

Development paths for small businesses in Ukraine after the war

Maryna SHEPEL*, Oleksandr BALAN**, Olena LYPYNSKA***

Abstract

The article examines the ways to develop small businesses in Ukraine in the post-war period. The overall objective of the study is to identify potential ways to promote small business development in Ukraine in the post-war period. The research objective leads to the following question: what are the best practices and tools that can be used to develop small businesses in Ukraine in the post-war period. To achieve the research objective, the following tasks were used: the analysis of scientific literature on the research topic, using the data obtained within the framework of the UUT 25 Grant Project “Dynamic Capabilities building in Ukrainian SMEs for development and growth in the framework of post-war restoration of territorial communities of Ukraine” (Odesa Polytechnic National University,2023) and secondary analysis of data from open Internet resources, and the proposals for the small businesses in Ukraine development in the post-war period were given.

Keywords: small businesses, development, post-war period, an entrepreneur, Ukraine

Introduction

The Russian Federation’s military invasion of independent Ukraine’s territory has drastically changed all areas of life. The military aggression affected many economic entities and institutions on which the country’s livelihoods depended. The invasion also influenced small businesses as part of the country’s economic system. After the outbreak of a full-scale war in Ukraine, small entrepreneurs found themselves in a very difficult situation, although they could respond more quickly and flexibly to new unforeseen challenges than large ones. In general, according to research by the European Business Association, small businesses in Ukraine suffered enormous losses: 15% of enterprises lost more than USD 100 thousand due to the war. 28 % - from 10 to 100 thousand USD. 28 % - from 10 to 50 thousand USD, 28 % - from 10 to 50 thousand USD. USD, 40 % - from 10 to

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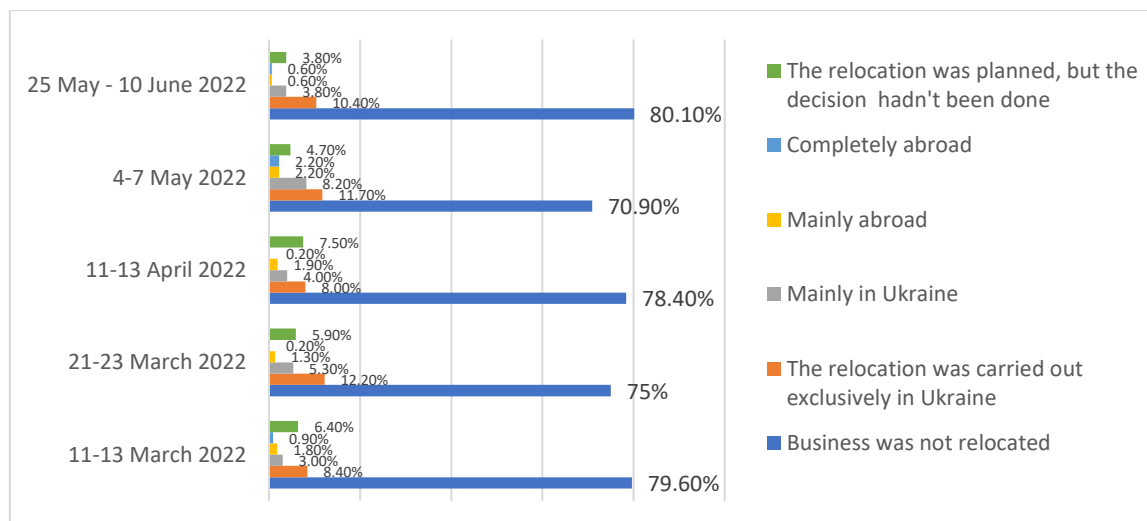
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50 thousand USD. USD, 40 % - up to USD 10 thousand. USD, 40 % - up to USD 10 thousand. USD. At the same time, one in five suffered losses as a direct result of hostilities. At the same time, only 6 percent managed to survive the first two months of the war without losses (Ero, 2022).

Small businesses were forced to relocate due to the hostilities (Figure 1).

Figure 1 - Small Businesses Relocation at the Beginning of the Russian Invasion



Source: Current State and Needs of Ukrainian Business during the Full-Scale War Main Results of Business Survey in June (2022)

As we can see from Figure 1, on average 76.8% of businesses were not displaced, while 19% were relocated. In our opinion, this is due to the enterprise’s location (the war zone), access to markets, severe disruptions in the supply chain (disruption of transport routes, availability of raw materials, customs, and access to harbors, airports, etc.), problems related to limited access to vital resources such as electricity, fuel, water and skilled labour force, serious difficulties due to damage to transport networks, utilities, communication networks and systems.

7,820 Ukrainian businesses have changed their region of registration since the beginning of the full-scale invasion. 27% of the total number of companies moved out of Kyiv. The top three regions from which entrepreneurs have moved since the start of the full-scale invasion are also the Dnipropetrovsk region (11%) and the Donetsk region (8%). At the same time, Kyiv is also at the top of the list of regions where companies are moving to – 22% of the total number of relocators chose the capital. Despite the hostilities and proximity to the frontline, entrepreneurs also choose Kharkiv and Odesa regions - 10% of companies that have changed regions (Opendabot, 2023a).

The hostilities haven’t stopped entrepreneurship development. Ukrainians continue to open new businesses. Since the start of the Russian full-scale invasion, more than 202,000 new individual entrepreneurs were registered in Ukraine (Opendabot, 2023c, 2023d).

To date, it is difficult to predict how small businesses will fare in the post-war period. Thus, the purpose of this study is to provide recommendations and ideas for small businesses development during the war and the post-war periods in Ukraine. In this piece of research, we made an attempt to give some ideas for small businesses development after the war.

1. Small business in the Ukrainian context

According to Ukrainian statistics, small businesses in the service sector include business entities of any legal form and ownership, where the average number of employees for the reporting period (calendar year) does not exceed 50 people and the annual income from any activity does not exceed the amount equivalent to EUR 10 million (determined at the average annual exchange rate of the National Bank of Ukraine) (Enterprises activity, n.d.).

The subjects of small business entities are:

- natural persons registered by the procedure established by law as natural persons: entrepreneurs in which the average number of employees for the reporting period (a calendar year) does not exceed 50 persons and the annual income from any activity does not exceed the amount equivalent to 10 million euros, determined by the average annual rate of the National Bank of Ukraine;
- legal entities: economic entities of any organizational and legal form and form of ownership, in which the average number of employees for the reporting period (a calendar year) does not exceed 50 people and the annual income from any activity does not exceed an amount equivalent to 10 million euros, determined at the average annual exchange rate of the National Bank of Ukraine Enterprises activities.

Bezus and Shafrananova (2016) note that the small business sector is an integral part of the country's socio-economic system, as it ensures relative stability of market relations, and due to its flexibility, demonstrates a rapid response to constantly changing environmental conditions. Small business plays an important role in increasing the number of jobs and solving employment problems, thereby mitigating the negative effects (structural and frictional unemployment) of scientific and technological progress and fluctuations in the labour market.

Gryga *et al.* (2014) studied the factors that influence the efficiency of small businesses: interaction with large businesses and innovation activity. Based on the analysis of empirical data obtained by the authors in the course of the managers' survey of small businesses in the Chernihiv region, it was found that the greatest impact on the profit of small enterprises was made by

technological innovations, in particular, the use of new materials, technologies, new packaging and product design, while organisational innovations do not directly affect the profit of the company. It was also proved that the interaction between small and large businesses in Ukraine has a positive impact on the economic activity of small businesses.

