001 study, Faulkner (2001) noted that "crisis and disasters have transformational connotations, with each such event having potential positive (e.g., stimulus to innovation, recognition of new market, etc.), as well as negative outcomes". The market system tends to recover, and this is possible due to the ability of the enterprise and the destination to learn from crises, change the policy, adapt and modify strategies that did not work effectively (Miller & Ritchie, 2003).

The complex structure of the tourism market makes us talk about the different nature and scale of crisis impacts. For example, a tsunami in Southeast Asia or an earthquake in Turkey causes a drop in demand on the Ukrainian market for tours and air tickets mainly in these directions and affects almost exclusively the tour operator and aviation sectors. In this case, adaptability is determined by the ability to diversify the product and the ability to quickly reengineer business processes. However, in this study, we will consider in detail the large-scale crises of different origins that have affected all tourism industries without exception.

3. Crises in the Ukrainian economy of the 21st century

The first large-scale political and economic crisis in Ukraine in the 21st century can be considered the crisis of 2014 as a result of russian aggression in the east of the country, when real GDP fell by 6.8%, and real gross value added decreased in all sectors except for agriculture and non-market services. High fiscal pressure, financial constraints, and accelerating inflation led to a 10.8% drop in domestic demand. Net real exports contributed positively to economic growth as real imports fell more than exports (Institute for Economic and Policy Consulting, 2015). As for certain tourism sectors, the consequences of this crisis were, first of all, a sharp decline in the inbound tourist flow due to the annexation of territories, including the powerful destinations of the Autonomous Republic of Crimea and city of Donetsk, negative impact on the country’s image in target markets, loss of entire markets, including the Russian market, which traditionally accounted for up to 60% of the flow, which affected the hospitality industry, incoming tour operation, passenger transport and those economic activities involved in serving visitors.

This crisis caused significant losses in both the outbound and domestic tourism sector. Again, Crimean destinations and city of Donetsk "fell out" from the sphere of interests of Ukrainian tourists, but an even more important consequence was a drop in domestic demand for relevant products and services.

COVID-19 pandemic was the next natural economic crisis of the 21st century that had a disastrous impact on global tourism. In 2020, Ukraine’s GDP decreased by 4%, with exports and imports of goods and services falling by 7.8% and 12.5%, respectively. The unemployment rate increased to 9.5% from 8.2% in 2019 (Institute for Economic and Policy Consulting, 2021). The imposed quarantine restrictions affected all tourism sectors, forcing business entities to form reactive anti-crisis strategies.

The reason for the third analyzed crisis was full-scale Russian military aggression, which began in February 2022 and continues at the time of writing this article. In 2022, GDP lost 29.1%, consumer spending fell by

27%, exports by 42%, and imports by 19% (Ekonomichna Pravda, 2023, May 4). Once again, the crisis affected all tourism sectors without exception, but also revealed strong regional differences in these changes. For example, the hotel sector in Lviv, Ivano-Frankivsk, Zakarpattia, and Chernivtsi regions suffered much smaller losses compared to those regions of Ukraine where active hostilities were taking place.

4. Analysis of statistical data

4.1. Visitor flows

According to data from the State Border Guard Service of Ukraine, received upon request, the number of foreigners entering Ukraine critically decreased three times – in 2014-2015 by 48% compared to 2013, in 2020 during COVID-19 pandemic by 75% compared to 2019, and since the beginning of Russian military aggression by 46% (*Figure 1*). In fact, Ukrainian inbound tourism did not recover from COVID-19 crisis, smoothly "entering" another crisis, although in 2021 there was a 26% increase in the flow of foreign visitors, including those for tourism purposes. Although the number of foreigners entering Ukraine increased slightly in 2023 (by 6%), the flow is still unprecedentedly small, and its motivational structure is obviously significantly different from the pre-war one. Thus, according to the expert opinion, diplomats, volunteers, media workers, and public activists account for a significant share of the tourist flow (Kyivstar Business Hub, 2023).

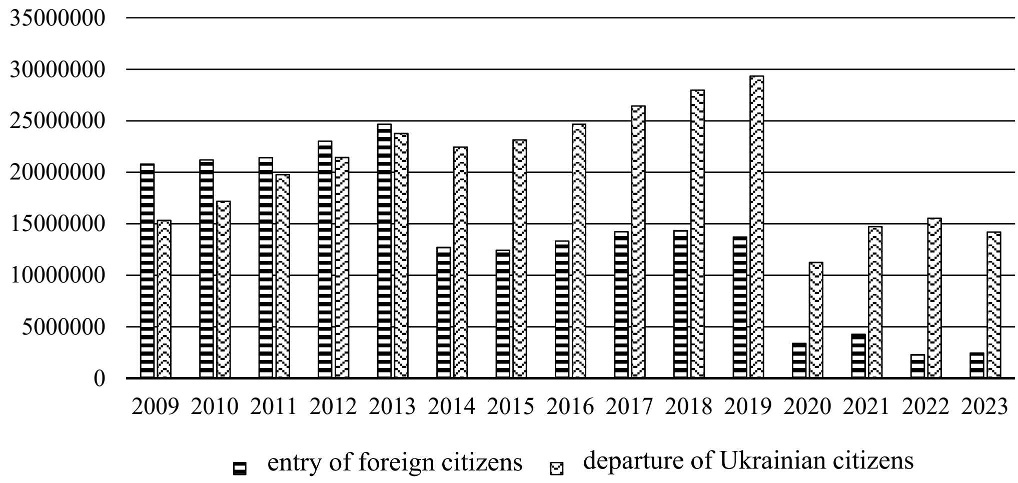


Figure 1. Dynamics of foreign nationals entering Ukraine and Ukrainian citizens leaving Ukraine, persons

Source: data of the State Border Guard Service of Ukraine (on request).

The dynamics of the flow of Ukrainians who traveled abroad during the study period requires some explanation. For example, the decline in the outbound tourism during 2014-2015 crisis was not so critical and amounted to only 6%, but later there was an annual increase until 2020, when the number of Ukrainians traveling abroad decreased by 62%. After recovering to 31% in 2021, the outbound flow increased again in 2022, but this time due to the non-tourist component – refugees. We would like to emphasize that the number of Ukrainian citizens who traveled abroad for various purposes in 2021 was 14.726.250, and in 2022 – 15.538.488, but the distribution of travel purposes changed dramatically and continued to change throughout 2022. Thus, from February 24, 2022, refugees dominated the flow, but since May, the share of tourists, often hidden, has appeared in it. In 2023, the number of departures of Ukrainian citizens decreased slightly, but the motivation clearly changed in favor of certain types of tourism, and the structure of the flow changed in favor of women. It is in terms of the outbound flow that a certain syncretism of the purpose and motivation of travel is observed, when traditional tourism motivation is intertwined with the desire to escape the hardships of war, the desire for security, etc. We believe that this important aspect is the basis for maintaining the demand for the outbound tourism at a certain level, and thus for maintaining the business.

The tour operator market has responded to the changes: on the one hand, foreign tour operators from Moldova, Poland, Germany, and Romania entered the Ukrainian market, and on the other hand, national tour operators launched their own flights from neighboring countries or shifted their focus to bus tours.

As for domestic tourism, there are no statistical surveys of it in Ukraine, but a study conducted in 2023 by the State Agency for Tourism Development of Ukraine (SATD) and UNICEF U-Report Ukraine project shows a certain intensification of tourism during the war (SATD, 2023).

4.2. Taxes: sectoral and regional aspects

The next group of data that can be used to assess the state of the tourism sector in Ukraine is data on tax revenues of business entities by type of economic activity related to tourism, and tourist tax.

SATD has been monitoring the volume of tax revenues from business entities for 5 KVED (NACE) related to the tourism sector only since 2021, so from their data we can only assess the latest large-scale crisis. Thus, according to the agency, tax revenues from the tourism sector in 2023 increased by 32% compared to 2022 (*Figure 2*); the number of taxpayers decreased by 9%, with the number of legal entities decreasing by 22% and individuals by 5%, which indicates the nature of transformation processes; state budget revenues from hotel operations amounted to UAH 1.303.623, which is almost twice as much as the amount paid to the budget by the hotel industry in 2022 and almost the same as the amount paid by hotels in 2021; tax revenues from tour operators in 2023 increased by almost a quarter compared to 2022 – UAH 205.828 against UAH 167.858 (SATD, 2023). We also see an upward trend in terms of tourist tax (*Figure 3*).

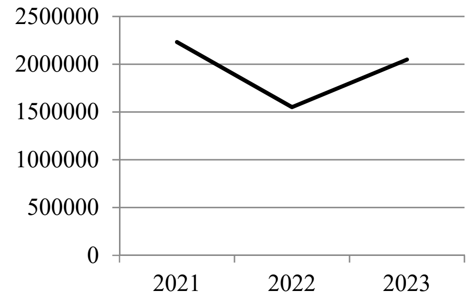


Figure 2. Dynamics of tax revenues from the tourism sector, thousand hryvnias

Source: compiled by the authors based on data (SATD, 2023).

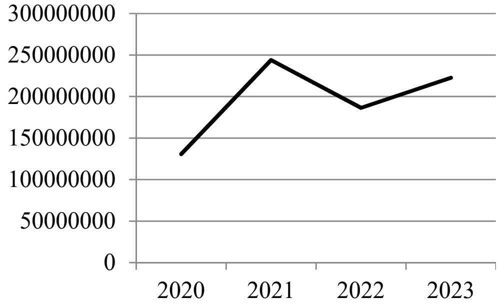


Figure 3. Dynamics of tourist tax revenues, hryvnias

Source: compiled by the authors based on Open budget data (2024).

Analyzing the situation with tax revenues regionally, we see several groups of Ukrainian regions, divided according to how their tourism sector responded to the last crisis (*Table 1*). *Firstly*, these are the regions where tax revenues increased during the war years: Zakarpattia, Kyiv, Lviv, Khmelnytskyi, and Chernivtsi regions, which first became a center for refugees during the military aggression and later became the main tourist destinations in Ukraine. It should be noted that this list also conditionally includes Ivano-Frankivsk region, the flow to which increased in 2022, and slightly decreased in 2023. *Secondly*, these are Vinnytsia, Volyn, Zhytomyr, Poltava, Rivne, and Ternopil regions, whose tourism business entities initially worsened the indicators of tax revenues, but in 2023 improved them even compared to 2021. *Thirdly*, these are city of Kyiv, Dnipropetrovsk, Mykolaiv, Odesa, Sumy, Kharkiv, and Cherkasy regions, which, despite some growth in 2023, were not able to reach the volume of the pre-war 2021. And finally, the *fourth* group includes Donetsk, Zaporizhzhia, Luhansk, Kherson, and Chernihiv regions, whose tax revenues from business entities continue to fall due to the destruction caused by the war.

Figure 3 shows the dynamics of the volume of tourist tax in Ukraine for 2018-2023 (before 2018, the rules and amounts of this local tax were different, so they cannot be compared). It can be seen from *Figure 3* that although the tourist tax rate is set by the decision of each specific local self-government authority for each day of short-stay accommodation in places of residence (overnight) and varies depending on the community from 0.5% of the minimum wage – for domestic tourism and up to 5% of the minimum wage – for inbound tourism, as provided for in subclause 268.5.1 of clause 268.5 of Article 268 of the Tax Code of Ukraine (Tax Code of Ukraine, 2018), the general trend is obvious – we see "failed" touristic 2020, and a 25% drop in the military 2022, followed by a 24% increase in 2023, which clearly indicates a certain recovery in the hotel sector.

Table 1

Dynamics of changes (growth rates) in the volume of tax revenues from the tourism sector in Ukrainian regions in 2021-2023

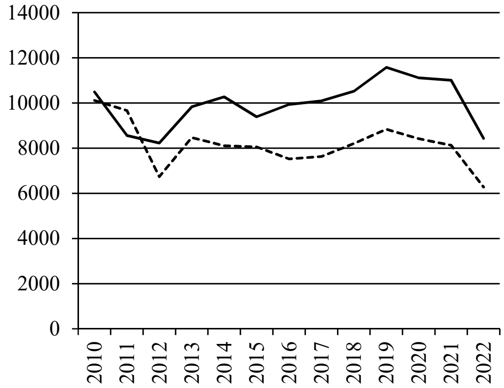
Region	Volume of tax revenues from the tourism sector, million hryvnias			Growth rates, %		
	2021	2022	2023	2021/2022	2022/2023	2021/2023
City of Kyiv	777.9	415.2	449.3	–46.6	8.2	–42.2
Vinnytsia	27.4	23.9	29.9	–12.8	25.1	9.1
Volyn	13.3	11.8	15.9	–11.3	34.7	19.5
Dnipropetrovsk	98.4	69.5	98.1	–29.4	41.2	–0.3
Donetsk	59.6	18.8	8.8	–68.5	–53.2	–85.2
Zhytomyr	14.1	9	14.5	–36.2	61.1	2.8
Zakarpattia	59.5	72.4	94.2	21.7	30.1	58.3
Zaporizhzhia	98.6	26.2	12.2	–73.4	–53.4	–87.6
Ivano-Frankivsk	132	159.7	138.8	21.0	–13.1	5.2
Kyiv	125.4	163.9	239	30.7	45.8	90.6
Kirovohrad	15.2	10.9	15.8	–28.3	45.0	3.9
Lviv	215.4	273.8	345.5	27.1	26.2	60.4
Luhansk	9.2	1.9	0.5	–79.3	–73.7	–94.6
Mykolaiv	45.9	14.3	21.7	–68.8	51.7	–52.7
Odesa	210.8	87.6	98.8	–58.4	12.8	–53.1
Poltava	43.5	34.6	45.4	–20.5	31.2	4.4
Rivne	16.2	14.1	20.1	–13.0	42.6	24.1
Sumy	11.4	7.3	9.8	–36.0	34.2	–14.0
Ternopil	17.3	15.1	19.6	–12.7	29.8	13.3
Kharkiv	104.8	38.9	49.6	–62.9	27.5	–52.7
Kherson	58.7	10.4	1.7	–82.3	–83.7	–97.1
Khmelnytskyi	21.4	22.6	31.2	5.6	38.1	45.8
Cherkasy	23	17.4	20.7	–24.3	19.0	–10.0
Chernivtsi	18.2	20.7	28.8	13.7	39.1	58.2
Chernihiv	18.6	11.3	10.8	–39.2	–4.4	–41.9

Source: calculated by the authors based on data (SATD, 2023).

If we analyze the regional differences in the volumes of tourist tax collected (SATD, 2024), we again see that the volume of tourist tax revenues in the regions that were partially occupied, as expected, sharply decreased, while the same indicator in Lviv, Ivano-Frankivsk, Zakarpattia, Chernivtsi, Kirovohrad, and Ternopil regions more than doubled. This creates a certain dilemma, as it is obvious that the growth was also due to the influx of refugees from other regions of the country, but formally, until they were registered as internally displaced people, they continued to pay tourist tax while staying in accommodation facilities.

4.4. Number of business entities and employment

The economic shock experienced by tourism business entities during the crisis is naturally reflected in the dynamics of the number of business entities and the number of employees (*Figure 4, 5*).



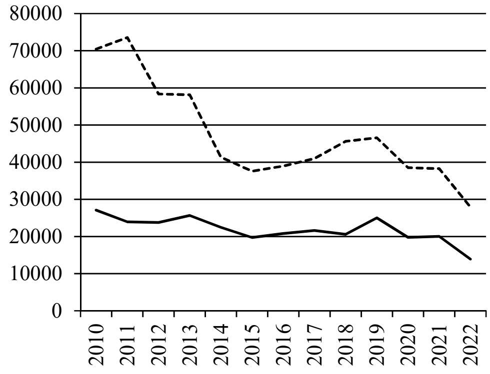


Figure 4. Dynamics of the number of tourism business entities, pcs

Figure 5. Dynamics of employment in the tourism sector by type of economic activity, persons

Source: created by the authors based on the data of the State Statistics Service of Ukraine (State Statistics Service, 2024).

Figure 4, 5 shows that the nature of the dynamics for each indicator in both studied branches of the tourism sector – hospitality and tour operators – is approximately the same, with response to crisis phenomena, but tour operators recovered from the crisis faster, reaching the pre-crisis values.

In order to analyze the dynamics of the tourism sector, it is worth considering this indicator by the types of economic activity that are related to tourism. We selected seven such types of activities according to KVED-2010 (NACE): hotels and similar accommodation, holiday and other short-stay accommodation, camping grounds, recreational vehicle parks and trailer parks, other accommodation, tour operators, travel agencies, other booking services and related activities (*Table 2*).

The analysis of the growth rates of the number of business entities shows that the tour operator market fully restored their pre-crisis values a year after the crisis began, while the hospitality market needed more time.

In terms of the number of employees, both sectors needed even more time – about 3–4 years – to restore their pre-crisis values. We can also see that during the crisis the rate of reduction in the number of employees in these markets is higher than the rate of reduction in the number of business entities.

Table 2

Dynamics of changes (growth rates) in the number of business entities in the tourism sector by type of economic activity, %

Comparison period	Short-stay accommodation					Tour operators, travel agencies, other booking services			
	Total	including:				Total	including:		
		hotels	holiday short-stay accommodation	camping grounds	other accommodation		travel agencies	tour operators	other booking services
2010/2011	–4.4	–3.4	–5.7	–3.7	–2.2	–18.4	–23.7	47.9	–28.2
2011/2012	–30.3	–26.0	–33.8	–16.5	–33.1	–3.9	–4.0	–4.1	–3.0
2012/2013	25.7	25.8	24.8	30.3	30.0	19.5	19.5	20.7	17.8
2013/2014	–4.2	7.7	–13.7	–16.3	–15.0	4.5	10.8	–11.8	–16.3
2014/2015	–0.6	–1.1	2.1	2.8	–13.7	–8.5	–10.0	–0.4	–7.0
2015/2016	–6.6	1.7	–20.0	–13.5	19.7	5.8	–2.1	–15.4	108.6
2016/2017	1.4	8.0	–4.6	–7.8	–15.1	1.6	6.6	1.2	–18.8
2017/2018	7.5	12.5	2.4	–6.8	–7.2	4.2	7.3	9.9	–17.0
2018/2019	7.7	9.3	5.9	1.8	1.7	10.0	10.4	3.5	14.4
2019/2020	–4.7	–6.0	–0.5	–8.9	–15.9	–4.0	–2.8	–5.0	–11.1
2020/2021	–3.5	–4.3	–1.4	–5.9	–6.8	–1.0	0.1	–4.8	–5.6
2021/2022	–22.8	–16.7	–32.1	–37.5	–30.5	–23.4	–22.7	–37.2	–14.4

Source: calculated by the authors based on data (State Statistics Service, 2024).

4.4 Sales volume, profitability, and efficiency

Another important indicator of the crisis is the volume of sales of goods (services), data on which are collected as part of the state statistical survey "Structural Changes in the Economy of the Country and its Regions" (*Figure 6*).

And again we see the steady growth of these branches of tourism sector in 2012–2013, a decline in 2014 by 30–50% depending on the type of activity, followed by a slow, even recovery of the sector until 2019, another crisis in 2020 with a drop in sales by 10-30% and a very rapid recovery in 2021 – from 60 to 90% in one year, exceeding the value of the pre-crisis 2019, which obviously indicates the adaptability of the system, and a new decline of 50% in 2022. In *Figure 7*, which shows the dynamics of net profit (loss) of tourism business entities, there are significant differences in the tourism sectors. We can see that after 2014 crisis, both the tour operators and the hospitality sector made a profit only in 2017, after 2020 crisis – in 2021, but the long military crisis of 2023 had a more negative impact on the hospitality sector.

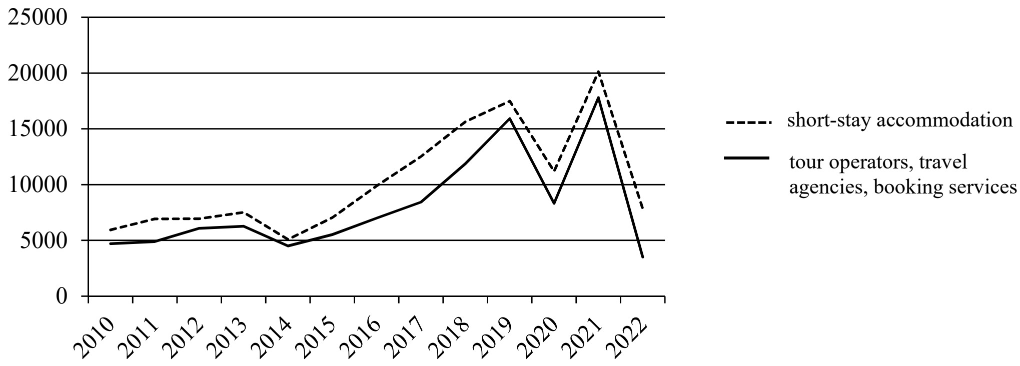


Figure 6. Dynamics of volumes of products sold by tourism business entities, million hryvnias

Source: created by the authors based on data (State Statistics Service, 2024).

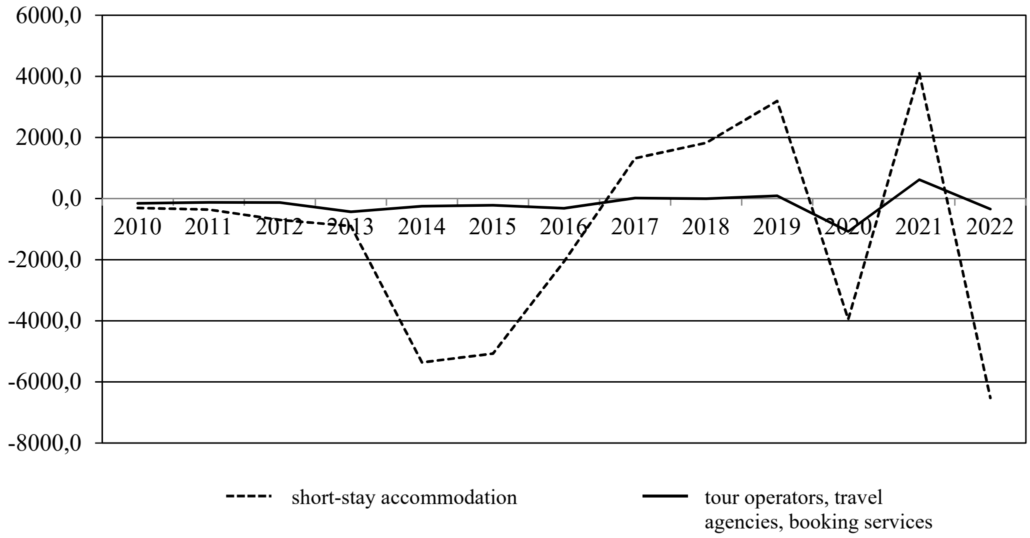


Figure 7. Dynamics of net profit (loss) of business entities in the tourism sector, million hryvnias

Source: created by the authors based on data (State Statistics Service, 2024).

Similar phenomena can be observed in another tourist sector – tour operation, where in 2014 the sales fell by 30% for all types of activities, and since 2015 the system began to recover at a rate of 20, 30, and in some activities 50% annually until the coronavirus crisis, when the sector "dropped" by 30–50%. However, the recovery came quite quickly, already in 2021, when the sales of tour operators increased by 140% at once, and sales of travel agents by 90% (*Table 3*). Obviously, a similar situation occurred in 2023, after a catastrophic decline due to the outbreak of war, but statistical data have not yet been published. Thus, we can say that the adaptability of the tour operation sector was even higher than in the hospitality sector.

Table 3

Dynamics (growth rates) of volumes of products (goods, services) sold by tourism business entities in 2010–2022, %

Comparison period	Short-stay accommodation					Tour operators, travel agencies, other booking services			
	Total	including:				Total	including:		
		hotels	holiday short-stay accommodation	camping grounds	other accommodation		travel agencies	tour operators	other booking services
2010/2011	16.8	22.4	5.3	25.9	0.0	3.9	4.8	21.8	–44.9
2011/2012	0.2	5.2	–7.6	–5.7	–32.1	24.4	–34.7	122.7	–20.2
2012/2013	8.1	9.1	1.7	301.6	9.4	3.1	8.8	–1.7	38.3
2013/2014	–32.3	–30.4	–35.7	–13.6	–53.5	–28.1	–25.1	–31.8	–3.9
2014/2015	38.4	45.9	11.0	–83.8	25.1	22.4	29.9	15.1	47.3
2015/2016	40.4	43.6	25.6	46.5	17.4	26.9	28.7	24.6	34.5
2016/2017	26.6	26.2	28.2	48.3	32.6	20.4	18.3	23.5	10.0
2017/2018	24.9	24.4	31.0	8.8	8.6	40.8	28.0	47.9	45.3
2018/2019	11.8	8.4	32.8	17.3	19.0	34.1	21.7	38.5	48.1
2019/2020	–36.0	–40.6	–13.9	–9.0	–24.3	–47.8	–43.4	–52.2	–33.2
2020/2021	79.9	77.2	93.2	6.8	55.0	114.1	93.1	135.5	72.1
2021/2022	–61.1	–51.2	–91.6	–51.5	–86.4	–80.3	–79.5	–84.3	–58.6

Source: calculated by the authors based on data (State Statistics Service, 2024)

However, if we consider the dynamics of profits (losses)[1] of tourism enterprises, grouping the above types of economic activity into two groups – hospitality or short-stay accommodation, which includes 4 KVED, and tour operators, travel agencies, other booking services and related activities, which includes 3 KVED, it becomes clear that enterprises of the first group with activity 55.10 Hotels and similar accommodation faster adapted to crises – and by 2014 they were chronically in losses, and this situation significantly worsened in 2014–2016, when their profitability ranged from -37 to -59%. In 2017–2019, the situation improved significantly, with hotels making a profit. However, COVID-19 crisis in Ukraine has once again worsened the situation in the hotel business, which was the most affected by the pandemic among all types of economic activity. The dynamics of profits (losses) of tour operators were almost similar to the hotel sector – they also suffered large losses in 2014–2016 and recovered in 2017–2019, experienced a deep drop in the coronavirus crisis and a subsequent encouraging rise in

[1] Net profit/net loss by type of economic activity is calculated as the algebraic sum of profit (loss) before taxes, income tax, and profit (loss) from discontinued operations after taxes in the reporting period (State Statistics Service, 2021)

profits, a new drop in 2022, and the beginning of recovery in 2023. As for the second group, travel agencies adapted best to the crisis, as they began to make a profit the following year after the drop (*Table 4*).

Table 4

Net profit (loss) of tourism enterprises by type of economic activity in 2010–2023, million hryvnias

Year	Short-stay accommodation					Tour operators, travel agencies, other booking services			
	Total	including:				Total	including:		
		hotels	holiday short-stay accommodation	camping grounds	other accommodation		travel agencies	tour operators	other booking services
2010	–309,5	–186,9	–97,0	–0,5	–24,9	–178,2	–128,5	–28,7	–20,9
2011	–357,9	–218,8	–138,6	–2,9	2,3	–172,7	–135,3	8,7	–46,1
2012	–700,6	–594,5	–105,3	–2,3	1,6	–134,3	–5,6	–125,5	–3,1
2013	–898,3	–762,6	–117,8	–1,4	–16,4	–480,6	–380,0	–51,9	–48,6
2014	–5361,3	–5142,9	–176,2	–13,1	–29,2	–297,0	–35,9	–212,3	–48,7
2015	–5072,1	–4959,1	–90,8	–20,9	–1,3	–242,5	–1,5	–216,5	–24,3
2016	–2060,9	–2028,6	–29,5	1,4	–4,2	–281,7	46,2	–365,3	37,4
2017	1323,0	1470,2	–132,2	–6,8	–8,2	0,8	22,8	–2,9	–19,0
2018	1825,2	1846,7	–11,9	–0,9	–8,6	11,0	57,9	–59,9	12,9
2019	3194,7	3192,9	11,1	–0,9	–8,3	126,2	121,4	–29,3	34,0
2020	–3947,3	–3858,6	–82,1	0,5	–7,1	–1126,4	–58,1	–1017,5	–50,7
2021	4107,1	2760,3	1344,4	0,7	1,6	589,4	161,7	458,1	–30,3
2022	–6526,7	–6464,0	–66,4	–0,4	4,1	–463,9	–72,8	–270,1	–121,0
2023	–664,1	–624,7	–42,4	0,1	2,9	2318,3	64,4	2115,0	138,8

Source: calculated by the authors based on data (State Statistics Service, 2024).

If we analyze the profitability of operating activities by tourism sectors (types of economic activity), based on the position that the profitability of all activities is calculated as the result of ratio of net profit (loss) to all expenses of enterprises, and the profitability of operating activities is calculated as the result of ratio of the financial result from operating activities (profit, loss) to the expenses of operating activities of enterprises (State Statistics Service, 2021), we see evidence that the tour operation sector is emerging from the crisis faster than the hospitality sector (*Table 5, Figure 8*).

Thus, looking at each post-crisis period, we see a time lag of one year for profitability growth for travel agents (mainly small and micro businesses) and tour operators, while hotels need more time to improve their efficiency.