The scientists of the State Organization “Institute of Market and Economic & Ecological Researches of the National Academy of Sciences of Ukraine” Butenko *et al.* (2014) and Isachenko (2009) noted quantitative assessments of small business development are provided and a very high level of regional differentiation of its development in favour of the most prosperous and economically successful regions of the country. Thus, we can conclude that the state of small business is determined by the overall level of the region’s economic development, which in turn has a limit of its capabilities as an independent subject of modernisation.

Burkinsky (2015) identified the goals of small business support at the regional level: increase in the volume of products, works, services by small businesses, increase in the volume of products of small businesses in GRP, increase in the volume of products of small businesses in total industrial production, increase in the volume of products, works, services of small businesses operating in the processing industry, increase in the share of products, works, services of small businesses operating in the processing industry, increase in the volume of products, works, services of small businesses operating in the areas of the economy (manufacturing industries with a high share of added value, import-substituting industries, export industries), increase in the volume of products, works, services by small businesses in the total volume of investments

Exploring the role of small businesses in the economic and social development of territorial communities, Mitsa (2016) argues that small enterprises play a crucial role in the economic system of a community. The importance is determined by the fact that in developed countries at least one in six households owns such a business. Small businesses employ local citizens, which contributes to the economic situation in the community (p.26).

Kuklinova (2023) shares the same opinion, noting that small businesses play an important social role, providing self-employment, a good social environment, generating a vital level of income, promoting initiative and encouraging employees, activating the processes of initial capital accumulation for further development, which is of great importance both in wartime and post-war period. Thus, support for small businesses is one of the main prerequisites for the economic and social recovery of Ukraine and the Odesa region in particular in the post-war period.

Golich and Panukhnyk (2018) studied the foreign experience of using small businesses in the system of territorial community development and emphasized that there is no single system of criteria

for defining small businesses, as each country develops its own system in accordance with national business traditions, economic characteristics and economic policy priorities

The entrepreneurial potential of small businesses plays a significant role in the process of recovering the national economy from the consequences of military operations. The post-war economic and social development of Ukraine depends on the speed of recovery, which in turn can be ensured by the effective functioning of small businesses and the creation of optimal conditions for their development. Therefore, the speed of “resuscitation” of this sector should become a priority for the government, which will ensure the economy transition to a qualitatively new level and contribute to the post-war renewal of the country (Vasylynets, 2022, pp.119-120)

Ukraine needs to promote small businesses development at the state level in order to build a high-tech business sector and increase its competitiveness in the global market. The main areas of focus should be stimulating the innovation activity of small businesses, creating a favourable innovation and investment climate and regulatory environment. Today, Ukraine needs unconventional measures, new legislative acts, and special new organisational structures that should focus on the existing problems of the legal use of competition law for the development of small businesses in wartime (Chernychko, 2022)

As we see the scholars agree that small business is a lever for the development of the Ukrainian economy, especially in the post-war period. They talk about how to do this at the national level. But in our opinion, during the war and post-war periods, small businesses should be developed both at the local level (territorial communities) and at the national level.

2. Small business in Ukraine during the war

Despite the full-scale invasion, Ukrainians continue to open new businesses. Over the last year, since the start of the full-scale invasion of the Russian Federation, more than 202,000 new individual entrepreneurs were registered in Ukraine. After the outbreak of the war, the registers were down for some time, making it impossible to start a small business. After the opportunity to start a business was restored, more than a thousand new businesses were registered on the first day using the Diia App. In April, their number increased tenfold to 12,600. Since then, the number of new small businesses has been growing, peaking at 20,100 in September. After a slight decline in autumn and early winter, most likely due to power outages and massive shelling of civilian infrastructure by the Russian Federation, the number of new small and medium-sized enterprises started to grow again in

early 2023. Table 1 shows the number of new businesses opened during the period of the full-scale Russian invasion from March 2022 to September 2023 (Opendabot 2022, 2023b, 2023c)

Table 1. Number of new businesses opened since the full-scale Russian invasion

2022		2023	
January	11 951	January	16 931
March	1 946	February	16 440
April	12 626	March	15 893
May	15 408	April	21 481
June	17 950	May	25 623
July	19 085	June	31 477
August	20 108	July	28 682
September	20 136	August	30 847
October	17 324	September	35 587
November	15 934		

Source: Opendabot (2022, 2023a, 2023b)

Analysing Table 1, we see that the smallest number of small businesses was launched in March 2022 (1,946), and the largest number was launched in September 2023 (35,587). The small number of small businesses opened in March 2022 is due to the outflow of personnel (women/women with children went abroad or to safer places), uncertainty about the future, and the intensity of shelling. In 2023, the situation became more stable, people began to return from abroad, and it was necessary to create new jobs in the communities.

In the regional context, we have the following results of registered small businesses as of September 2023, which are presented in Table 2 (Opendabot, 2023c).

Table 2 Number of small businesses in territorial communities by region as of September 2023

Region.	Number of small businesses
The Cherkasy region	10 677
The Chernihiv region	8 657
The Chernivtsi region	9 414
The Crimean region	93
Sevastopol	16
The Dnipropetrovska oblast	31 096
The Donetsk region	6 331
The Ivano-Frankivsk region	12 882
The Kharkiv region	24 009
The Kherson region	2 831
The Khmelnytskyi region	13 916
The Kirovohrad region	8 009
The Kyiv region	26 408
The city of Kyiv	52 904
The Luhansk region	1 433

The Lviv region	29 868
The Mykolaiv region	8 268
The Odesa region	23 984
The Poltava region	14 370
The Rivne region	10 342
The Sumy region	7 981
The Ternopil region	8 262
The Vinnytsia region	14 911
The Volyn region	10 457
The Transcarpathian region	8 559
The Zaporizhzhya region	10 175
The Zhytomyr region	10 830

Source: Opendabot (2023b, 2023c)

Analysing Table 2, the largest number of small businesses was established in the Kyiv city, the Kyiv, Lviv, Kharkiv, Dnipropetrovsk, Odesa, and Poltava regions, and the smallest number was in the Transcarpathian, Volyn, Ternopil, Luhansk, Kherson, Zaporizhzhia, and Donetsk regions, as well as in the Autonomous Republic of Crimea and the city of Sevastopol. Small businesses are developing in areas where there is no or low level of hostilities. The size of the region and the population should also be taken into account.

The war has also changed the activities of small and medium-sized businesses. The most popular industries for new small businesses have not changed. Just like last year, as of September 2023, retail trade was ranked first (more than 51,000 new small businesses officially started operating in this sector). The second most popular is Computer programming, consulting and related activities (CEA), which was the most popular before the full-scale invasion. This year, 12,000 entrepreneurs have already started their own businesses in this area. The top three was “Provision of other personal services”, in which more than 11,000 individual entrepreneurs have started their business (Opendabot, 2023b).

Table 3. The most popular areas for small businesses as of September 2023

Category.	Amount
Retail	51 182
Computer programming	12 098
Provision of other individual services	11 989
Wholesale sales	10 109
Food and beverage services	9 567
Transport	7 888
Information services	7 908
Education	4 797
Wholesale and retail trade in cars	4 147
Activities of the head offices	5 057
Other	47 895

Source: Opendabot (2023c)

Analysing Table 3, we see that the largest number of small businesses were established in retail trade, computer programming and other personal services; the smallest number of small enterprises were established in education, wholesale and retail trade in motor vehicles.

As of 8 March 2023, a total of 36,892 small businesses have been registered since the beginning of 2023, of which 51%, or 18,776, were founded by women. The share of women starting small businesses has been increasing since 2017. In 2020-2021, women entrepreneurs opened 51% of new businesses, but the Great War set this figure back somewhat. In total, women registered more than 93,000 small businesses in 2022, accounting for 48% of the total number of new small businesses. The dynamics of small business registration by men and women in the period from 2017 to 2023 is shown in Table 4 (Obendabot, 2023e).

Table 4. Dynamics of small businesses registration among men and women

Year	2017	2018	2019	2020	2021	2022	2023
Women	102 119	173 498	166 944	148 161	146 521	92 964	18 776
Men	114 447	168 803	169 769	142 478	139 490	100 695	18 116

Source: Obendabot(2023e)

Analysing Table 4, we can see that in 2017 the number of small enterprises registered by women was 12,328 fewer than by men; in 2018 the number of small enterprises registered by women was 4,595 more than by men; in 2019 the number of small enterprises registered by women was 2,825 fewer than by men; in 2020, the number of small enterprises registered by women was 5,683 more than men; in 2021, the number of small enterprises registered by women was 7,031 more than men; in 2022, the number of small enterprises registered by women was 7,731 less than men; as of March 2023, the number of small enterprises registered by women was 660 more than men. Thus, the data on the number of small businesses registered by men and women in Ukraine also indicates relative equality in business start-ups by men and women (with a 1 – 2% variation in business ownership between years by men or women). However, this data does not take into account the outflow of male entrepreneurs to the war and the consequent reorientation of some of their businesses to their wives.

One third of new small businesses registered by women are in the retail sector, almost twice as many as men in this category. 10,658 entrepreneurs started their own business in the IT sector, which ranks second in terms of the number of registrations. However, this is only 34% of the total number of small businesses in this category (Obendabot, 2023e).

In 2022, women outperformed men in the provision of other personal services (85% of new businesses were founded by women), clothing, education and human resources (75%), social assistance (74%), and healthcare (72%), among others. On the other hand, the situation with women

at the top of companies is not as positive. The number of female directors of medium and large businesses is decreasing every year. In 2021, only 35% of businesses were headed by women. The year of the full-scale Russian invasion reduced their number to 29%. A total of 9,405 women-led companies were launched last year. In 2023, there was an upward trend. Since the beginning of the year, 3,849 businesses have been opened, and women head 30% of new companies (Opendabot, 2023e). The increase in the number of female directors is due to the fact that at the beginning of the war, men joined the Armed Forces of Ukraine.

Within the framework of the UUT 25 Grant Project between Odesa Polytechnic and the University of Portsmouth “Dynamic Capabilities building in Ukrainian SMEs for development and growth in the framework of post-war restoration of territorial communities of Ukraine” (Odesa Polytechnic National University, 2023), we investigated the challenges and results of business activities after the Russian invasion. 216 small business representatives took part in the survey. The respondents evaluated the statements according to the following criteria: 1 - strongly disagree/strongly disagree, 2 - disagree, 3 - rather agree than disagree, 4 - agree, 5 - strongly/completely agree. For greater clarity, the data are presented in Table 7 (Balan *et al.*, 2023).

Table 4. Business challenges and results after the Russian invasion

After the Russian invasion	Assessments (results)				
	1	2	3	4	5
Since the start of the full-scale invasion, we have had to work under restrictions	2.8%	10.8%	23.1%	24.1%	39.2%
The company remains mostly open and continues to operate, even with some interruptions	3.3%	4.7%	26.4%	32.2%	35.1%
After the Russian invasion, the company tries to pay its employees and/or debts and/or taxes	4.8%	7.7%	27.9%	24.5%	35.1%
The company's revenue/profit has decreased significantly since the Russian invasion	5.7%	11.5%	29.2%	22%	31.6%
The company is trying to preserve its financial liquidity after the Russian invasion	3.3%	10%	26.3%	29.7%	30.6%
After the Russian invasion, the cost of operation increased significantly	2.9%	12.4%	33.3%	21.9%	29.5%
After the Russian invasion, it is harder to find and retain labour/employees	11.4%	15.2%	26.7%	21%	25.7%
We have resumed our operations (if they were suspended)	25.4%	11.2%	21.8%	17.8%	23.9%

Source: Balan *et al.* (2023)

After the invasion, entrepreneurs mostly highlight the following problems: working with restrictions, working with interruptions, difficulties with payroll, company profits have significantly

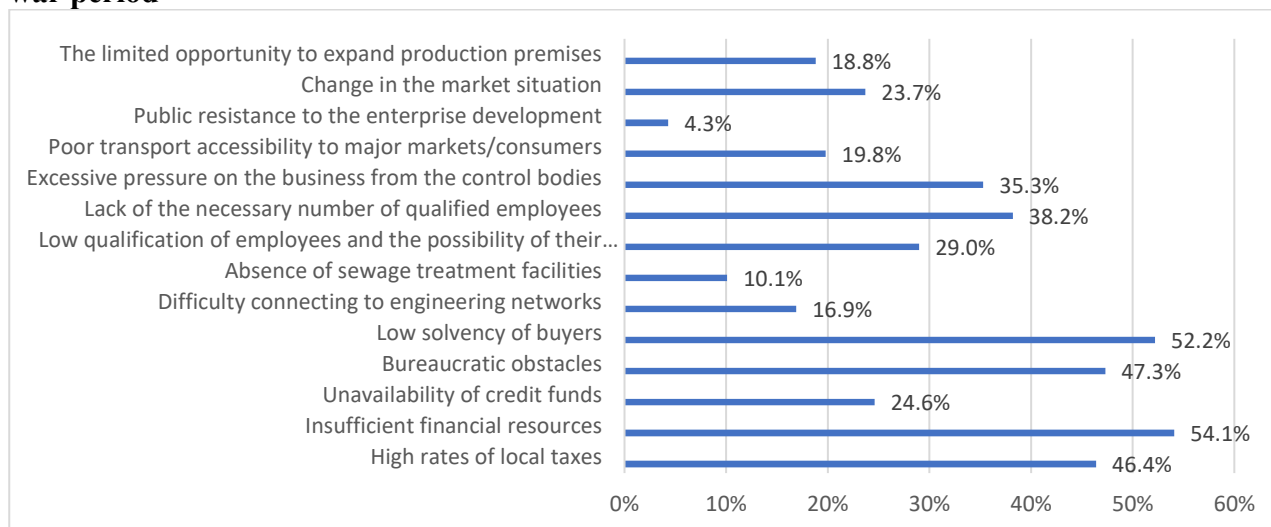
decreased, the company is struggling to maintain its financial liquidity, and the cost of doing business has increased significantly.

The recovery and development of small businesses in the post-war period is of great importance. Unfortunately, small businesses can face obstacles in the recovery process. Among the most common obstacles identified by respondents were the following: finances, corruption, inflation, high prices for raw materials and energy, lack of demand, mined areas, insufficient financial resources, lack of funds in society, high taxes, lack of qualified personnel in the state, bureaucracy, insolvency of customers, human resources, the IT community is in no hurry to return to Ukraine, misunderstandings between people, disputes over the “language”, problems with company financing and problems with loans, corruption in local governments, lack of easy and low-interest loans, lack of working capital, destruction of material and technical potential and departure of personnel, personnel shortage, government intervention, lack of market, irrelevance of goods or services, high prices, lack of demand, qualified employees with experience, mined Black Sea, difficult logistics, return of foreign competitors, loss of trust and investment, high costs of recovery and reconstruction, high rents, difficulty in finding production facilities that meet all needs, anxiety, lack of security, mainly economic difficulties.