Table 5

Profitability of enterprises by types of economic activity for 2010–2023, %

Years	Hotels and similar accommodation		Holiday and other short-stay accommodation		Camping grounds, recreational vehicle parks and trailer parks		Other accommodation		Tour agencies		Tour operators		Other booking services and related activities	
	operating activities	all activities	operating activities	all activities	operating activities	all activities	operating activities	all activities	operating activities	all activities	operating activities	all activities	operating activities	all activities
2010	1.6	–2.7	–7.1	–7.6	–20.3	–20.6	–5.6	–6.7	–2.4	–4.1	11.5	–2.1	–5.5	–6.6
2011	1.5	–3.2	–5.7	–10.2	–39.4	–53.2	0.0	0.4	–2.3	–4.0	1.8	0.3	–5.9	–9.4
2012	–4.9	–8.5	–4.0	–7.3	–24.8	–32.1	2.9	1.0	1.5	–0.4	–0.7	–2.9	–0.3	–1.6
2013	–5.3	–10.6	–5.3	–8.6	–2.9	–4.0	–6.5	–7.6	–20.8	–20.5	0.5	–1.2	–6.2	–13.1
2014	–54.4	–54.7	–17.1	–21.4	–29.1	–29.1	–17.0	–34.3	–3.9	–3.3	–4.2	–6.7	–11.1	–15.3
2015	–35.3	–37.2	–9.2	–11.3	–74.0	–80.6	–2.7	–2.2	–0.8	–0.1	–4.0	–5.7	2.2	–5.9
2016	–5.9	–16.1	–1.7	–3.5	28.3	9.1	–2.6	–6.3	1.8	3.0	–8.2	–7.4	3.1	8.0
2017	18.7	11.6	–4.2	–12.0	–54.2	–47.7	–5.3	–8.2	1.8	1.3	0.0	–0.1	–10.4	–3.9
2018	22.3	14.6	–0.1	–0.9	–8.6	–8.8	–11.5	–9.6	4.4	2.8	–0.2	–0.8	3.4	1.9
2019	25.5	23.6	0.9	0.7	–8.3	–10.6	–8.9	–7.3	7.9	5.3	–0.9	–0.3	5.8	3.4
2020	–28.5	–30.6	–6.7	–5.1	–0.6	6.3	–10.1	–1.1	–5.0	–5.1	–11.0	–15.4	–8.2	–7.6
2021	16.6	22.5	97.7	80.7	20.8	9.3	–10.3	0.2	4.9	5.9	5.3	4.9	–2.4	–2.5
2022	–22.4	–44.3	–22.4	–9.6	32.7	–4.4	–4.2	6.9	–5.6	–7.0	–8.9	–11.9	–31.8	–9.8
2023	4.8	–5.3	–14.4	–8.1	5.2	1.3	–7.8	4.3	4.2	4.3	79.9	62.8	16.2	10.3

Source: compiled by the authors based on data (State Statistics Service, 2024).

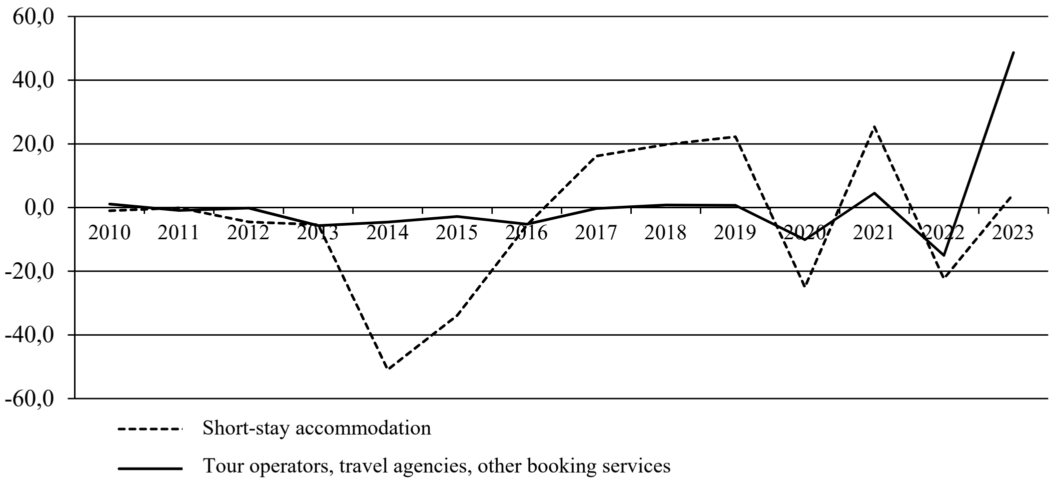


Figure 8. Dynamics of operating profitability of tourism enterprises, %

Source: created by the authors based on data (State Statistics Service, 2024).

For example, all tour operation sector, including tour operators, travel agents, and booking companies, had negative operating and total profitability in 2022, and in 2023 this level rose to the industry average of 4.2% and 4.3% for agents and 79% and 62% for tour operators.

At the same time, the hotel sector shows deeper declines (see *Figure 8*) and slower adaptation to the crisis that lasts longer than a year.

5. Crisis recovery

The duration of any particular crisis and the associated recovery period can vary significantly. The impact of the crisis is multidimensional and, in addition to economic and social losses, it affects a number of other aspects – physical destruction, environmental losses, medical and emotional states of people.

Effective recovery of the tourism sector at micro, meso, and macro levels requires a large-scale restructuring of business processes and strong marketing.

Meso and macro levels include improving operational practices and systems, law enforcement and preventive measures, strong public relations, creating positive images and impressions, celebrity visits, meeting journalists, holding international events, that is, everything that can affect the subjective opinions and attitudes of potential consumers. At micro level, the anti-crisis strategies include diversifying the product base, targeting new market segments, and improving quality and competitiveness.

Summarizing the approaches of Ukrainian scientists, we can distinguish the following groups of strategic and tactical measures:

diversification, that is, expanding the field of activity of a business entity in any direction, so as not to be dependent on one market, is used at the beginning of the enterprise establishment, and at the first signs of a crisis. The purpose of diversification is to combine different stages of production and distribution, and different types of activities within one organization to significantly save costs. In the tourism sector of Ukraine, we see such examples of diversification as the introduction of transportation services by a tour operator; entry of foreign tour operators into the domestic tourism market, etc;

reengineering – redesigning the enterprise's business processes by reducing unnecessary links and operations in business processes, unnecessary time and other resources in order to improve performance indicators, such as labor productivity, service time, cost price, etc;

regularization – formation of a system of strategic planning and management accounting, creation of a comprehensive system of financial control and planning, automated accounting system, full-fledged marketing services, etc. Using this method the enterprises create management systems that are able to solve a large volume of complex tasks related to work (Nizalov, 2000);

restructuring – implementation of organizational, economic, legal, production and technical measures aimed at changing the enterprise's structure, its management, and forms of management that can ensure the enterprise's financial recovery, increase in the volume of competitive products, and increase in production efficiency;

merger – amalgamation of enterprises (by creating a new legal entity or connecting enterprises to parent enterprise), as a result of which the owners (shareholders) of the merged enterprises will exercise control over all the net assets of the merged enterprises;

liquidation – termination of the enterprise's activities in order to satisfy creditors' claims;

downsizing – reduction of production capacities and the number of employees of the enterprise according to real demand and market opportunities in order to reduce fixed costs and production costs;

rehabilitation – combines a set of financial, economic, production, technical, organizational and social measures aimed at rapid improvement of the enterprise's financial performance by changing the structure of the enterprise's assets and liabilities. The rehabilitation measures include presservation, lease and sale of fixed assets not used by the enterprise, replacement of short-term debt obligations with long-term ones, transfer of social facilities to municipal ownership, etc. (Zakharchenko, 2014);

monitoring – research, assessment and forecasting the state of the environment in connection with economic activity of the enterprise to detect an impending crisis and its "weak signals" (Zakharchenko, 2014);

controlling – function in the enterprise management system that analyzes and coordinates the system of implementation of production programs in comparison with the planned indicators (Ruban, 2015);

benchmarking – continuous systematic search for and implementation of best practices that will lead the organization to a more perfect form. It is an effective tool for determining the company's position in comparison with other organizations of similar size and/or field of activity (Ruban, 2015).

From the perspective of holistic crisis management, the recovery process can also provide some experience, and the lessons learned should be evaluated and used to develop improved strategies to mitigate future crises. For destinations that are heavily dependent on tourism, such reforms imply significant economic, social and structural investments.

Conclusions

Thus, this article systematically sorts out statistical indicators that clearly demonstrate the impact of crisis phenomena on the development of domestic tourism sector, clarifies the research context and framework for crisis management in tourism in order to ultimately help the tourism industry to improve the level of anti-crisis management and provide a theoretical basis for anti-crisis management in tourism. The article provides an overview of the most significant destructive events for Ukrainian tourism over the past decade.

The statistical assessment proves the existence of a certain scenario of events in the tourism market, which includes the following stages:

at the first stage, there is a crisis trigger or a certain internal or external event that triggers crisis phenomena of various types, causes a sharp decline in demand in all market sectors, and therefore, an economic shock in the tourism sector, especially noticeable due to the drop in the values of all indicators of economic activity;

at the second stage, there are rapid changes in the demographic, behavioral, and motivational structure of demand;

at the third stage, tourism enterprises and destinations, trying to survive, adapt business processes to new conditions, initiate the launch of products and services that are best suited to changes in demand, differentiate their activities, and then, after recovering from the shock, begin to actively influence the demand in new conditions;

at the fourth stage, depending on the duration of crisis, demand and key economic indicators of the industry's performance recover.

The analysis of statistics on the activities of domestic business entities proves that, due to its structure and specific features of business processes, the tour operator market adapts to crisis phenomena faster than the hospitality market, which confirms the suggested hypothesis. In addition, tourism enterprises of traditionally tourist regions, in terms of both demand (large places with a concentration of consumers) and supply (Ivano-Frankivsk, Lviv, Zakarpattia regions), endure crises more easily.

It is the regional aspect of research on crisis phenomena that can be the basis of our further research.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Beirman, D. (2003). Restoring Tourism Destinations in Crisis: *A Strategic Marketing Approach* (1st ed.). Routledge. ISBN 9781865089119.

Bobeka, V., Gotalb, G., & Horvatc, T. (2023). Impacts of the 2022 War in Ukraine on the Travel Habits of Ukrainian Tourists. *Naše gospodarstvo*, *69*(3). https://doi.org/10.2478/ngoe-2023-0018

Bondarenko, A. G., & Dugienko, N. O. (2020). Impact of the Covid-19 pandemic on international tourism. *Eastern Europe: Economy, Business and Management. World economy and international economic relations, 3*(26), 3–7. https://doi.org/10.32782/easterneurope.26-1

Бондаренко, А. Г., & Дугієнко, Н. О. (2020). Вплив пандемії Covid-19 на міжнародний туризм. *Східна Європа: економіка, бізнес та управління. Світове господарство і міжнародні економічні відносини*, *3*(26), 3–7. https://doi.org/10.32782/easterneurope.26-1

Danilina, S. O., Kocjurubenko, G. M., & Shikina O. V. (2020) Financial and economic consequences of the pandemic for the global tourism industry. *World economy and international economic relations, 52*(1), 29–34. https://doi.org/10.32843/bses.52-4

Даниліна, С. О., Коцюрубенко, Г. М., & Шикіна, О. В. (2020) Фінансово-економічні наслідки пандемії для світової туристичної галузі. *Світове господарство і міжнародні економічні відносини, 52*(1), 29–34. https://doi.org/10.32843/bses.52-4

Economic Truth. (2023, May 4). The war destroyed a third of Ukraine's GDP. *How does the economy look now?* https://www.epravda.com.ua/weeklycharts/2023/05/4/699766

Економічна правда. (2023, 4 травня). Війна знищила третину ВВП України. *Як зараз виглядає економіка*? https://www.epravda.com.ua/weeklycharts/2023/05/4/699766

Faulkner, B. (2001). Towards a Framework for Tourism Disaster Management. *Tourism Management*, (22), 135–147. https://doi.org/10.1016/S0261-5177(00)00048-0

Haisheng Hu, Yang Yang, Jin Zhang (2021) Avoiding panic during pandemics: COVID-19 and tourism-related businesses. *Tourism Management*. https://doi.org/10.1016/j.tourman.2021.104316	
Institute for Economic and Policy Consulting. (2021). 30 Years of Independence: COVID-19 as an Economic Crisis of Natural Origin. http://www.ier.com.ua/ua/publications/comments?pid=6718	Інститут економічних і політичних консультацій. (2021). 30 років Незалежності: COVID-19 як економічна криза природного походження. http://www.ier.com.ua/ua/publications/comments? pid=6718
Institute of Economic and Political Consultations. (2015). 2014: Economic results for Ukraine "*A year of crisis and new opportunities.* http://www.ier.com.ua/files/Regular_products/Economic_Summary/ES_2014_ukr.pdf	Інститут економічних і політичних консультацій. (2015). 2014 рік: Економічні підсумки для України "*Рік кризи та нові можливості*". http://www.ier.com.ua/files/Regular_products/Economic_Summary/ES_2014_ukr.pdf
Jianchun, Yang, Wenting, Li, Hongming, Wei. (2021). Review of the Literature on Crisis Management in Tourism. *Proceedings of the 2021 2nd International Conference on Modern Education Management, Innovation and Entrepreneurship and Social Science* (MEMIESS 2021) https://www.atlantis-press.com/proceedings/memiess-21/125959221	
Kyivstar Business Hub. (2023). Tourism during the war. *How the industry survives and prepares for recovery*. https://hub.kyivstar.ua/articles/turyzm-pid-chas-vijny-yak-galuz-vyzhyvaye-ta-gotuyetsya-do-vidnovlennya	Kyivstar Business Hub. (2023). Туризм під час війни. *Як галузь виживає та готується до відновлення.* https://hub.kyivstar.ua/articles/turyzm-pid-chas-vijny-yak-galuz-vyzhyvaye-ta-gotuyetsya-do-vidnovlennya
Miller, G. A., & Ritchie, B. W. (2003). A Farming Crisis or a Tourism Disaster? An Analysis of the Foot and Mouth Disease in the UK. *Current Issues in Tourism*, *6*(2), 150–171. https://doi.org/10.1080/13683500308667949	
Nepochatenko, V. O. (2020). Covid-19 and tourism: analysis of the situation and economic ways out of the crisis. *Efektivna ekonomika*, (7). http://economy.nayka.com.uaop=1&z=8079 https://doi.org/10.32702/2307-2105-2020.7.52	Непочатенко, В. О. (2020). Covid-19 і туризм: аналіз ситуації та економічні шляхи виходу з кризи. *Ефективна економіка,* (7). http://economy.nayka.com.uaop=1&z=8079 https://doi.org/10.32702/2307-2105-2020.7.52
Nizalov D. V. (2000) Anti-crisis management: a choice of methods. Scientific works. *Economic sciences,* (IX), 56–58. https:/lib.chmnu.edu.ua/pdf/naukpraci/economy/2001/9-1-38.pdf	Нізалов, Д. В. (2000). Антикризове управління: вибір методів. *Наукові праці. Економічні науки.* (IX), 56–58. https:/lib.chmnu.edu.ua/pdf/naukpraci/economy/2001/9-1-38.pdf
Open budget: the official state web portal of the Ministry of Finance of Ukraine. (2024). https://openbudget.gov.ua	Open budget: офіційний державний вебпортал Міністерства фінансів України. (2024). https://openbudget.gov.ua
Ritchie, B. W. (2004). Chaos, crises, and disasters: A strategic approach to crisis management in the tourism industry. *Tourism Management*, *25*(6), 669–683. https://doi.org/10.1016/j.tourman.2003.09.004	
Roik, O. R., & Nedzvetska, O. V. (2022). Ways of development of the tourist sphere of Ukraine during the war period. *Scientific Bulletin of Kherson State University.* Economic sciences series. (46), 11–15. https://doi.org/10.32999/ksu2307-8030/2022-46-2	Роїк, О. Р., & Недзвецька, О. В. (2022). Шляхи розвитку туристичної сфери України у воєнний період. *Науковий вісник Херсонського державного університету.* Серія Економічні науки. (46), 11–15. https://doi.org/10.32999/ksu2307-8030/2022- 46-2
Sönmez, S. F., Apostolopoulos, Y., & Tarlow, P. (1999). Tourism in Crisis: Managing the Effects of Terrorism. *Journal of Travel Research*, *38*(1), 13–18. https://doi.org/10.1177/004728759903800104	
State Statistics Service of Ukraine. (2017). *Methodological recommendations for compiling an auxiliary (satellite) account of tourism in Ukraine, approved by the Order of the State Statistics Service of December* 29, 2017 No. 359. http://www.ukrstat.gov.ua/norm_doc/2017/359/359_2017.htm	Державна служба статистики України. (2017). *Методичні рекомендації із складання допоміжного (сателітного) рахунку туризму в Україні, затверджені наказом Держстату від 29 грудня 2017 року № 359.* http://www.ukrstat.gov.ua/norm_doc/2017/359/359_2017.htm
State Tourism Development Agency of Ukraine (2023) In 2023, tax revenues from the tourism industry of Ukraine reached the pre-war level. https://www.tourism.gov.ua/blog/u-2023-roci-podatkovi-nadhodzhennya-vid-turistichnoyi-galuzi-ukrayini-viyshli-na-dovoienniy-riven	ДАРТ. (2023). Державне агентство розвитку туризму України. *У 2023 році податкові надходження від туристичної галузі України вийшли на довоєнний рівень.* https://www.tourism.gov.ua/blog/u-2023-roci-podatkovi-nadhodzhennya-vid-turistichnoyi-galuzi-ukrayini- viyshli-na-dovoienniy-riven