Among the factors that would hinder the small business development in the territorial community in the post-war period, respondents chose the following options: high rates of local taxes (46.4%); insufficient financial resources (54.1%); unavailability of credit funds (24.6%); bureaucratic obstacles (47.3%); low solvency of buyers (52.2%); difficulty connecting to engineering networks (16.9%); absence of sewage treatment facilities (10.1%); low qualification of employees and the possibility of their arrangement (29%); lack of the necessary number of qualified employees (38.2%); excessive pressure on the business from the control bodies (35.3%); poor transport accessibility to major markets/consumers (19.8%); public resistance to the enterprise development (4.3%); change in the market situation (23.7%); the limited opportunity to expand production premises (18.8%). For greater clarity, we present the data in Figure 2.

As can be seen from Figure 2, the highest indicators had the following factors: insufficient financial resources (54.1%), high rates of local taxes (46.4%), low solvency of buyers (52.2%), and the lowest indicators had the following factors: absence of sewage treatment facilities (10.1%) and public resistance to enterprise development (4.3%)

Figure 2. Factors that will hinder business development in the territorial community in the post-war period



Source: Balan *et al.* (2023)

Among the problems that exist in the relationship between business and the authorities (community leaders), respondents named the following: corruption; interference of community leaders; taxes; bureaucratic obstacles; pressure; authorities do not hear entrepreneurs, it is difficult for them, and they still want to kill them with their tariffs and laws; control; openness of the authorities to communication; each side will defend its interests; the city authorities support their business and destroy others; transparency; the authorities will put pressure on small businesses in the pursuit of suppressing corruption, instead of inspecting and punishing “scandalous” businesses; change of priorities; many people have left; terms of service; understanding; money; since it is a transport company, questions about the content of what is being transported, although the company does respond promptly to all requests, including restrictions/prohibition of transportation of even excisable alcohol in the Donetsk direction; therefore, it is doubtful that there will be big problems for responsible businesses, maximum misunderstandings on the ground; excessive pressure on enterprises by regulatory authorities, lack of solvent customers, unpredictability of the situation in Ukraine, lack of capital, inaccessibility of credit programmes; bureaucracy and complexity of regulatory policy: businesses may find it difficult to navigate the large number of regulations, permits and administrative procedures; bureaucratic barriers may make it difficult to launch new projects and grow businesses; corruption and unfairness: corruption issues can create obstacles for businesses, as they may face demands for bribes or unfair practices from the authorities; tax policy: high taxes or unreasonable tax rates can affect the profitability of businesses and their ability to grow; disputes and conflicts of interest: disputes and conflicts of interest can arise between different business groups and

between different levels of government, making cooperation difficult; lack of communication and openness: businesses and authorities can face problems in communication and openness, which can lead to misunderstandings and negative perceptions of one side of the other; populism; lack of comprehensive support

It is difficult to predict how small businesses will develop in the future. But at the same time, we are able to offer ways to restore and develop business in the post-war period.

3. Ways to develop small business in the post-war period

The following ideas can be used to develop small businesses in Ukraine in the post-war period: linking small businesses with e-government to improve their services; using artificial intelligence to collect and analyse customer data, which will allow small businesses to make informed decisions about their target audience and their preferences; creating a hub for individual entrepreneurs to exchange ideas; and creating courses for individual entrepreneurs who are starting out on the basis of the Odesa Polytechnic Consultancy and Training Centre. Let us consider them in more detail.

3.1. The relationship of small businesses to e-government in improving services

E-government and informatisation play an important role in changing the face of traditional public service delivery, bringing the promise of increased efficiency and a more customer-centric and friendly approach. Informatisation is one of the means to facilitate e-government, which can be broadly defined as the management and delivery of (potentially interactive) public services through electronic technologies, primarily focused on ICT (Vyas-Doorgapersad, 2009).

Effective implementation of e-government can play a particularly important role in facilitating SMEs' access to and use of business registration and licensing systems, as it offers the potential to reduce the time, costs and process elements associated with the business regulatory challenges currently faced by SMEs (Bureau for Economic Research, 2016).

E-government contributes to many areas, such as improving services, enriching democratic and consultative practices, increasing public sector efficiency and bridging the digital divide. It is believed that the e-government development indirectly affects areas that are difficult to link. Business is one of the areas that benefit from e-government in two ways. The first is through the concept of open information, where new businesses can find the information they need on e-government pages when they start a new business. The second is related to the infrastructure and services that benefit new

businesses and indicate how much such businesses can benefit from them. (Abu-Shanab and Osmani 2019, p. 38)

It is advisable to establish an intergovernmental coordinating body for SMEs/LED and e-government, comprising all stakeholders identified in the framework, to lead the implementation of the proposed framework. Consideration should be given to improving the e-government portal to integrate the various agencies and departments tasked with providing assistance to SMEs. The development of a separate SME/LED development strategy should address the identified challenges. Municipalities should take into account the economies of scale in expanding broadband, as well as the benefits of improved internet access for SMEs. The use of e-governance that covers business in municipalities should be expanded in a way that increases the level of use of these systems. Regular monitoring and evaluation of the development and use of e-government should be carried out, which can help assess the extent to which e-government systems remain relevant and usable by SMEs and other target beneficiaries. In other words, e-government is seen as a system that supports improved non-bureaucratic support for service delivery and therefore offers a solution to the identified challenges related to MSMEs (Soga and Vyas-Doorgapersad, 2022, pp. 100-101).

Viana Thompson *et al.* (2005) classify e-government services into search-oriented and transaction-oriented. They found that a company's digital capabilities determine the extent to which e-government is used for search purposes, which in turn increases profitability; however, no such effect was found for transaction-oriented e-government. Potentially, e-government can expand markets, and government websites providing information on possible revenue prospects, along with hosting business contacts, lists of subcontractors, buyer networks, etc., help firms to seek revenue prospects to improve their business.

In Ukraine e-government is implemented by the Ministry of Digital Transformation, which developed the Diya App. In 2020 they launched a full-scale national project for the development of entrepreneurship and export Diya .Business. Since May 2021 the project has been realized by the Ministry of Digital Transformation together with the Entrepreneurship and Export Promotion Office (Entrepreneurship and Export Promotion Office, n.d.), a government institution responsible for developing and supporting Ukrainian entrepreneurship on domestic and international markets.

The project's philosophy is to inspire business creation; teach entrepreneurship from childhood and throughout life; help start a business; protect Ukrainian entrepreneurs by monitoring the business climate and regulatory environment; and promote the development, scaling and internationalisation of Ukrainian businesses (About the National Project Diia. Business , n.d.).

The project has online and offline components. The online component is implemented through the Business. Diia, a one-stop shop where you can find all the information you need to start and develop your own business. The offline component includes places where Ukrainians can get free consultations, attend educational events for entrepreneurs, rent a hall for events, and test their own product at a special pop-up location.

Entrepreneur support centres were opened in Kharkiv and Mykolaiv, a centre for students at Taras Shevchenko National University of Kyiv, and a pilot consultation stand in Cherkasy. Entrepreneurs' support centres are also being opened in Odesa, Poltava, Uzhhorod, Bucha, Ternopil, Kryvyi Rih, Kremenchuk, Rivne, and Lutsk. An advisory centre was also opened in Warsaw (Entrepreneur Support Centers DIIA.Business, n.d.).

Another portal created for Ukraine's digital transformation is E-Ukraine (About E-Ukraine, n.d) . The main goal of the Organization is to promote the development and implementation of e-government policies and services, its application in all sectors of the economy, science and education in Ukraine, as well as the systematization of the field of information technologies and the development of the information society. The main tasks of the Organization are promotion of the electronic services development in the state sphere of electronic government and in the commercial sphere; facilitating the creation and subsequent implementation of ICT Strategies in Ukraine. promotion of increasing the level of computer literacy of the Ukrainian population, accumulation of knowledge in the field of information technologies; facilitating the creation in Ukraine and the implementation of world-class modern systems and services; promotion of innovative development, technology transfer; facilitating the coordination of work on the development of information technologies and software; facilitating the coordination of work on the development of information technologies and software; promotion of management processes automation at all levels of state power; research, development and standardization of information technologies in the field of e-government; conducting scientific research and monitoring on separate topics and tasks with the preparation of specialized reports, proposals, methodological recommendations; facilitating the construction of an interactive map of electronic Ukraine; creation and distribution of electronic magazines, catalogs and electronic lists, archives, textbooks, as well as content and programs, schools, seminars, forums; participation in sectoral, national and international programs to promote access to information; facilitating Ukraine's entry into the global information space; participation in measures to eliminate deficiencies in legislation related to the creation, collection, accumulation, processing, storage, distribution, provision and use of information; cooperation with state, scientific and public organizations of Ukraine and foreign countries, individual foreign citizens on issues

related to the statutory activities of the Organization; organizational and methodological, scientific and information-technical support of programmes, examination and competitions for innovative projects and scientific research, scientific-design works in the field of information technologies; participation in the organization of conferences, festivals, sessions, seminars, reports for the purpose of development and implementation of e-government services (About E-Ukraine, n.d).

In this way, small businesses can interact with e-government to improve their services and receive government support.

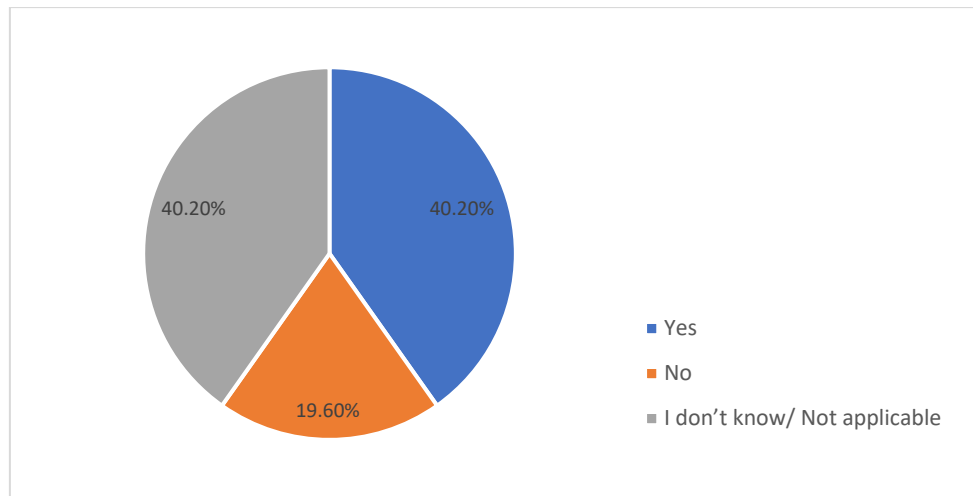
3.2. A hub creation for individual entrepreneurs to exchange ideas

Another important point for small business development is the creation of a special international hub platform where young people and entrepreneurs can exchange ideas. In global business, hubs can be defined as business platforms that are highly interconnected with the global economy through huge flows of goods and capital (Wild, 2020). The researcher argues that the importance of global business hubs for such SMEs is actually increasing, as the burden of SME internationalisation, which involves mediating cross-cultural differences and managing tangible and intangible resources across geographical distances and time zones, remains despite the borderless nature of the international business network (Wild, 2020, pp. 43 -44).

Merrell *et al.* (2022) conducted the first in-depth study of the role SMEs play in providing physical infrastructure for rural businesses, and the ability of rural businesses to overcome their lack of proximity to the diverse networks and support systems needed for innovation and entrepreneurship.

Business hubs are defined as the provision of workspace to multiple tenant companies, as well as additional services such as shared equipment, conference rooms, co-working spaces, business advice and support. They differ from standard business premises in providing such services, as well as access to networking opportunities, both internal and external, provided by the hub. They have different forms of ownership and are often managed by the private, public or third sectors, sometimes in partnership (Merrell *et al.* 2022, p. 82).

According to our survey, 40.2% of respondents said that the creation of a local logistics centre in the community could help businesses. 40.2% were undecided (Fig. 3).

Figure 3. Establishment of a local logistics centre in the community to help businesses

Source: Balan *et al.* (2023)

Thus, establishing an entrepreneurial hub at the local, national and global level can help both experienced and aspiring entrepreneurs learn about trends in the global marketplace and network with experienced entrepreneurs.

It would also be good to create special hubs at universities for students where they could try to launch their small start-ups as part of their future small business with the support of the university administration, teachers and stakeholders.

3.3. Using artificial intelligence to collect and analyse customer data

Another important development in small business in the post-war period was the use of artificial intelligence to collect and analyse customer data in order to work with the target audience and meet their needs.

The latest advanced technologies such as artificial intelligence and robotics are also playing a leading role in all sectors, replacing human intelligence with more efficient computerised, error-free intelligence that effectively improves overall business performance (Budania *et al.* 2022).

Sira (2023) argues that artificial intelligence (AI) simplifies big data analysis by automating and improving data preparation and visualisation and other complex analytical tasks. In addition, AI adds intelligence to existing products. Automation, dialogue platforms, bots, and smart machines can be combined with big data to improve many technologies. AI can make the most of data through self-learning algorithms. Artificial intelligence can be a very useful tool when it comes to business information management. AI algorithms are already helping companies manage their data more

efficiently through in-depth analysis. The further adoption of AI technologies requires the following: exploring the topic areas that are the subject of most publications; and uncovering research opportunities for the application of AI in business management. (Sira, 2023, p. 308) Using AI can increase an organization's productivity because it can help to perform work efficiently, save time, improve operational efficiency, analyse huge amounts of data in less time, offer intelligent advice.

Sharma (2023) states that automation and artificial intelligence can increase the efficiency and productivity of small businesses. Identifying areas for automation and assessing business readiness are key success factors. To do this, it is necessary to consider the technical, organisational and financial aspects of the business and draw up a plan for implementing automation systems. The next step is to evaluate and select the appropriate automation tools and solutions that meet the specific needs and goals of the business. Factors to consider include functionality, integration, cost, user-friendliness, support and maintenance. Small businesses can succeed by adopting a structured and comprehensive approach to automation and AI systems and benefit from increased efficiency and competitiveness.

Businesses recognise the competitive advantage that AI can bring to their value chains, particularly when it comes to automating and improving process efficiency (Schlögl *et al.* 2019).

The small businesses that have established themselves in their niche market segments and have scaled to a step further can opt for procuring AI technologies from AI vendors. And those small businesses that are in their infancy stages may use AI-powered platforms of large service providers helping them adopt and use AI automation for their small businesses. It is also concluded here that the successful adoption of AI automation depends on how effectively small businesses identify and analyze the data available to them or within the implemented AI system (Sharma, 2020).

Social media can be called a part of artificial intelligence. They can help small businesses collect data and information from consumers. (Dr Sana Saima *et al.*, 2023, p. 62). There are several aspects of using social media for business development. First, social media allows companies and customers to communicate in ways that were not possible in the past. This connection is made possible by a variety of “platforms: social networks (Facebook, LinkedIn, Google+); microblogging (Twitter, Tumblr); photo sharing (Instagram, Snapchat, Pinterest); video sharing (YouTube, Facebook Live, etc.)” (Shrilekha *et al.*, 2022). Second, the way customers and businesses interact and influence each other has changed. Activities such as information sharing, analysis, debate and discussion rely on communication and interaction. Third, the rapid development of social media has enabled companies to improve customer relationship management and business decision-making.