StateStatistic. (2021). State Statistics Service of Ukraine. Methodological provisions of state statistical monitoring "Assets, equity, liabilities and financial results of enterprises", approved by Order of the State Statistics Service of October 8, 2021 No. 254. http://www.ukrstat.gov.ua/norm_doc/2021/254/254.pdf	Держстат. (2021). Державна служба статистики України Методологічні положення державного статистичного спостереження "*Активи, власний капітал, зобов'язання та фінансові результати підприємств", затверджені Наказом Державної служби статистики 08.10.2021 р. No* 254. http://www.ukrstat.gov.ua/norm_doc/2021/254/254.pdf
StateStatistic. (2024). *State Statistics Service of Ukraine*. https://ukrstat.gov.ua	Держстат. (2024). *Державна служба статистики України.* https://ukrstat.gov.ua
Tax Code of Ukraine. (2018). https://zakon.rada.gov.ua/laws/show/2755-17#Text	Податковий кодекс України. (2018). https://zakon.rada.gov.ua/laws/show/2755-17#Text
Tsaruk, V. V. (2023). Tourism in Ukraine in the conditions of martial law – problems of restoration and search for new management models. *Taurian Scientific Bulletin. Series: Public management and administration*, (4), 15–24. https://doi.org/10.32782/tnv-pub.2023.4.3	Царук, В. В. (2023). Туризм в Україні в умовах воєнного стану – проблеми відновлення та пошуку нових моделей управління. *Таврійський науковий вісник. Серія: Публічне управління та адміністрування*, (4), 15–24. https://doi.org/10.32782/tnv-pub.2023.4.3
Tsviliy, S., Gurova, D., Zhuravlova, S., & Mykhailyk, D. (2022). Economic security of the sphere of tourism business in the postwar period. Current issues of security management during martial law: scientific monograph. Košice. *Vysoká škola bezpečnostného manažérstva v Košiciach*, 265–277. https://www.calameo.com/read/005426639015198890887	
UN WTO. (2022). Rethinking Tourism – From Crisis to Transformation. https://webunwto.s3.eu-west-1.amazonaws.com/s3fs-public/2022-09/from-crisis-to-transformation-WTD2022.pdf?VersionId=E2562w-REejLJYZbb5IkplKFufBA9URdC	
UN WTO. (2003). Strategy for Crisis Management https://www.unwto.org/history	
Vira Ruban (2015) Crisis management tools and the basic functions of crisis. *Galician Economic Herald. 48*(1), 109–114. https://galicianvisnyk.tntu.edu.ua/pdf/48/138.pdf	Рубан, В. (2015). Антикризові інструменти та основні функції антикризового менеджменту. *Галицький економічний вісник, 48*(1), 109–114. https://galicianvisnyk.tntu.edu.ua/pdf/48/138.pdf
Yermachenko, V., Melnychenko, S., Sidak, M., Dupliak, T., & Losytka, T. (2024). Sustainable tourismin the post-war reconstruction of territorial communities in Ukraine. *Access to science, business, innovation in the digitaleconomy*. ACCESS Press. *5*(1), 34–57. https://doi.org/10.46656/access.2024.5.1(3)	
Zakharchenko, V. I. (et al.). (2014). Development of strategic approaches to enterprise management in unstable conditions. Donetsk. Knowledge.	Захарченко, В. І. (та ін.). (2014). Розвиток стратегічних підходів до управління підприємством у нестабільних умовах. Донецьк. Ноулідж.
Zarubina, A. V., Syra, E. O., & Demchuk, L. I. (2022). Peculiarities of tourism in wartime conditions. *Economy and society*, (41). https://economyandsociety.in.ua/index.php/journal/article/view/1543/1484	Зарубіна, А. В., Сіра, Е. О., & Демчук, Л. І. (2022). Особливості туризму в умовах воєнного часу. *Економіка та сус-пільство,* (41). https://economyandsociety.in.ua/index.php/ journal/article/view/1543/1484

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RISKS AND PROFITABILITY OF BUSINESS MODELS OF INSURANCE COMPANIES

Ukrainian insurance companies are steadily moving towards the European development framework, facilitated by the adoption of a series of radical regulatory documents by the National Bank of Ukraine (NBU) concerning the supervision of their activities based on a risk-oriented approach. This, in turn, requires insurance companies to make fundamental changes to their risk management processes and substantiate their choice of a viable business model capable of ensuring their long-term. The aim of the article is to determine the level of risks and the related profitability of business models of insurance companies of Ukraine, as well as to develop recommendations for their transformation based on proactive risk management. The research is based on the use of a set of such methods as analysis, comparison, grouping, correlation. Various methodical approaches to distinguishing the business models of insurers are revealed and their brief description is given. An analysis of risks for business models of life and non-life insurance was carried out based on

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РИЗИКИ ТА ПРИБУТКОВІСТЬ БІЗНЕС-МОДЕЛЕЙ СТРАХОВИХ КОМПАНІЙ

Страхові компанії України невпинно рухаються в напрямі європейського контуру розвитку, чому сприяє прийняття НБУ низки радикальних нормативних документів щодо регулювання та нагляду за їх діяльністю на основі ризик-орієнтованого підходу. Своєю чергою, це потребує від страхових компаній внесення принципових змін у процес ризик-менеджменту й обґрунтування вибору ними бізнес-моделі, здатної забезпечити довготривале та стабільне їх функціонування на ринку. Метою статті є визначення рівня ризиків і пов'язаної з ними прибутковості бізнес-моделей страхових компаній України, а також розробка рекомендацій щодо їх трансформації на основі проактивного ризик-менеджменту. Дослідження ґрунтується на використанні сукупності таких методів, як аналіз, порівняння, групування, кореляції. Розкрито різні методичні підходи до виокремлення бізнес-моделей страховиків та надано їх коротку характеристику. Проведено аналіз ризиків за бізнес-моделями страхування life та *the system of selected indicators. An analysis of the correlation relationship between the ratio of insurance payments to insurance premiums (dependent variable) and independent variables was carried out. Proposals aimed at implementing innovative business models based on proactive risk management have been developed. Formulated and empirically tested hypotheses regarding the reduction of the scale of the insurance business under the influence of the unfavorable economic situation, the war in Ukraine and the strengthening of regulatory requirements for insurers; different levels of risks are inherent in the business models of non-life and life insurers; the introduction of innovative business models for insurers should be based on the conceptual principles of proactive risk management.*

Keywords: insurance companies, risk management, business model, European course.

non-life на основі системи обраних показників. Здійснено аналіз кореляційного взаємозв'язку між коефіцієнтом співвідношення страхових виплат до страхових премій (залежною змінною) та незалежними змінними. Розроблено пропозиції щодо впровадження інноваційних бізнес-моделей на основі проактивного ризик-менеджменту. Сформульовано й емпірично перевірено гіпотези щодо скорочення масштабів страхового бізнесу під впливом несприятливої економічної ситуації, війни в Україні та посилення регуляторних вимог до страховиків; для бізнес-моделей страховиків non-life та life притаманним є різний рівень ризиків; впровадження інноваційних бізнес-моделей для них має відбуватися на концептуальних засадах проактивного ризик-менеджменту.

Ключові слова: страхові компанії, ризик-менеджмент, бізнес-модель, європейський курс.

JEL Classification: G22, G32.

Introduction

The transition of Ukrainian insurance companies under the regulatory jurisdiction of the National Bank of Ukraine became a powerful impetus for the adoption of a number of important regulatory documents related to the identification of systemically important insurers, the formation of reserves, the regulation of capital adequacy to cover losses due to the occurrence of risks, the definition of business models, the creation of a risk management system on European regulatory principles based on the principles of the Solvency Directive II.

Recently, there has been a decrease in the number of insurers in Ukraine. In our opinion, the introduction of new, stricter regulatory norms by the NBU, in particular the establishment of requirements for solvency, liquidity, formation of capital and technical reserves of insurers, construction of a risk management system, compliance and internal audit in accordance with the three lines of protection, may become the reason for the preservation of the above-mentioned trend. This situation is explained by the desire of the NBU to introduce a regulatory toolkit, using which insurance companies of Ukraine would be able to form a viable business model and gradually integrate into the European insurance market, which will open up new horizons for business development for them and contribute to ensuring their long-term and stable functioning on the market. In the context of the above, the question of what risks each business model generates for the insurer and under what conditions it can remain viable is considered important.

The issue of business models of insurance companies became the subject of a scientific discussion by foreign scientists, which adopted the format of multi-vector consideration. Instead, the business model of insurers, which is based on modern financial technologies, is considered most often in the scientific publications of foreign researchers. A clear example is the article by VanderLinden (2024, April, 6), which argues that current insurance business models are not suitable for managing the risks of innovation support, operational risk and the risk of the transition to green energy. In the author's view, the insurance industry needs to transform, and insurers need to implement successful digital business models based on the size and niche of insurance companies, focus on direct customer relationships and interactions, and integration with technology innovators.

In the context of the digitalization of the insurance industry, Oletskyi (2024) analyzes the factors that influence the choice of an InsurTech business model when making a decision, which include: local market conditions and regulation of insurers' activities, as well as the possibility of their access to venture capital. The scientist notes that the most important factors affecting the choice of the InsurTech business model are: access to capital and its cost; regulatory mechanism and measures implemented by the regulator of the respective country; insurer startup speed and startup ecosystem.

More extensive research on key business models in the InsurTech industry; the advantages and new opportunities that this technology opens up for insurance companies through the introduction of a digital business model can also be found in the publications of Colmant (2023, July 18); Zinchenko (n. d.) etc.

The scientific publication Thomas (2024) is devoted to the study of the dynamic nature of the insurance sector, macroeconomic factors influencing business practices, new business models with an emphasis on the key proactive role of risk management and the use of the ERM tool to support the insurance industry. The author believes that insurers have several reasons to develop new business models, products and practices: analytics of large databases, new partnerships with InsurTech companies.

Separate scientific works are devoted to the study of the relationship between the business model of an insurance company and its financial efficiency. In particular, Lament & Bukowski (2021) identified the impact of the business model on the financial performance of insurance companies, based on the return on equity as a dependent variable, and concluded that the variability of ROE depends on the insurer's business model when dividing life and non-life insurance companies -life.

It seems important to conclude that the risk of investing in new business models, new products and their new sales channels can, at least, make it possible to maintain the competitiveness of insurers (Gart, 2018, January 18).

The above provides a basis for the statement that the main attention in foreign literature is focused on the need, advantages, opportunities, types and procedures of implementing new technological business models in insurance companies, as well as identifying the dependence between the business model and its financial efficiency.

In the domestic scientific field, the issues of formation, content, effectiveness and maturity of insurers' business models are considered only in individual publications. In particular, the question of the maturity of analytical business models in insurance became the subject of scientific research by Paruschke (2023, 27 February). According to the author, predict-tive analytics is driving the insurance industry, as tools for analyzing large volumes of data to transform them into business analytics help make more accurate risk calculations and increase insurers' profitability; it also highlights that the maturity of analytical business models in the insurance industry varies across regions and companies. The publication notes the factors influencing the maturity of analytical business models in the insurance industry, to which the researcher includes: investment in analytics, availability and quality of data, regulatory environment, business culture and leadership.

Among the scientific works on the business models of insurers, the most thorough is the article by Tarnavskyi & Kolomiits (2021), which examines the activities of insurance companies other than life insurance. To characterize the retail, corporate, universal (represented by two clusters) and reinsurance business models, a set of clustering methods was used – the classic k-means algorithm and Kohonen's self-organizing maps. The clustering results were validated using classical indicators and the migration indicator, which ensures the stability of clusters over time. The migration of companies between the selected clusters (change of the business model) during the studied period was analyzed and a significant migration within the universal model and between the reinsurance and corporate models was revealed. The authors concluded that companies that adhere to a universal business model are the most financially stable compared to their counterparts united in the reinsurance cluster.

On the other hand, we are not aware of scientific developments of domestic scientists that would touch on this problem, which caused the need for this study and established its purpose.

The aim of the research is to determine the level of risks and the related profitability of business models of insurance companies of Ukraine, as well as to develop recommendations for their transformation based on proactive risk management.

Several hypotheses were put forward in the research process:

the first is the dynamics of changes in the number of insurers in Ukraine are affected by numerous risk factors, among which the most significant are the deterioration of the macroeconomic conditions of their operation and the increase in regulatory risk. Under the influence of the unfavorable macroeconomic situation, the scale of the insurance business in the country, especially its individual types, is narrowing, and the level of risks is increasing. Destructive economic phenomena caused by COVID-19 and martial law, as well as the establishment of stricter requirements for regulating the activities of insurance companies in general and the risk management system in particular, led to a reduction in their number in Ukraine;

the second is a certain level of risks is inherent in each business model; and their choice will depend on the degree of development of the insurance market in the country, the strategy of the insurance company, the level of its risk appetite and other factors;

the third is the formation of the business model of insurers should be based on a proactive approach to risk management, which involves taking into account not only the current level of risks and profitability, but also the emergence of new risk factors and the development of hypothetically possible scenarios for their response in the long term.

When writing the article, the authors participated in the use of the following research methods: analysis as the characterization of changes in the number and scope of insurers' activities; comparison, when studying the level of risks of different models of insurers; grouping, when analyzing insurers' risks by type (life and non-life insurance); correlations, when identifying the relationship between the selected risk indicator and independent variables.

The main part of the article consists of three sections that are logically interconnected. The first describes the impact of macroeconomic and regulatory changes on the activities of insurance companies in Ukraine, which led to a significant reduction in the number, balance currency and gross income of insurers, as well as an increase in the amount of insurance indemnities; in the second, the risks of insurers' business models are analyzed, in the third, the key provisions of proactive risk management of insurers are formulated, in view of which they should choose a business model.

1. Macroeconomic conditions of insurers' functioning and increase in regulatory requirements for them

Adoption of the new version of the Law of Ukraine "On Insurance" (2021) and its expanded interpretation in NBU documents regarding various aspects of insurers' activities, as well as the unfavorable economic situation in the country, caused a slowdown in the pace of development of the insurance business, which was manifested in a decrease in the growth rate of gross insurance premiums on 14.7% in 2020, 20.3% in 2022 compared to the previous year. Insurance reimbursements increased, because the level of net insurance payments for 2023 was 36.4%, while for 2022 it was 33.2%, respectively. In addition, insurers began to accumulate insurance reserves, which increased 1.6 times over the past 4 years, from UAH 29.558.8 million at the end of 2019 to UAH 46.781.2 million in 2023 (NBU, 2024).