Social media is culturally important because for many people it has become the primary way to access a vast amount of information about the world around them.

Using works by more and more people causes small businesses to integrate these networks into their marketing communication channels. That is, once used and exploited to their best value, they can contribute to shaping brand identity, brand image, and company performance in today's marketing competition (Shrilekha *et al.*, 2022, p.25)

The effectiveness of the digital advertising space is higher because it offers a more targeted approach to advertising, with the ability to reach specific demographics and track the success of campaigns in real time. This direct line of communication can help businesses improve their Instagram algorithm, which is designed to show users content that is most relevant to their interests based on a variety of factors such as engagement, timeliness, and relationships. This means that if your small business can create content that resonates with your target audience and generates high levels of engagement, Instagram's algorithm will reward you with increased visibility and reach (Saima *et al.*, 2023, pp. 59-60).

Social media plays a crucial role in the development of small businesses, especially in the start-up phase. It helps to present products and ideas to the public, mostly for free, and is a great way to connect small businesses with consumers.

3.4. Creating courses for novice individual entrepreneurs from territorial communities on the basis of “Polytech-Consult” Consulting and Training Centre

The peculiarity of this education centre is as follows: many years of experience in the field of education; all the teachers who conduct workshops, courses and seminars have the highest qualifications, are fluent in their subject, have experience in practical work, teach the material of any complexity in an interesting and accessible way; modern approaches, technologies and methods, licensed software, modern computer classes, comfortable classrooms; classes are held in small groups, which allows you to pay proper attention to each student; attendees have the opportunity to get modern knowledge at the reasonable price; after completing the courses, a personal certificate is issued, which is a confirmation of an attendee's knowledge.

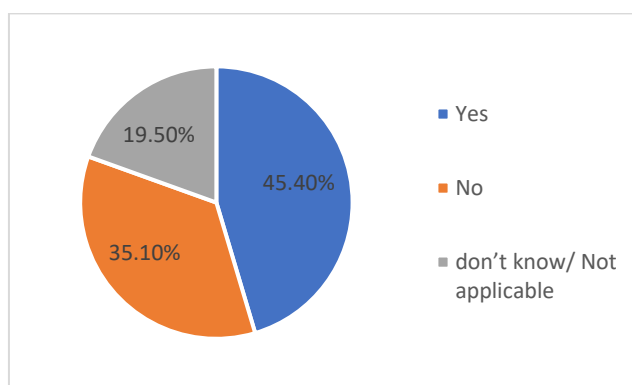
“Polytech-Consult” CTC also offers consulting services in the field of business creation and management. Its goal is to provide clients with the tools and methodology to create a successful and prosperous business. Only in the direction of the entrepreneurial activity activation in the Odesa region during its operation, the centre provided educational and consulting assistance to more than

2,000 trainees who wanted to master themselves in the field of entrepreneurial activity. More than 75% of them have become private entrepreneurs.

“Polytech-Consult” CTC gives the following services: provision of consulting services to novice entrepreneurs; business consulting for small and medium-sized businesses development; provision of organizational and other support at the initial stage of business formation; prospective business plans development; development of activity strategy, investment development plan, marketing plan for promotion of services in the markets; conducting open and corporate business workshops, and seminars

According to the results of our survey, 45.4% of respondents indicated that they need consulting assistance from business recovery specialists, while 19.5% of respondents were undecided (Figure 3).

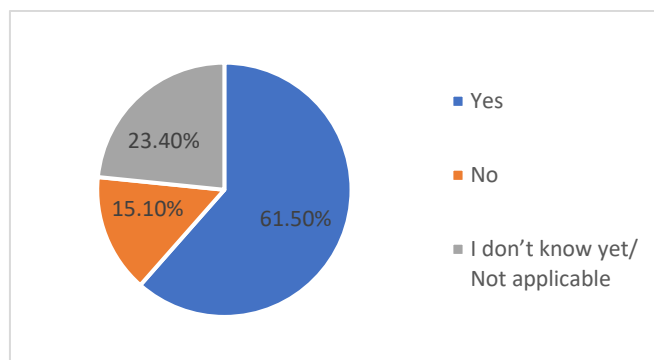
Figure 4. Consultancy assistance from business recovery specialists



Source: Balan *et al.* (2023)

61.5% of respondents indicated that they would like to undergo training to develop their entrepreneurial skills, while 23.4% were undecided (Figure 5) (Balan *et al.*, 2023).

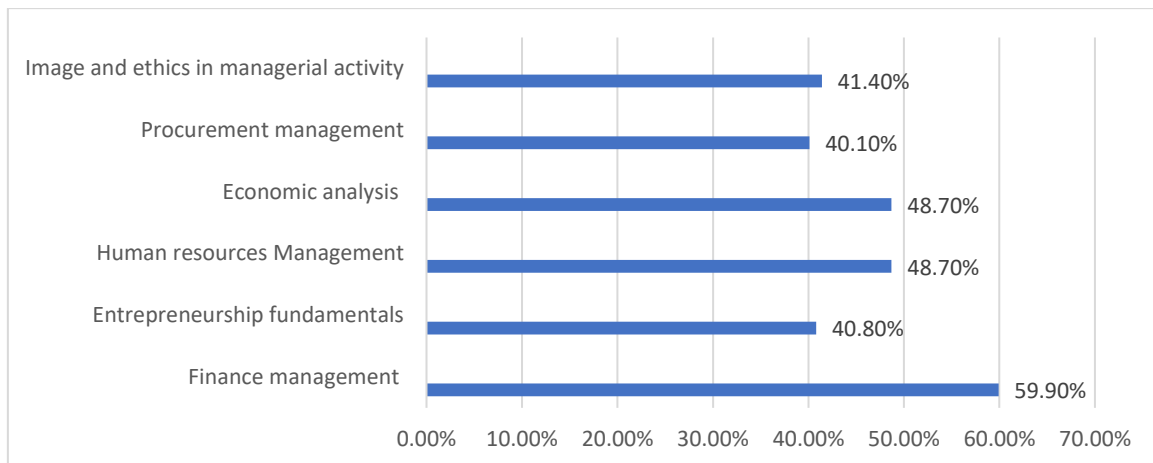
Figure 5. Training to improve entrepreneurial skills



Source: Balan *et al.* (2023)

Among the proposed topics, the respondents chose the most relevant ones: Finance management (59.9%); entrepreneurship fundamentals (40.8%); human resources management (48.7%); economic analysis (48.7%); procurement management (40.1%); image and ethics in managerial activity (41.4%) (Figure 6) (Balan *et al.*, 2023).

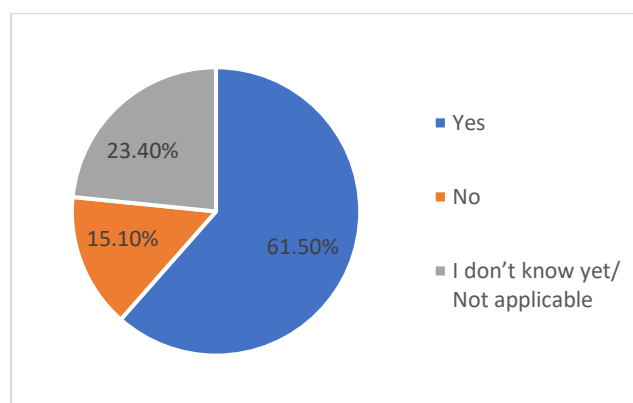
Figure 6. The most relevant topics



Source: Balan *et al.* (2023)

70.5% of the respondents believe that soft skills are essential for small businesses. 23.2% of respondents have not decided on the answer (Figure 7) (Balan *et al.*, 2023)..

Figure 7. Soft skill needs of small businesses

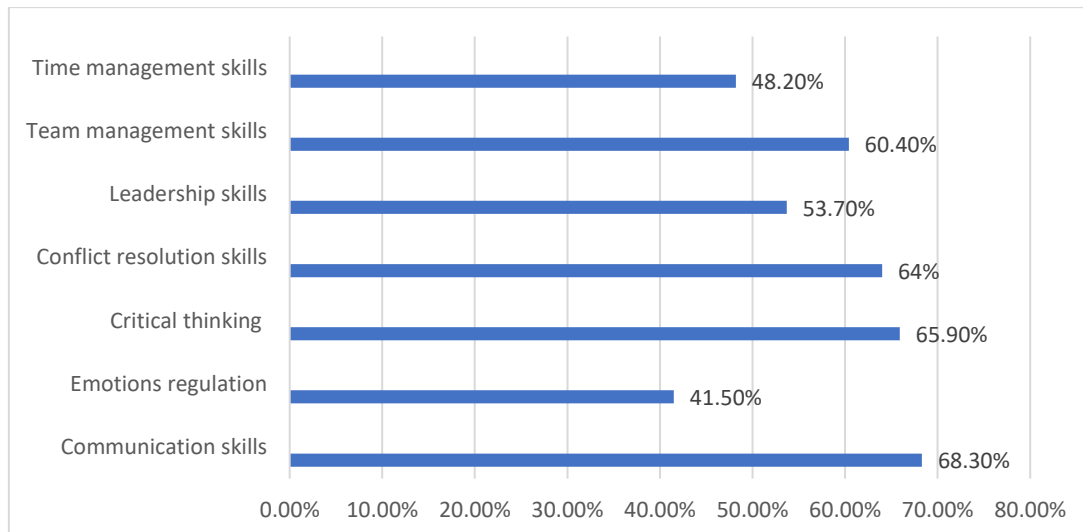


Source: Balan *et al.* (2023)

The respondents who indicated that soft skills are essential for small business development were asked to select the most relevant ones. Thus, respondents gave preference to the following soft skills: communication skills (68.3%); emotional regulation (41.5%); critical thinking (65.9%);

conflict resolution skills (64%); leadership skills (53.7%); team management skills (60.4%); and time management skills (48.2%) (Fig. 8) (Balan *et al.*, 2023).

Figure 8. Soft skills for entrepreneurs



Source: Balan *et al.* (2023)

As can be seen from Figure 8, among the soft skills, respondents preferred “communication skills” the most (68.3%), and “emotion management” the least (41.5%). Thus, the data shows that despite the war and other challenges, small businesses continue to grow.

Starting a small business in any field in the post-war period requires a thorough and structured approach based on technological innovation and methodology. When setting up an enterprise, a manager sometimes has to be a marketer, an accountant, a designer, a top manager, and a specialist in many other sectors of the economy (“Polytech-consult” CTC, n.d.). This approach will be especially relevant in the post-war period when people want to start their own small businesses. Topics that could be suitable for start-up entrepreneurs should focus on the basics of management, human resources, marketing, accounting, corporate finance, computer design, investment attraction, business etiquette, and business English. Thus, it is necessary to train a highly competitive specialist who will be able to start his own small business and be competitive even in the post-war period.

Conclusions

The military invasion of Ukraine by the Russian Federation on 24 February 2022 has dramatically changed the life of society. The invasion affected all spheres of life in our country. This has particularly affected small businesses in territorial communities as a component of the country's economy. Some

individual entrepreneurs had to close their businesses due to economic inexpediency. Other individual entrepreneurs had to relocate their businesses to safer communities or even abroad. But we can also observe a good trend of new businesses starting up in wartime. According to the Odendabot service, as of 30 March 2022, more than a thousand small businesses were opened every day.

As of September 2023, there were 465 thousand small businesses. The largest number of small businesses are located in Kyiv, Kyiv region, Odesa, Lviv, Kharkiv, Dnipro, Poltava regions, and the smallest number of small businesses are located in Zakarpattia, Volyn, Ternopil, Luhansk, Zaporizhzhia, Kherson, and Donetsk regions, as well as the Autonomous Republic of Crimea and Sevastopol.

It was determined that small businesses are currently opening in the following areas: retail trade, computer programming, personal services, wholesale trade, catering, transport, information services, education, wholesale and retail trade in cars.

The following ideas can be used for Ukraine's small businesses development in the post-war period: the interconnection of small businesses with e-government in improving their services; using artificial intelligence to gather, analyze customer data, which will allow small businesses to make informed decisions about their target audience and their preferences; creating a hub for individual entrepreneurs where they can exchange their ideas; on the basis of "Polytech-Consult" Consulting and Training Centre for Entrepreneurship and Innovation Activity create courses for novice individual entrepreneurs from territorial communities where they will be taught the aspects of business management, HR management, financial literacy, investment attraction, business etiquette, business English, accounting.

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References

- About the National Project Diia. Business* (no date), retrieved from <https://business.diia.gov.ua/en/about-project>.
- Abu-Shanab, E. and Osmani, M. (2019), E-Government as a tool for improving entrepreneurship, *International Journal of Electronic Government Research*, 15(1), pp. 36–46. <https://doi.org/10.4018/ijegr.2019010103>

- Balan, O., Garri, M., Shepel, M., Balan, A., Dobrianska, A., Bradul, K. (2023), *The mechanisms of small business development in the context of ensuring national security and Post-War restoration of territorial community of Ukraine: Analytical research*, UUT25, Odesa Polytechnic, University of Portsmouth, retrieved from <https://economics.net.ua/en/uut25>.
- Bezus, A.M. and Shafranova, K.V. (2016), Small entrepreneurship development in Ukraine, *KNUTD Bulletin of Economic Studies*, 3(99), pp. 7-17. <https://core.ac.uk/download/pdf/373098287.pdf>
- Burkinskiy, B.V. (2015), Role of small business in reforming region economic, *Economic Innovations*, 59, pp. 6-15, retrieved from <http://dspace.nbuv.gov.ua/bitstream/handle/123456789/81636/01-Burkinskiy.pdf?sequence=1>.
- Butenko, A. I. et al. (2015), *Strengthening the potential of small business in ensuring sustainable development of the Ukrainian Black Sea region: Monograph*. Odesa, Ukraine: State Organization "Institute of Market and Economic & Ecological Researches of the National Academy of Sciences of Ukraine".
- Bureau for Economic Research (2016), *The small, medium and micro enterprise sector of South Africa*, The Small Enterprise Development Agency, retrieved from <http://www.seda.org.za/Publications/Publications/The%20Small,%20Medium%20and%20Micro%20Enterprise%20Sector%20of%20South%20Africa%20Commissioned%20by%20Seda.pdf>
- Budania, P., Garvita, G., Lodha, G., Bhadauriya, S., Singh, B., and Rao, E. (2022), A comparison of artificial intelligence and robotics effects on business management and economics, *World Journal of Management and Economics*, [Preprint] https://www.researchgate.net/publication/366250735_A_COMPARISON_OF_ARTIFICIAL_INTELLIGENCE_AND_ROBOTICS_EFFECTS_ON_BUSINESS_MANAGEMENT_AND_ECONOMICS.
- Current state and needs of Ukrainian business during the full-scale war: main results of business survey in June* (2022), retrieved from <https://business.diia.gov.ua/en/cases/novini/stan-ta-potrebi-biznesu-v-umovah-vijni-rezultati-opituvanna>.
- Enterprises activity* (no date), retrieved from http://od.ukrstat.gov.ua/stat_info/pidpr/pidpr6.htm
- Entrepreneur Support Centers DIIA.Business* (no date), retrieved from <https://business.diia.gov.ua/en/hubs>
- Entrepreneurship and Export Promotion Office* (no date), <https://business.diia.gov.ua/en/eepo>.
- Holych, N.V. and Panukhnyk, O.V. (eds.) (2018), Small business in the territorial communities development system: external experience, *Proceedings of the VII International Scientific and Technical Conference of Young Scientists and Students. Actual problems of modern technologies*, Ternopil Ivan Puluj National Technical University, retrieved from