Under the influence of negative economic and geopolitical factors, the level of risks of insurers in Ukraine increased, which made it necessary for the NBU to adopt stricter requirements for the regulation of their activities.

In particular, regulatory documents were put into effect that establish clear requirements for: identification and functioning of systemically important insurers, new requirements for the formation of capital adequacy, the insurer's risk management system, which is based on a risk-oriented approach; transition of insurance companies to the new financial reporting standard IFRS 17 "Insurance Contracts".

The unfavorable economic environment due to the pandemic and martial law in Ukraine, as well as new regulatory innovations, became the reasons for the decrease in the number of insurance companies (*Figure 1*).

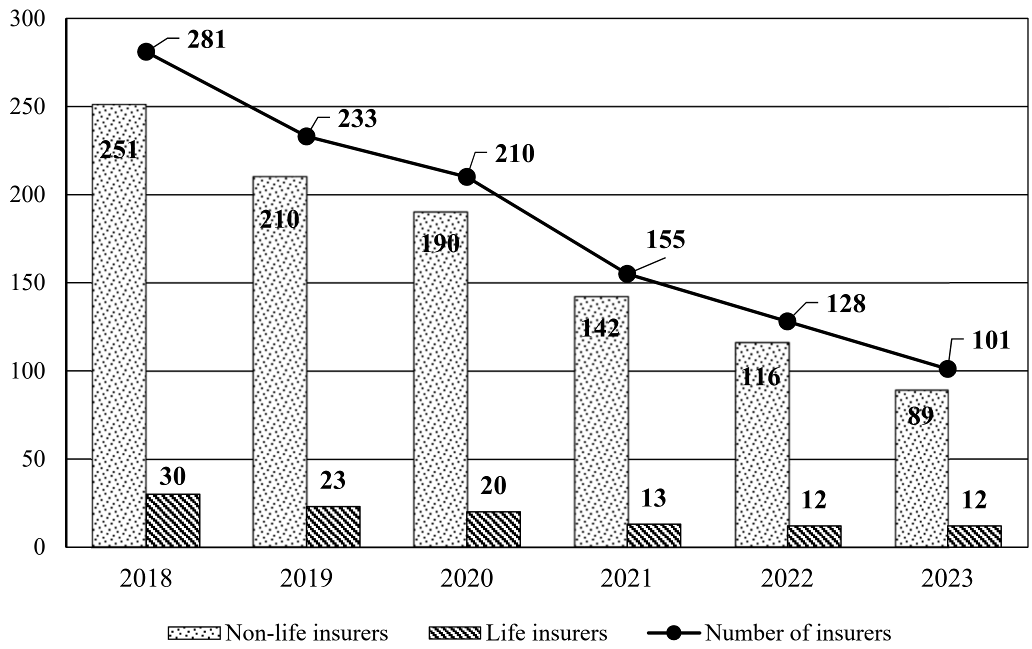

Figure 1. Dynamics of the number of insurance companies in Ukraine in 2018–2023

Source: compiled by the authors based on the NBU Supervisory Statistics (2024).

The data of *Figure 1* illustrate a clear trend towards a decrease in the number of insurers in Ukraine, especially in recent years. The largest quantitative changes occurred in 2019, 2021 and 2023, when the rate of decline in the number was 17%, 26.2% and 21%, respectively, which is connected, firstly, with different phases of development of the insurance market of Ukraine, taking into account the course towards European integration, secondly, with the increased impact of risks on the activities of insurance companies: in 2019–2021, the COVID-19 pandemic and military risks in 2022–2023.

According to the NBU, the main reasons for the exit of insurance companies from the domestic insurance market were failure to submit reports, failure to meet solvency requirements and individual insurers' own initiative due to the impossibility of functioning in the new regulatory field.

2. Research of business model risks of insurance companies in Ukraine

Methodical approaches to the definition of business models in the field of insurance are focused on the business processes of companies or are focused on the client. Models focused on the internal processes of the functioning of insurance companies ensure high efficiency, cost reduction and risk management, in turn, focused on customers, contribute to the growth of insurers' income due to repeated sales of insurance poles and recommendations of satisfied customers. When determining the business models of insurers in Ukraine, scientists Tarnavskyi & Kolomiits (2021) took into account indicators characterizing types of customers, types of insurance and sales channels. The business models identified by them on the basis of key quantitative indicators have the following characteristics: the "retail" company insures individuals, concentrating on a certain group of insurance; "corporate" focused on legal entities, insurance of expensive risks; "universal" large insurers focus on selling a significant number of cheap poles; small ones tend to insure mandatory species; "reinsurance" focuses mainly on voluntary types of insurance.

In turn, foreign researchers Lament & Bukowski (2021), analyzing the impact of business models of insurance companies on their financial efficiency; prove that the main factor differentiating the business model of an insurance company is insurance activity and the object related to it insurance. It seems to us that both approaches are balanced. The difference between them is only in the degree of detail: according to the first approach, the authors distinguish business models within one type of insurance, and according to the second, business models are considered from the perspective of two types of insurance.

The methodology of this research is based on the postulate of distinguishing two business models depending on the type of insurance: the first model – life insurers – *life*; the second – *non-life* insurers (other than life insurance). This approach seems more acceptable to us from the point of view of risk analysis and related indicators of the financial performance of insurers.

The diagnosis of the selected business models was based on public information about the main indicators of insurers' activity, published on the NBU website. It should be noted that the only company in Ukraine (PJSC Export Credit Society) has a state form of ownership and a special status. In the specified reporting, the performance indicators of the insurer with a special status are not reflected. As of January 1, 2024, 97 insurers, including 12 life insurers, provided insurance reporting (*Table 1*).

Table 1

Distribution of Ukrainian insurance companies by business models of life and non-life insurance as of 01.01.2024

Sample		Insurance business model	
		life	*non-life*
Amount	97	85	12
Structure , %	100	87.6	12.4

Source: compiled by the authors based on the NBU Supervisory Statistics (2024).

The statistical basis for the study of the level of risks under the two business models was the data of a sample of selected indicators for the last 4 years in a quarterly cut. The dependent variable reflecting the riskiness of insurers' operations is the ratio of insurance claims to insurance premiums (Loss Ratio), which allows to assess risks and is influenced by many independent variables. The choice of the latter is based on the following considerations: in the economic domestic and foreign literature, a number of indicators of insurers' performance are given, namely Solvency Ratio, Reinsurance Ratio, Reserves Ratio, Liquidity Ratio, Equity to Liability Ratio, Loss Ratio, Expense Ratio, Reserves Dynamics, etc. (Faster Capital, 2024). The study suggests that the risk indicators of insurance companies are closely related to the profitability of their activities, since the desire of companies to increase profits and achieve a higher level of return on capital leads to the acceptance of higher levels of risk. Based on the above, in the course of the study, the indicators of financial performance (profitability) of insurance companies were added to the risk indicators defined as independent variables. The algorithm for calculating the independent variables is shown in *Table 2*.

Table 2

Algorithm for calculating independent variables of insurers

Variable	Designation	Method of variable calculation
Net financial result	RN	Gross financial result – Income tax
Provisioning ratio	Reserve Ratio (ResR)	$\frac{\text{Insurance reserves}}{Insurance\ premiums} \cdot 100$
Reinsurance ratio	Reinsurance Ratio (RR)	$\frac{Reinsured\ premiums}{Total\ premiums} \cdot 100$
Solvency ratio	SR	$\frac{Equity}{Total\ assets} \cdot 100$
Dynamics of provisions	RD	$\frac{Provisions\ at\ the\ end\ of\ the\ period - Provisions\ at\ the\ beginning\ of\ the\ period}{Provisions\ at\ the\ beginning\ of\ the\ period} \cdot 100$
Return on assets	ROA	$\frac{Net\ income \cdot 100}{Assets}$
Return on equity	ROE	$\frac{Net\ profit \cdot 100}{Shareholders'\ equity}$

Source: compiled by the authors based on data from (Faster Capital, 2024; Lament & Bukowski, 2021).

The results of the analysis of variable indicators by insurers' business models are shown in *Table 3*.

Table 3

Main statistical indicators of variable parameters
by Ukrainian business models of insurers

Variables	Mean	Median	Minimum	Maximum	Variance	Standard deviation
Model 1: life insurers						
RN	395 887.6	338 186.3	77 270.0	845 697.3	49520303672	232426.6539
ResR	106.5	94.3	93.8	170.9	755.1125086	28.70120381
RR	7.7	3.0	2.5	23.0	53.03472222	7.606317151
SR	13.0	12.9	11.7	14.5	0.594420979	0.805269675
RD	–0.1	3.7	–43.4	9.9	192.7596631	14.56144324
ROA	1.9	1.9	0.5	3.5	0.800037637	0.934220708
ROE	15.1	14.4	3.3	28.1	51.82407454	7.518999537
Model 2: non-life insurers						
RN	1 405 422.1	1 227 427.9	261 056.5	2 717 495.1	5.96398E+11	806607.7028
ResR	105.2	82.9	82.2	218.6	2503.121924	52.25589405
RR	15.5	15.5	10.9	20.2	8.800763889	3.098521153
SR	35.8	35.7	34.7	37.5	0.705954805	0.877571943
RD	–2.2	3.5	–60.9	10.5	356.7091345	19.80858521
ROA	3.4	3.0	0.8	6.4	2.958956727	1.796650437
ROE	9.4	8.6	2.2	17.9	22.39818813	4.943115116

Source: Authors' own calculations.

The analysis of statistical indicators for the studied business models of Ukrainian insurers has led to the following conclusions:

- non-life insurers have significantly higher average net profit and variability, which proves that they operate in a more heterogeneous and risky environment with fluctuations in profit;
- the standardized value of the provisioning ratio in both models is similar, but higher for non-life companies, which indicates fluctuations in the amount of provisions, which is confirmed by their more volatile dynamics. The reinsurance ratio also varies. Additional volumes of reinsurance in the non-life model are higher because of its higher risks compared to the life model;
- Solvency ratios indicate different approaches to asset and liability management of insurers operating under the chosen business models;
- return on assets is higher for non-life insurers, which is evidence of more efficient asset management, although life insurers have a higher return on equity. Instead, ROE values are more variable and indicate higher risks associated with capital management for life insurers.

The correlation between the selected risk indicator and independent variables has been calculated in *Table 4*.

Table 4

Indicators of correlation dependence according to insurers' business models of Ukraine

Reporting date	The ratio of insurance payments to insurance premiums		Dependent variables	Correlation coefficient	
	life	*non-life*		Model 1 *life*	Model 2 *non-life*
01.04.2021	18.5	61.5	*RN*	0.63848981	–0.569867639
01.07.2021	19.6	59.3	*ResR*	–0.320117665	0.599412563
01.10.2021	19.2	59.8	*RR*	–0.510488774	0.669301032
01.01.2022	18.7	60.0	*SR*	–0.162999285	–0.839235655
01.04.2022	16.0	39.9	*LD*	–0.001037531	–0.08269526
01.07.2022	19.3	40.1	*RD*	0.204627692	–0.46095677
01.10.2022	21.5	42.3	*ROA*	0.553473977	–0.565620255
01.01.2023	21.4	42.9	*ROE*	0.542378204	–0.538218736
01.04.2023	27.0	48.6	–	*0.7 – 1 або –0.7 – –1*	Strong connection
01.07.2023	27.0	49.1		*0.5 – 0.7 або –0.5 – –0.7*	Moderate connection
01.10.2023	26.4	47.9		*0.3 – 0.5 або –0.3 – –0.5*	Weak connection
01.01.2024	25.8	48.3		*0 – 0.3 або 0 – –0.3*	No connection at all

Source: authors' own research.

The analysis of correlation dependences gives reason to claim that life insurers (model 1) are more risky due to the positive correlation between the indicators of RN, ROA, ROE and payments, which confirms the thesis that the risk of payments increases with an increase in their profitability. At the same time, the negative correlation with the coefficients of reserves and reinsurance indicates the need for them to have significant reserves and carry out reinsurance to reduce the level of risks. Non-life insurers of the second model are less risky due to the negative correlation between key profitability indicators and payouts. It can be hypothetically assumed that insurers using the non-life model achieve higher profitability at a lower level of risks due to mandatory types of insurance. However, this issue requires additional special research. The positive correlation with the coefficients of reserves and reinsurance is a vivid illustration of the feasibility of providing high volumes of reserves and reinsurance to cover losses when risks occur.

3. Formation of the insurer's business model based on proactive risk management

According to foreign sources, the top 10 current risks for insurers include: cyberattack and data leakage, inability to attract or retain the best specialists, weather and climate disasters, regulatory or legislative changes, economic downturn or slow recovery, brand or reputation damage, technical or system failure, upward competition, climate change, inability to innovate or meet customer needs (GRMS Aon, 2023). Currently, the list of these risks is far from complete, which necessitates their constant identification and implementation of a new risk management platform that will allow insurers to anticipate possible risk factors in advance, develop preventive response measures, and ensure stability and continuity of operations.

Given the European integration vector of changes in domestic legislation, Ukrainian insurance companies in the near future should not only achieve positive financial results and obtain an acceptable level of return on capital, but also adhere to a risk-oriented philosophy of conducting insurance business based on a proactive approach. This will require them to transform existing and introduce innovative business models based on:

First, the use of new technologies (artificial intelligence and machine learning), modern software products to ensure digital operational resilience; a single standardized risk taxonomy, methodology and risk management culture;

secondly, the formation of a centralized database on risk factors of the external and internal environment, as well as a balanced system of risk indicators, financial performance, market position, customer interest, optimization of business processes, insurance company value;

thirdly, implementation of modern tools for measuring risks and predicting the emergence of new drivers of threats, both economic and climatic, social, epidemiological, technological, geopolitical, and man-made, as well as procedures for transforming risk data into business analytics;

fourthly, taking into account both European directives and guidelines on determining capital adequacy, ensuring solvency, liquidity and creating reserves, as well as national trends in the development of the insurance market and the peculiarities of the functioning of insurers in the conditions of martial law in Ukraine;

fifthly, the development of a risk matrix that would reflect the most significant risks for the insurer in the current situation and in the long term. This will enable the insurance company to focus on proactivity with the ability to take into account future risk factors and, in the event of their occurrence, to quickly adapt, which will contribute to its competitive advantage, sustainability and growth;

sixth one is conducting constant monitoring of risk appetites for all key risk positions and analysis of their consistency with the insurance company's potential opportunities to comply with established parameters, as well as current market trends;

seventh one is to create a chain of interrelated determinants of the insurance business "client – business process – profitability and value, weighted by risk – added value for consumers of insurance services" considering not only the actual situation, but also the forecast of the future;

eighthly, the orientation of insurers towards a possible increase in regulatory risk due to the adoption of stricter requirements of regulators, which is currently observed both in the countries of the European Union and in Ukraine. Obviously, this will lead to an increase in costs, a decrease in profitability and a decrease in the competitiveness of insurance companies in the local segments of the insurance market, and at the same time to an increase in insurance premiums for consumers;

ninth, shifting the emphasis from current analytics to prognostic, based on the application of innovative stress testing tools of actual and hypothetically possible risk-event development scenarios, which should be developed for different types of business models;

tenth, the use of the system of motivation of the personnel of insurance companies to achieve not only the current, but also the long-term financial result, taking into account the accepted risks;

twelfth, providing relevant, reliable, transparent information to owners of insurance services in an accessible form, which will enable them to simplify and speed up decision-making, as well as eliminate information asymmetry;

twelfthly, attracting highly qualified specialists who have new knowledge, skills and experience in the use of the wide possibilities of digital platforms in the insurance business and risk management. Today, more than ever, insurers and reinsurers need to involve talented and strategically thinking specialists in the process of managing a diverse range of risks.

The practical implementation of the above and other provisions of proactive risk management in insurance companies of Ukraine will enable them to form inclusive business models that will ensure the reliability and longevity of their operation in a high-risk market environment. Instead, this process will take place in stages, as the national economy recovers and its insurance sector develops.

Conclusions

Based on the results of determining the level of risks and the profitability associated with them, the business models of insurance companies of Ukraine proved the need for their transformation on the basis of proactive risk management. As a result of the unfavorable macroeconomic situation caused first by the pandemic and then by the state of war in Ukraine, the scale of the insurance business is shrinking, the number of insurance companies is decreasing, and the level of their risks is increasing. In the research process, two business models were distinguished depending on the type of insurance – life and non-life, for each of which the risk and profitability indicators were analyzed. Insurers based on the life model are more risky due to the positive correlation between RN, ROA, ROE and payouts, which confirms the thesis that the payout risk increases when profitability increases. At the same time, the negative correlation with the coefficients of reserves and reinsurance indicates the need for significant reserves and reinsurance to reduce the level of risks. Non-life insurers are less risky due to the negative correlation between key profitability indicators and payouts. Analysis of the causes of such dependence requires special scientific research. A positive correlation with the coefficients of reserves and reinsurance indicates the expediency of providing high volumes of reserves and reinsurance to cover losses from risks.

It is proposed to form a business model for insurers, which should be based on proactive risk management, according to which it is assumed to take into account not only the current level of profitability and risks, but also the appearance of their new types, as well as the definition of hypothetically possible scenarios of the occurrence of risk events in the long term and their sizes potential losses. The implementation of proactive risk management in insurance companies will provide them with strengthening their competitiveness on the market, stable operations and sustainable development both in the current and future periods.

The main areas of future research include: development of the latest tools for measuring insurers' risks; forecasting the emergence of new types of risks in life and non-life insurance based on statistical and expert methods; development of methodical approaches to identification of business models of insurers.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Colmant, Q. (2023, July 18). The promise of insurtech: which business models are emerging as winners. *Qover. Blog post.* https://www-qover-com.translate.goog/blog/winning-insurtech-business-models?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc

Faster Capital. (2024). *Key Solvency Ransjs For Insurance Companies.* https://fastercapital-com.translate.goog/topics/key-solvency-ratios-for-insurance-companies.html?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc

Gart, D. (2018, January 18). The Insurance Industry Needs to Change the Business Model and Take Risks. *Majesco blog.* https://www-majesco-com.translate.goog/blog/change-business-model/?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc)

GRMS Aon. (2023, November 28). Top Risks Facing Insurance Organizations. *Aon.* https://www-aon-com.translate.goog/en/insights/reports/global-risk-management-survey/top-risks-facing-insurance-organizations?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc

Lament, M., & Bukowski, S. (2021). Business Model Impact on the Financial Efficiency of Insurance Companies. *European Research Studies Journal Volume*, *XXIV*(4), 237–247. https://www.researchgate.net/publication/356956969_Business_Model_Impact_on_the_Financial_Efficiency_of_Insurance_Companies

Law of Ukraine "On Insurance" No. 1909-IX (2021). https://zakon.rada.gov.ua/laws/show/1909-20#Text.

Закон України "Про страхування" № 1909-IX (2021). https://zakon.rada.gov.ua/laws/show/1909-20#Text.

NBU. (2024). *Supervisory statistics.* https://bank.gov.ua/ua/statistic/supervision-statist

НБУ. (2024). *Наглядова статистика.* https://bank.gov.ua/ua/statistic/supervision-statist

Oletskyi, T. (2024). InsurTech in the United States and Germany-What is driving the different business models? *Risk Management and Insurance Review*, *26*(4), 485–511. https://onlinelibrary-wiley-com.translate.goog/doi/full/10.1111/rmir.12254?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc) (485-511)

Paruschke, A. (2023, February 27). Insurance & Strategy/Analytics as powerful tool adapt business models. *Linkedin.* https://www-linkedin-com.translate.goog/pulse/insurance-strategy-analytics-powerful-tool-adapt-models-paruschke?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc)

Thomas, C. (2024). Investigating risk management trends to impact the insurance sector. *360factors*. https://www-360factors-com.translate.goog/blog/risk-management-trends-impact-insurance-sector/?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc)

VanderLinden, S. (2023, April 6). Disrupting the insurance business model for a sustainable future. *Enterprise times*. https://www-enterprisetimes-co-uk.translate.goog/2023/04/06/disrupting-the-insurance-business-model-for-a-sustainable-future/?_x_tr_sl=en&_x_tr_tl=ru&_x_tr_hl=ru&_x_tr_pto=sc)

Zinchenko, P. Insurance digital transformation: 4 emerging business models. (n. d.). *MindK*. Retrieved 15 July 2024 from https://www-mindk-com.translate.goog/blog/digital-transformation-in-insurance/?_x_tr_sl=en&_x_tr_tl= ru&_x_tr_hl=ru&_x_tr_pto=sc)

Tarnavskyi, O., & Kolomiits, V. (2021). Identifying insurance companies' business models in Ukraine: cluster analysis and machine learning. *Visnyk of the National Bank of Ukraine*, (252), 37–55. https://journal.bank.gov.ua/en/article/2021/252/02

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BANK LENDING TO BUSINESS ENTITIES: 2021-2024

The current situation in the country is characterized by a high degree of uncertainty, which prompts banks to invest resources not in the development of the real sector of the economy, but in risk-free and low-risk assets, which primarily include domestic government loan bonds (DGLB) and certificates of deposit (CD) of the NBU. This situation led to the fact that lending to corporate clients on market terms was not widely distributed and largely led to the implementation of the state credit program "5-7-9", according to which the state does not fulfill its obligations to banks in a timely manner to compensate the difference between market and preferential interest rates. The aim of the research is to develop a comprehensive approach to bank lending to business entities, which involves the implementation of radical measures to stimulate it on a market basis in a harmonious combination with state support. A set of methods of scientific knowledge were used: comparison, analysis and synthesis, grouping, abstraction, observation, etc. Ukrainian banks are currently weakly motivated or unable to provide business lending on a market basis. This is due to the presence of the state credit program "5-7-9", which provides a number of preferences to its participants. An inhibiting factor in the development of market lending to enterprises is also the attractiveness for banks of risk-free

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БАНКІВСЬКЕ КРЕДИТУВАННЯ СУБ'ЄКТІВ ГОСПОДАРЮВАННЯ: 2021-2024

Поточна ситуація в країні характеризується високим ступенем невизначеності, що спонукає банки вкладати ресурси не в розвиток реального сектору економіки, а у безризикові та низькоризикові активи, до яких належать передусім облігації внутрішньої державної позики (ОВДП) та депозитні сертифікати (ДС) НБУ. Це призвело до того, що кредитування корпоративних клієнтів на ринкових умовах не отримало широкого розповсюдження та звелося здебільшого до реалізації державної кредитної програми "5-7-9", по якій держава не виконує своєчасно свої зобов'язання перед банками щодо компенсації різниці між ринковою та пільговою процентними ставками. Метою дослідження є формування комплексного підходу до банківського кредитування суб'єктів господарювання, що передбачає здійснення радикальних заходів щодо його стимулювання на ринкових засадах у гармонічному поєднанні з державною підтримкою. Використано сукупність методів наукового пізнання: порівняння, аналізу та синтезу, групування, абстрагування, спостереження тощо. Банки України нині слабо мотивовані або неспроможні здійснювати кредитування бізнесу на ринкових засадах через наявність державної кредитної програми "5-7-9", яка надає ряд преференцій її учасникам. Гальмуючим чинником розвитку ринкового *investments in DGLB and CD NBU, for which interest rates are higher than for loans granted to corporate clients. In addition, the latter generate a high level of risks for banks during the war. A set of measures aimed at the development of business lending on a market basis is proposed, which include: the use of risk diversification tools by providing guarantees from the state and international financial organizations, in particular the EBRD, the EIB; the implementation of military risk insurance, as well as the transformation of the state credit program according to the outlined directions.*

Keywords: credit service, corporate clients, state credit program, NBU deposit certificates, domestic state loan bonds, credit development strategy.

кредитування підприємств є також привабливість для банків безризикових вкладень у ОВДП та ДС НБУ, за якими процентні ставки є вищими, ніж за кредитами, наданими корпоративним клієнтам. До того ж останні генерують для банків під час війни високий рівень ризиків. Запропоновано комплекс заходів, спрямованих на розвиток кредитування бізнесу на ринкових засадах, до яких віднесено: використання інструментів диверсифікації ризиків шляхом надання гарантій з боку держави та міжнародних фінансових організацій, зокрема ЄБРР, ЄІБ; страхування військових ризиків, а також трансформація державної кредитної програми за окресленими напрямами.

Ключові слова: кредитне обслуговування, корпоративні клієнти, державна кредитна програма, депозитні сертифікати НБУ, облігації внутрішньої державної позики, стратегія з розвитку кредитування.

JEL Classification: E40, E44, G21.

Introduction

The recovery of Ukraine’s economy is only possible if, on the one hand, a favorable macroeconomic climate is created for the development of business activity of business entities, and, on the other hand, banks are encouraged to lend to them. The current situation in the country is characterized by a high degree of uncertainty, which encourages banks to invest in risk-free and low-risk assets, such as domestic government bonds (DGB) and NBU certificates of deposit (CD), rather than in the development of the real economy. In 2022-June 2024 alone, Ukrainian banks increased their investments in these assets by UAH 409 billion to more than UAH 1 trillion, which is 16% of last year’s nominal GDP, according to the authors’ calculations based on NBU statistics (NBU, n. d.). At the same time, the volume of lending to business entities is declining relative to GDP. To boost lending to the real economy, the Government implemented the 5-7-9 state loan program, which proved to be insufficiently effective, leaving both banks and their clients with little motivation to develop their businesses on a market basis.

The resumption of market-based lending to business entities seems to be possible through a set of measures at the level of the government, the central bank, and banks.

Lending to businesses by banks in times of war largely depends on the monetary policy of the central bank. In this regard, it is worth mentioning the article by Peterson at al. (2024), which discusses various instruments of the central bank’s monetary policy, including changes in the discount rate, reserve requirements for banks on correspondent accounts, and liquidity ratios. At the same time, in times of war, the government can sell government securities and use such an unpopular and least appropriate option to increase the money supply as issuing money into circulation.

Betz & Pond (2023) emphasize that, despite the mobility of financial assets and restrictions on global markets, governments retain the freedom to regulate domestic markets for their own financial benefit.

The enormous need for funds in times of war exacerbates the problem of government credibility, and central banks increase its ability to borrow. In his paper, Poast (2015) examines the interaction between the central bank and the country's leadership over a long period of time. The author concludes that in the presence of interaction between the government and the central bank management, the cost of government borrowing can be reduced.

The work of Moosa (2019) notes that, in addition to direct lending to the government, banks make a profit during wartime through other channels: commissions by helping the government sell military bonds; financing military suppliers who sell goods and provide services to the military; financing economic recovery after the end of hostilities.

The analysis of the domestic scholars' works has shown that the issue of lending to business entities is mainly considered from the following perspectives: description of the loan granting process; disclosure of the methodology for assessing the creditworthiness of legal entities; management of the credit risk of an individual borrower or a loan portfolio, which are not directly related to the topic under study. Instead, only a few scholarly works are devoted to defining the peculiarities of lending to business entities during the war, the content of the state program of business lending "5-7-9" and the participation of banks in its implementation, generalizing approaches to the formation of the central bank's monetary policy in times of war and substantiating relevant recommendations for Ukraine (Danylyshyn, 2023; Khymych et al., 2023; Shpanel-Yukhta, 2022; Kornyliuk A., & Kornyliuk R., 2024).

The specifics and trends of lending to business entities operating in the difficult economic situation caused by the war are mainly disclosed in short journalistic reviews.

At present the issue of lending to Ukrainian enterprises in the context of war remains under-researched, which requires scientific approach to address it.

The aim of the research is to formulate a comprehensive approach to bank lending to business entities, which involves the implementation of radical measures to stimulate it on a market basis in harmony with state support.

The research puts forward the *first hypothesis* that banks prefer investing in NBU domestic government bonds and state securities to lending to the real economy. To substantiate this hypothesis, the NBU compared the volume of lending to corporate clients and the resources allocated by banks to purchase NBU domestic government bonds and government securities, and analyzed the ratio of interest income earned by banks from loans and investments in NBU domestic government bonds and government securities.

In order to intensify the business activity of banks in the credit market, the Government and the NBU have developed a Strategy for the development of lending, which necessitated the generation of the *second hypothesis* on the formation of a favorable macroeconomic "credit field" for the introduction of an effective mechanism for lending to enterprises. It is proved that the government and the NBU are taking certain measures that would help to launch a credit lever for the development of the country's economy, in particular by implementing the State lending program "5-7-9". The study identifies the advantages and disadvantages of this program and formulates proposals for its transformation.

The article is based on the NBU's regulations, state statistics and the Regulator's data, and scientific articles by foreign and domestic scholars.

The article consists of three interrelated sections. The first of them analyzes current trends in lending by banks to corporate clients and factors that hinder its development; the second analyzes the SWOT analysis of the State Credit Program "5-7-9", reveals the purpose and principles of the Strategy for the Development of Lending approved by the Financial Stability Council; the third identifies the problems of lending to enterprises by Ukrainian banks, outlines possible ways to solve them, and suggests areas for improving the State Credit Program "5-7-9".

1. Current trends in bank lending to corporate clients and factors that hinder its development

The results of the analysis of the dynamics of net loans granted by Ukrainian banks to business entities between February 2022 and May 2024 show an undulating trend and a significant decrease in dollar terms (*Figure 1*). Since the beginning of 2024, bank loans to business entities in national currency have increased by 12% year-on-year, and by only 1% compared to February 2022. At the same time, net loans measured in US dollars decreased by 28% during the analyzed period, which is a clear illustration of the fact that the real sector of the country's economy did not receive sufficient credit support.