https://elartu.tntu.edu.ua/bitstream/lib/27636/2/VII_AZST_2018v3_Holych_N_V-Small_business_in_the_154-155.pdf.

- Gryga, V.Y., Bohdan, S. V., Isakova, N. B. (2014), Performance of innovation activity of small enterprises in the collaboration with large business, *Ekonomika i Prognozovanie*, 2, pp. 94-104. retrieved from http://www.irbis-nbu.gov.ua/cgi-bin/irbis_nbu/cgiirbis_64.exe?I21DBN=LINK&P21DBN=UJRN&Z21ID=&S21REF=10&S21CNR=20&S21STN=1&S21FMT=ASP_meta&C21COM=S&_S21P03=FILA=&_S21STR=econprog_2014_2_10.
- Ero, O. (2022), How does the country's small business feel? - Olena Ero / LIGA.Blogs, *LIGA*, 11 May, retrieved from <https://blog.liga.net/user/olenaero/article/44832>.
- Isachenko, D.A. (2009), *Small industrial enterprises in the transformational economy of the region: Monograph*. Odesa, Ukraine: State Organization "Institute of Market and Economic & Ecological Researches of the National Academy of Sciences of Ukraine".
- Politech-Consult CTC - Economic Scientific Portal* (no date), retrieved from <https://economics.net.ua/knc>.
- Kuklinova, T. (2023), Regarding the functions of small enterprises during the martial state, *Herald of Khmelnytskyi National University Economic Sciences*, 316 (2), pp. 172–174. <https://doi.org/10.31891/2307-5740-2023-316-2-27>
- Merrell, I., Phillipson, J., Gorton, M., Cowie, P. (2022), Enterprise hubs as a mechanism for local economic development in rural areas, *Journal of Rural Studies*, 93, pp. 81–91. <https://doi.org/10.1016/j.jrurstud.2022.05.016>.
- Mitsa, V. (2016), Role of small business in the economic and social development of communities. *Investytsiyyi: praktyka ta dosvid*, 15, pp. 23-27.
- Odesa Polytechnic National University (2023), *UUT25.Dynamic Capabilities building in Ukrainian SMEs for development and growth in the framework of post-war restoration of territorial communities of Ukraine*, retrieved from <https://op.edu.ua/en/international/projects/uk-ukraine-twinning-initiative-25>.
- Opendatabot (2023a), *7,820 companies moved within Ukraine since the beginning of the full-scale war*, 30 November. <https://opendatabot.ua/analytics/relocation-in-war-2>.
- Opendatabot (2023b), *Small Business Growth Persists in Ukraine Amid War with Russia*, 28 March, retrieved from <https://opendatabot.ua/analytics/fops-per-waryear>.
- Opendatabot (2022), *Almost 150 thousand brave businesses have opened since the Russian invasion*, 24 August, retrieved from <https://opendatabot.ua/analytics/brave-business-in-war>.

- Opendatabot (2023c), *Ukrainians set a record by opening a number of new small businesses during the ongoing war in September*, 11 October, retrieved from <https://opendatabot.ua/en/analytics/fop-records-september>.
- Opendatabot (2023d), *Record Number of Businesses Opened in Ukraine Despite Ongoing Conflict*, 10 July, retrieved from <https://opendatabot.ua/analytics/fop-record-2023>.
- Opendatabot (2023e), *Women start every second business in Ukraine*, 8 March, retrieved from <https://opendatabot.ua/analytics/businesswoman-in-war-2022>
- Portal of digital transformation of Ukraine (no date), *About E-Ukraine*, retrieved from <https://eukraine.org.ua/ua/pro-nas>.
- Saima, S., Parappagoudar, S., Hariharan, A., Setty, V. S., Jain, A. A., Jain, A., Jain, A. P., Jain, A. R. Banka, D. (2023), The Power of Instagram's Algorithm in Boosting the Visibility of Startups & Small Businesses, *International Journal of Engineering and Management Research*, 13(2), pp. 59–63. <https://doi.org/10.31033/ijemr.13.2.9>
- Sharma, P. (2020), Artificial intelligence, machine learning and data science as iterations of business automation for small businesses, *CSMFL Publications eBooks*, pp. 87–94. <https://doi.org/10.46679/isbn978819484834904>.
- Sharma, S. (2023), Implementing automation and AI in small businesses, *CSMFL Publications eBooks*, pp. 28–56. <https://doi.org/10.46679/978819573223403>.
- Schlögl, S., Postulka, C., Bernsteiner, R., Ploder, C. (2019), Artificial Intelligence Tool Penetration in Business: Adoption, Challenges and Fears, in: Uden, L., Ting, IH., Corchado, J. (eds.) *Knowledge Management in Organizations*, KMO 2019, Communications in Computer and Information Science, vol 1027, Springer, Cham. https://doi.org/10.1007/978-3-030-21451-7_22
- Shrilekha, J. and Kamila Sharmin, I. (no date), Strategies of social media marketing and its impact on small businesses, *Journal of Fundamental & Comparative Research*, VIII(1(XVIII)), pp. 171–178.
- Sira, M. (2022), Artificial intelligence and its application in business management, *Zeszyty Naukowe*, 2022(165), pp. 307–346. <https://doi.org/10.29119/1641-3466.2022.165.23>.
- Soga, B. and Vyas-Doorgapersad, S. (2022), The use of e-government services by small businesses in municipalities, *Eureka: Social and Humanities*, (6), pp. 92–104. <https://doi.org/10.21303/2504-5571.2022.002576>

- Thompson, D.V., Rust, R.T. and Rhoda, J. (2005), The business value of e-government for small firms, *International Journal of Service Industry Management*, 16(4), pp. 385–407. <https://doi.org/10.1108/09564230510614022>
- Vasylets, N. (2022), Chapter 1.8. Scientific approaches to the development of small business in the conditions of war, *Publications of the Research and Educational Innovation Center of Social Transformations*, pp. 110–121. <https://doi.org/10.54929/monograph-02-2022-01-08>
- Vyas-Doorgapersad, S. (2009), The application of e-Government for increased service delivery in South Africa, *The International Journal of Interdisciplinary Social Sciences*, 4(1), pp. 455–466. <https://doi.org/10.18848/1833-1882/cgp/v04i01/5282>
- Wild, P. (2020), The Importance of Global Business Hubs on Internationalizing SMEs: an empirical analysis of psychic and geographic distance, *Technology Innovation Management Review*, 10(4), pp. 35–47. <https://doi.org/10.22215/timreview/1345>