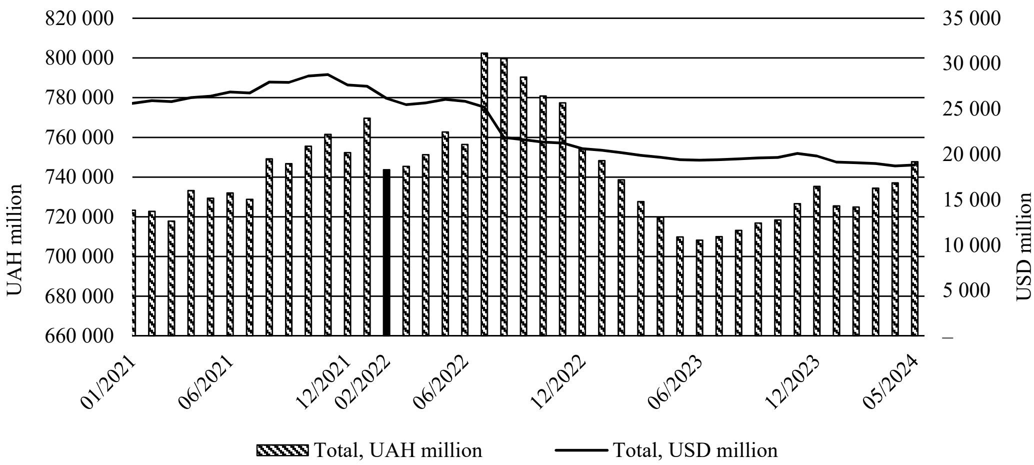

Figure 1. Dynamics of net business loans granted by Ukrainian banks in January 2021 – May 2024, UAH million and USD equivalent

Source: compiled by the authors based on financial sector statistics of the National Bank of Ukraine (NBU, n. d.).

The full-scale invasion of Ukraine has led to a significant reduction in the volume of loans relative to GDP. By the end of 2023, the share of loans to business entities amounted to only 11% of nominal GDP, while in 2017 it reached 28% (*Figure 2*).

The data in Figure 2 shows that the volume:

• of nominal GDP – by 2.2 times, which was largely influenced by inflation;

• of investments in the NBU's DS – by more than 8 times;

• domestic government bonds – by 1.8 times.

Accordingly, the share of investments in the NBU's CD in relation to GDP increased from 2% to 8%, while the share of investments in domestic government bonds remained roughly the same at 10–12% of GDP. At the same time, over the same period, the volume of net loans to business entities declined to 11%, and their ratio to nominal GDP fell by 2.6 times.

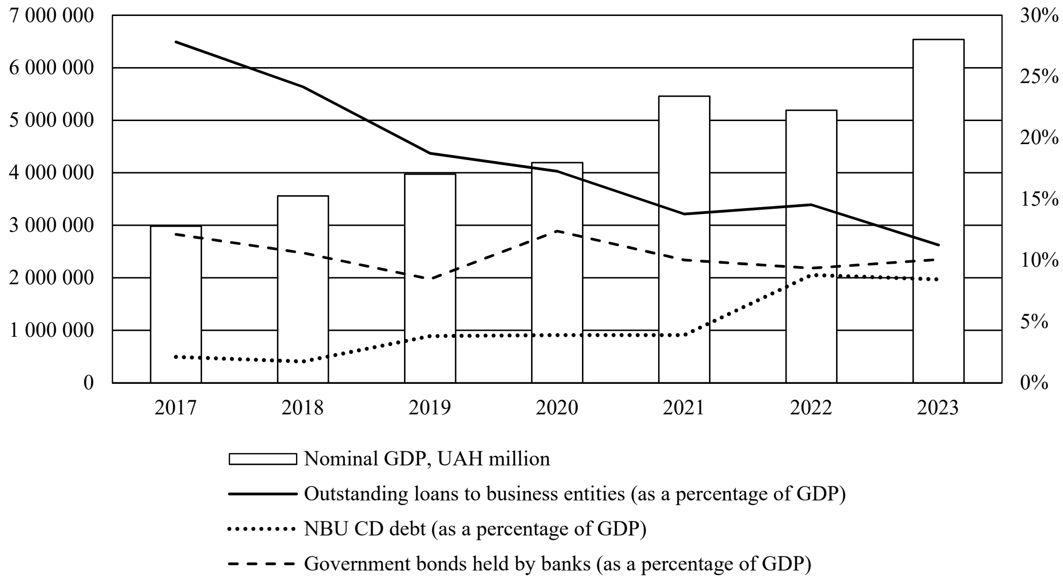

Figure 2. Nominal GDP, debt on NBU CD and loans to lending entities, and bank-owned domestic government bonds, % of GDP in 2017–2023

Source: compiled by the authors based on NBU data on financial sector statistics and State Statistics Service of Ukraine data on national accounts (NBU, n.d.; State Statistics Service of Ukraine, n. d.).

Numerous factors contribute to the low level of lending to the real economy.

First, the NBU stimulated banks' investments in domestic gover nment bonds and NBU securities through various monetary levers (*Figure 3*). Starting from January 10, 2023, the NBU allowed banks to cover up to 50% of their total required reserves with domestic government bonds. According to the NBU, this step will facilitate more active participation of banks in the primary market for domestic government bonds, avoiding the need for emission financing of the budget deficit in 2023, and absorbing part of the banking system's free liquidity (NBU, 2023, January 6).

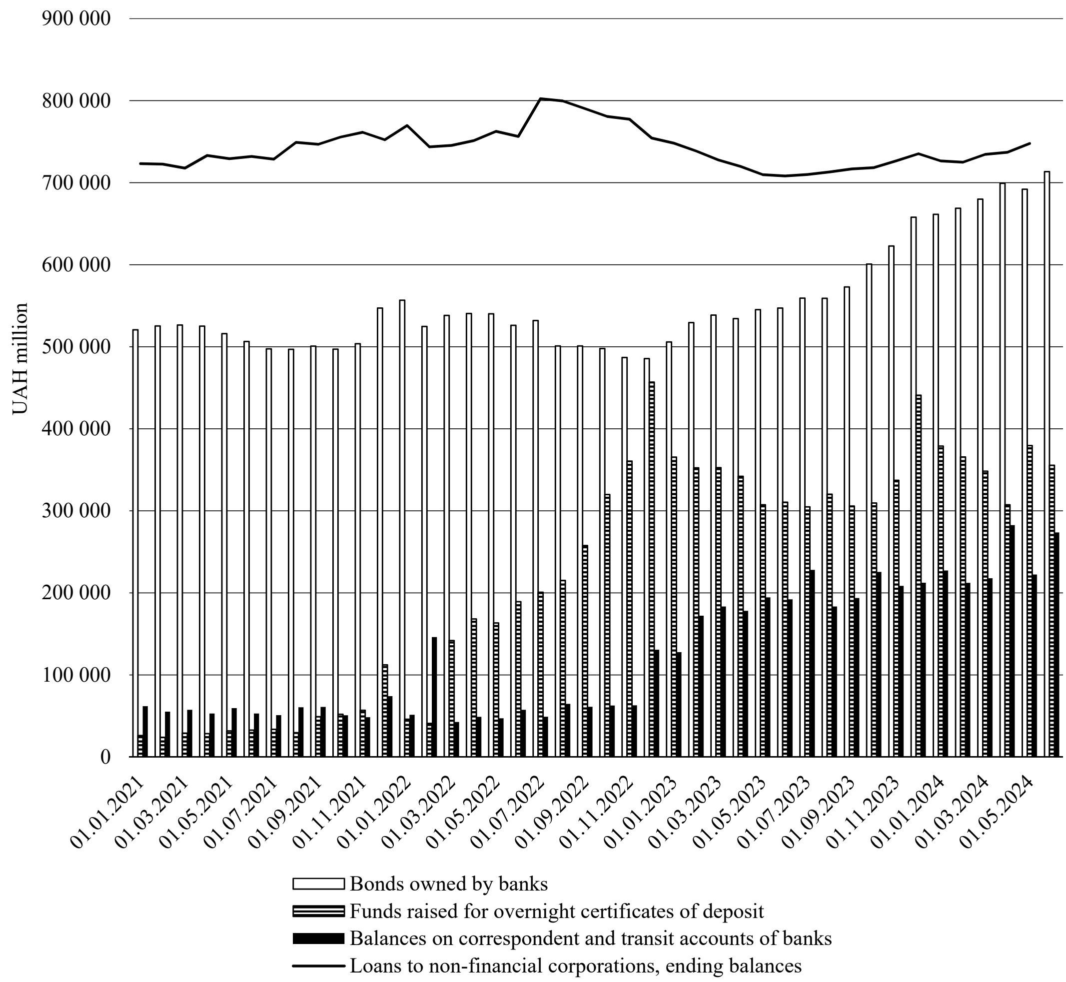

Figure 3. Comparison of lending to business entities by banks with their investments in NBU domestic government bonds and securities and balances on correspondent accounts during the period (January 2021 – May 2024, UAH million)

Source: compiled by the authors based on NBU data on financial sector statistics (NBU, n. d.).

According to *Figure 3*, the amount of domestic government bonds held in banks' portfolios has been steadily increasing since December 2022. Banks also allocated significant resources to purchasing NBU securities, which fluctuated over the period under review, due to the NBU's liquidity regulation of the banking sector.

Second, this process was facilitated not only by monetary leverage but also by the high yields on these assets. It has been established that the yield on NBU CD reached its highest level from June 2022 to June 2023, with some months reaching 23–23.4% per annum, while the maximum yield on loans to business entities was only 15.8–16.2% per annum in July-December 2023 (NBU. Financial Sector Statistics, b. d.).

The significant difference between the yield on the NBU's securities and the yield on loans to business entities has significantly affected the structure of banks' interest income (*Table*).

While in 2021, Ukrainian banks received 34.3% of their interest income from lending to business entities, and 30.3% from financing domestic government bonds and NBU securities, in April 2024 this ratio was 22.8% and 52.5%, respectively, which confirms the thesis that they are not interested in lending to businesses, but primarily in investing their free funds in domestic government bonds and NBU securities, which is facilitated by the Government's and the Regulator's policies.

Table

Components of interest income of Ukrainian banks for 2021 – April 2024, %

Period	In total	Credits		DGLB	NBU certificates of deposit	Other interest income
		business entities	natural persons			
31.12.2021	100	34.3	33.3	24.2	6.1	2.1
31.03.2022	100	33.3	30	27.8	6.7	2.2
30.06.2022	100	28.7	25.7	23.8	18.8	3
30.09.2022	100	31.5	24.3	18.1	22.5	3.6
31.12.2022	100	27.9	15.6	17.2	34.4	4.9
31.03.2023	100	26.4	17.1	21.4	29.1	6
30.06.2023	100	23.9	15.4	21.4	32.5	6.8
30.09.2023	100	23.5	16.8	22.7	30.3	6.7
31.12.2023	100	23.8	17.2	25.4	27	6.6
31.03.2024	100	22.9	17.8	27.1	25.4	6.8
30.04.2024	100	22.8	18.4	27.2	24.6	7

Source: compiled by the authors based on the NBU Financial Stability Report for June 2024 (NBU, 2024, June).

Third, the increase in the NBU discount rate in June 2022 from 10 to 25% per annum was one of the reasons for the decrease in the volume of new loans by banks (*Figure 4*).

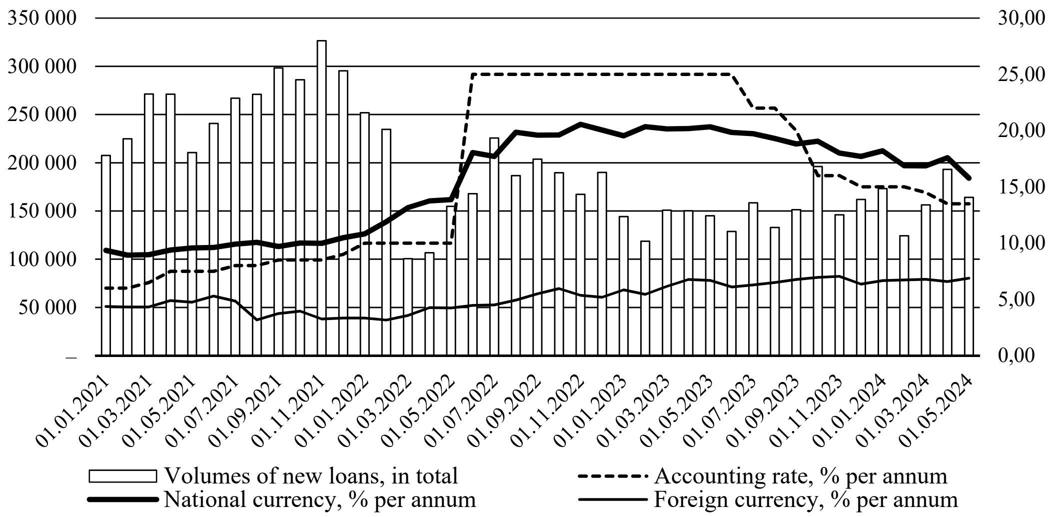

Figure 4. The NBU discount rate, lending rates, and the volume of new loans to business entities granted by Ukrainian banks in January 2021 – May 2024

Source: compiled by the authors based on NBU data on financial sector statistics (NBU, n. d.).

Starting in March 2023, banks gradually reduced interest rates on business loans without waiting for the official reduction of the discount rate by 3% in July 2023, which led to a decrease in the cost of new loans.

The emergence of new borrowers was an important factor in the revival of lending. In May 2024, about 35% of all bank debtors were companies that had not used loans at all a year ago. The new clients are mainly SME, 3/4 of which applied to financial institutions for soft loans under the program (NBU, n. d.).

The loan portfolio of medium-sized businesses, according to the authors' calculations based on NBU financial sector statistics, increased by UAH 50 billion or 25% from February 2022 to May 2024, while lending to large businesses decreased by 10% and to small and microbusinesses by 3%[1] (NBU, n. d.).

Despite the fact that the loan portfolio to business entities has only begun to grow in recent months, the yield on the banking system's investments in government bonds and NBU securities remains high, which hinders the further development of lending to businesses on market terms. In addition, a major threat to bank lending to business entities remains the decline in their creditworthiness due to problems with energy supply, disrupttion of logistics chains, and military attacks by the aggressor on Ukraine's critical infrastructure, which causes business disruption.

2. SWOT-analysis of the State Credit Program "5-7-9" and the strategy for credit development developed by the Government and the NBU

The SWOT analysis of the State Loan Program "5-7-9" identified several important factors.

The advantage of the program after the start of the full-scale invasion in 2022 was the credit support for enterprises. Despite the deep economic crisis, lending was carried out thanks to the state program. Some banks have built up to 50% of their hryvnia loan portfolio with loans from the state program.

Along with its advantages, the implementation of the State Loan Program "5-7-9" has also revealed some disadvantages. In particular, the state program has increased competition between banks, which has led to a slight decrease in the standard of creditworthiness assessment of borrowing companies. Increased competition prompted banks to simplify the procedures for approving loans under this program, which led to an increase in NPL in servicing banks.

[1] Under the Article 55 of the Economic Code of Ukraine, medium-sized enterprises include economic entities of any organizational and legal form and form of ownership, in which the average number of employees for the reporting period (calendar year) does not exceed 250 people and the annual income from any activity does not exceed the amount equivalent to EUR 50 million, determined at the average annual exchange rate of the National Bank of Ukraine.

A disadvantage of the state loan program is the significant debt of the state to banks to compensate interest rates. Periodic delays in financing the program have created uncertainty for banks and borrowers participating in it. Banks are in no hurry to lend under the program because of the state's existing debts to them. Borrowers are reluctant to enter into loan agreements with banks outside the program, hoping to take advantage of its preferential terms. As a result, the conclusion of new agreements and the prolongation of old ones have been suspended, and lending have slowed down *(Figure 5)*.

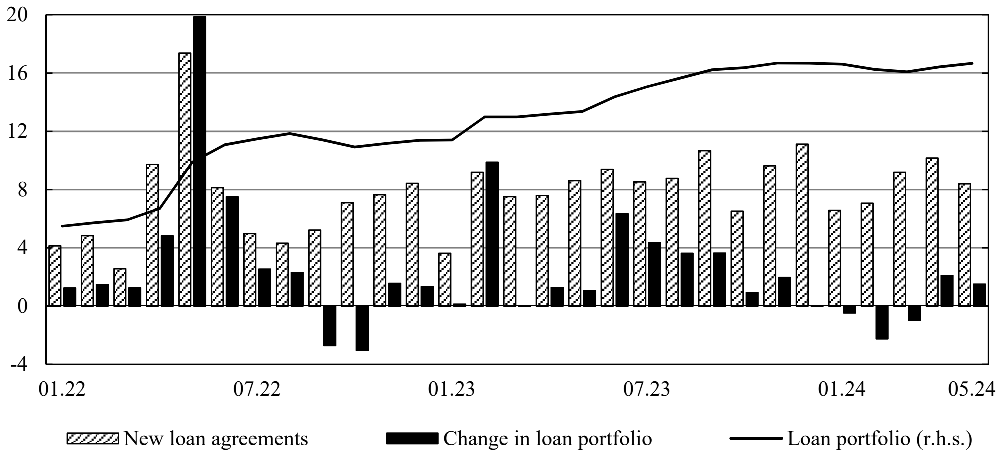

Figure 5. Loans under the program "Affordable Loans 5-7-9%", UAH billion

Source: (NBU, 2024, June).

Starting in January 2024, the volume of lending under the 5-7-9 program has been gradually decreasing, both in terms of the limits of signed agreements and net loan growth, which is a result of delays in interest rate compensation by the government and, accordingly, a decrease in bank interest.

In 2022–2023, the government amended the program 16 times, mostly by raising credit limits and expanding the list of lending areas. Since then, a wide range of borrowers have been able to receive government support, regardless of their actual need for credit assistance. The loan portfolio has more than doubled since the beginning of the full-scale invasion and amounted to UAH 129 billion in early June 2024. The compensation budget of the program was not designed for such dynamics. The state's debt to banks amounted to UAH 5.8 billion at the beginning of June (NBU, n. d.).

In order to reduce the pressure on the budget in terms of rate compensation payments to banks, the government restricted working capital lending in April 2024, with limits for non-priority areas reduced from UAH 60 million to UAH 5 million. The NBU also reduced the banks' margin above the UIRD (Ukrainian Index of Retail Deposit Rates) by 3–5 percentage points. These changes will reduce the burden on the budget in the long run, but will not solve all the problems (Resolution of the Cabinet of Ministers of Ukraine No. 473 (2024, April 30).

Due to the recent changes in the program's rules, bankers admit that the total amount of funding will be reduced by "5-7-9%" and are confident that the Cabinet of Ministers will be able to save budget funds on compensation of interest rates and slightly reduce the state debt under the program. Although it does not mean that concessional lending will stop completely (Lysenko, 2024).

The preferential regime of lending to enterprises under the state loan program "5-7-9" poses threats to its further functioning. After all, low or zero compensation rates for loans under the program and the right to extend the principal amount of loans allow banks to mask the insolvency of a number of their clients for a long time. Under the terms of the program, the bank ceases to receive interest compensation if the client breaches the terms of the loan agreement. Therefore, banks are not interested in recognizing a loan as problematic as long as possible (Kornyliuk A., & Kornyliuk R., 2024).

The capabilities of the State Credit Program "5-7-9" are subject to change in light of the Lending Development Strategy approved by the Financial Stability Council on June 6, 2024, which aims to ensure effective lending to the economy, especially to critical sectors (NBU, 2024). These include energy, the military-industrial complex (or MIC), manufacturing, agriculture, and businesses in the de-occupied territories and those close to the front line.

The strategy stipulates that state subsidies for loans under the 5-7-9 program will remain available for businesses that implement investment projects that are critical to maintaining infrastructure or operate in high-risk areas. However, for businesses that do not fall into these categories, the amount of subsidized loans will be reduced.

The strategy is based on eight fundamental principles: win-win lending and its accessibility, reducing credit risks, improving the quality of the loan portfolio, environmental responsibility, developing infrastructure for SME, financial responsibility, innovations in financial services, and implementing modern solutions to facilitate access to financial services and improve customer service (NBU, 2024).

The approval of the Lending Development Strategy by the Financial Stability Council is a positive step. However, the list of measures outlined in this strategy looks more like a declaration of intent than a plan of practical measures to achieve the goal, as the financial mechanism for its implementation is not disclosed.

3. Problem identification of corporate lending by Ukrainian banks and possible ways to solve them

The diagnosis of the corporate lending market by Ukrainian banks has revealed that there are currently no prerequisites for its active growth on a market basis without increasing the level of credit risk. This is due to the fact that the number of solvent companies is currently limited, and new ones are hardly being created. Some companies from cities and regions near the combat zone are relocating to the central and western regions of Ukraine, and, in our opinion, an increase in lending is only possible due to the growth of banks' risk appetite, which may lead to an increase in the share of non-performing loans. Solvent demand in Ukraine has declined significantly, exports have become difficult due to logistical issues, and prices do not fully cover costs. In addition, borrowers in most sectors of the economy have a significant debt burden and are cautious and careful about borrowing from banks.

The value of collateral has declined and is not increasing much even with the hryvnia devaluation, and collateral coverage ratios for credit exposures are also declining, so new loans will be partly form-based. In order to avoid this situation, we believe it is necessary to use such risk-sharing instruments as government guarantees on a portfolio basis, risk-sharing programs from international financial organizations, including the EBRD, EIB, etc.

It seems important to insure military risks, especially for companies located in close proximity to the war zone or near the border with Russia and Belarus, as well as for companies that have a significant impact on the economy (energy, logistics, fuel complex, which are potential targets for enemy shelling).

It also seems appropriate to reorient from lending under the state loan program "5-7-9" to lending at market rates, which, although decreasing, are higher than the rates in the program.

Summarizing the above, it can be argued that banks are currently not ready to provide "long" financing without government participation, as they are not sure that the borrowing company will be able to repay the loan. After all, at any moment its production may be damaged or destroyed as a result of an enemy attack.

Neither Ukrainian banks nor international financial organizations will agree to lend to large investment projects with a 3-5-year horizon (whether in the defense industry, energy, or agriculture) unless there are clear guarantees of compensation for war damage and confidence in the ability to collect the debt from the borrower, and this process will not take years.

A number of radical measures have been developed to improve the State Loan Program "5-7-9", in particular:

• to conduct a comprehensive diagnosis of the asset quality and achieved socio-economic effects of the existing 5-7-9 loan portfolio (in particular, in terms of job creation, innovation, increased contribution to food and energy security, etc;)

• to focus state funds on credit support for SME that cannot obtain loans on market conditions from banks and to distinguish between large businesses and small/medium-sized businesses when groups of large companies consist of several small and medium-sized enterprises;

• to regularly assess the compliance of clients with the conditions of access to the program, including increased attention to the actual location of the business, avoiding schemes of fictitious re-registration in the high military risk zone, paying more attention to assessing the solvency of clients during prolongation (Kornyliuk A., & Kornyliuk R., 2024).

In our opinion, it is advisable to improve the state credit program "5-7-9" in the following areas:

• diversify lending by economic sectors to prevent "distortions" of program funding in favor of certain sectors (lending to the agricultural sector accounts for 50% of all loans in the program) and state-owned banks;

• support investment projects focused on energy independence and energy efficiency;

• develop and launch a war risk insurance mechanism, which will contribute to strengthening the role of investment lending in the structure of the state program and reducing borrowers' credit risks;

• consider the possibility of limiting the total portfolio of loans under the program, taking into account the budget allocated to it.

Thus, a set of measures for the formation of a market mechanism for providing bank loans to enterprises, together with their state support, will activate the participants of the credit market to expand the scale of business lending in the conditions of martial law, which is the key to the revival of the Ukrainian economy.

Conclusions

Based on the results of the research, it was established that Ukrainian banks and their clients are currently weakly motivated in business lending on a market basis. Inhibiting factors for the development of market lending to enterprises are the attractiveness for banks of risk-free investments in DGLB and CD NBU, for which interest rates are higher than for loans granted to corporate clients; a limited number of solvent enterprises, a significant debt burden of borrowers in most sectors of the economy and a decrease in the value of mortgaged property, even taking into account the devaluation of the hryvnia; lack of military risk insurance, deficiencies in the State Credit Program "5-7-9", etc.

In order to form a comprehensive approach to bank lending to business entities, which involves the implementation of radical measures to stimulate it on a market basis in a harmonious combination with state support, we suggest to use risk distribution tools (state guarantees on a portfolio basis, guarantees of international financial organizations, in particular EBRD, EIB, etc.); to form an effective system of military risk insurance and a financial mechanism for its provision. At the same time, it is appropriate to transform the State credit program "5-7-9". The adoption of these measures during the war can provide an impetus both for expanding the participation of banks in financing enterprises, and for increasing the effectiveness of their state credit support, which will contribute to the relaxation of the domestic economy.

Future directions of research may be the development of a financial mechanism of the Strategy for the Development of Lending, which will provide for a harmonious combination of various sources of credit support for enterprises at the expense of the state, international financial institutions and banks, as well as the introduction of effective tools of the central bank's monetary policy aimed at stimulating the activation of market lending to businesses in Ukraine.

REFERENCE/СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ

Betz, T., & Pond, A. (2023). Governments as borrowers and regulators. The Review of International Organizations. https://doi.org/10.1007/s11558-023-09516-1	
Danylyshyn, B. (2023). Lending to the economy should become the basis of development. B. Danylyshyn's blog. https://lb.ua/blog/bogdan_danylysyn/590900_kredituvannya_ekonomiki_maie_stati.html	Данилишин, Б. (2023). Кредитування економіки має стати основою розвитку. Блог Б. Данилишина. https://lb.ua/blog/bogdan_danylysyn/590900_kredituvannya_ekonomiki_maie_stati.html
Khymych, I., Vynnyk, T., & Tymoshyk, N. (2023) Business lending analysis during the war: state support programs. *Socio-Economic Problems and the State* (electronic journal), *1*(28), 30–41. https://doi.org/10.33108/sepd 2023.01.030	Химич, І., Винник, Т., & Тимошик, Н. (2023). Аналіз кредитування бізнесу в умовах війни: державні програми підтримки. *Соціально-економічні проблеми і держава* (електронний журнал), *1*(28), 30–41. https://doi.org/10.33108/ sepd 2023.01.030
Kornylyuk, A., & Kornylyuk, R. (2024). State business support program "Affordable loans 5-7-9%": in search of optimal design. Vox Ukraine. https://voxukraine.org/derzhavna-programa-pidtrymky-biznesu-dostupni-kredyty-5-7-9-u-poshukah-optymalnogo-dyzajnu	Корнилюк, А., & Корнилюк, Р. (2024). Державна програма підтримки бізнесу "Доступні кредити 5-7-9%": у пошуках оптимального дизайну. Вокс Україна. https://voxukraine.org/derzhavna-programa-pidtrymky-biznesu-dostupni-kredyty-5-7-9-u-poshukah-optymalnogo-dyzajnu
Lysenko, O. (2024). "Available loans 5-7-9%" were cut: who dropped out of the program and what are the alternatives. https://minfin.com.ua/ua/credits/articles/dostupnye-kredity-579-urezali-kto-vypal-iz-programmy-i-kakie-est-alternativy/	Лисенко, О. (2024). "Доступні кредити 5-7-9%" урізали: хто випав із програми та які є альтернативи. https://minfin.com.ua/ua/credits/articles/dostupnye-kredity-579-urezali-kto-vypal-iz-programmy-i-kakie-est-alternativy/
Moosa, I. (2019). The Economics of War. Chapter 8: Bankers as war profiteers,160–183. Edward Elgar Publishing. https://doi.org/10.4337/9781788978521. 00014	
NBU. (2023, December). Report on financial stability. https://bank.gov.ua/admin_uploads/article/FSR_2023-H2.pdf?v=7#page=25	НБУ. (2023, грудень). Звіт про фінансову стабільність. https://bank.gov.ua/admin_uploads/article/FSR_2023-H2.pdf?v=7#page=25
NBU. (2023, January 6). The NBU implements the announced measures to activate the domestic debt market. https://bank.gov.ua/ua/news/all/nbu-implementuye-anonsovani-zahodi-dlya-aktivizatsiyi-vnutrishnogo-borgovogo-rinku	НБУ. (2023, 6 січня). НБУ імплементує анонсовані заходи для активізації внутрішнього боргового ринку. https://bank.gov.ua/ua/news/all/nbu-implementuye-anonsovani-zahodi-dlya-aktivizatsiyi-vnutrishnogo-borgovogo-rinku
NBU. (2024). Credit development strategy. https://bank.gov.ua/admin_uploads/article/Lending_development_strategy_2024.pdf	НБУ. (2024). Стратегія з розвитку кредитування. https://bank.gov.ua/admin_uploads/article/Lending_development_strategy_2024.pdf
NBU. (2024, June). NBU report on financial stability. https://bank.gov.ua/ua/news/all/zvit-pro-finansovu-stabilnist-cherven-2024-roku	НБУ. (2024, червень). Звіт про фінансову стабільність. https://bank.gov.ua/ua/news/all/zvit-pro-finansovu-stabilnist-cherven-2024-roku
NBU. (n. d.). Statistics of the financial sector. https://bank.gov.ua/ua/statistics/sector-financial	НБУ. (б. д.). Статистика фінансового сектора. https://bank.gov.ua/ua/statistic/sector-financial
Peterson, K., Esther, N, & Kingsley, I. (2024). Wartime monetary policy: Monetary policy options to adopt during war. In book: *Encyclopedia of Monetary Policy, Financial Markets and Banking.* April. https://doi.org/10.1016/B978-0-44-313776-1.00261-0	
Poast, P. (2015). Central Banks at War. International Organization, *69*(1), 63–95. https://doi.org/10.1017/S0020818314000265	
Resolution of the Cabinet of Ministers of Ukraine No. 473 (2024, April 30) On Amendments to the Procedure for Providing Financial State Support to	Постанова КМУ № 473 (2024, 30 квітня). Про внесення змін до Порядку надання фінансової державної підтримки суб'єктам підприємництва,

Business Entities, approved by Resolution No. 28 of the Cabinet of Ministers of Ukraine of January 24, 2020 "On Providing Financial State Support"	затвердженого постановою Кабінету Міністрів України від 24 січня 2020 р. № 28 "Про надання фінансової державної підтримки"
Shpanel-Yukhta, O. (2022). Peculiarities of bank lending in wartime conditions. *Economy and society. Finance, banking and insurance*. (45). https://doi.org/10.32782/2524-0072/2022-45-96	Шпанель-Юхта, О. (2022). Особливості банківського кредитування в умовах війни. *Економіка та суспільство. Фінанси, банківська справа та страхування*. (45). https://doi.org/10.32782/2524-0072/2022-45-96
State Statistics Service of Ukraine. (n. d.). National accounts (GDP). https://ukrstat.gov.ua/imf/arhiv/nr/nr_u.htm	Державна служба статистики України. (б. д.). Національні рахунки (ВВП). https://ukrstat.gov.ua/imf/arhiv/nr/nr_u.htm

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