Women’s Small Businesses Development in the Post-War Period in Ukraine: Non-Conventional Industry Sectors

Oleksandr Balan  
dept. of Public Management and Administration,  
Institute of Economics and Management  
Odessa Polytechnic National University  
Odessa, Ukraine  
ORCID 0000-0001-6711-5687

Myropi Garri  
Faculty of Business & Law, School of Strategy, Marketing and Innovation  
University of Portsmouth  
Portsmouth, Great Britain  
ORCID 0000-0002-2462-0613

Maryna Shepel  
dep. of Public Management and Administration  
Institute of Economics and Management  
Odessa Polytechnic National University  
Odessa, Ukraine  
ORCID 0000-0001-6534-9797

Alla Balan  
dep. of Accounting Analysis and Audit,  
Institute of Economics and Management  
Odessa Polytechnic National University  
Odessa, Ukraine  
ORCID 0000-0002-2017-8813

Abstract — This article is dedicated to women’s small businesses development tools, in the post-war period in Ukraine, in atypical for women industries. The authors suggest using new approaches to the design of women’s small businesses in combination with business cooperation strategies, electronic governance by artificial intelligence in social networks because of the electrical engineering sector development on the basis of distributed production. It is proposed to create a hub for women entrepreneurs on the basis of the Department of Public Management and Administration, where they can exchange their ideas; to take courses for female aspiring entrepreneurs; to discuss their ideas with the leadership representatives of territorial communities.

Keywords— small businesses, women, the post-war period, Ukraine, electrical engineering, production

I. INTRODUCTION

The Russian Federation’s military invasion on the territory of democratic and independent Ukraine has drastically changed all areas of life. Many economic entities and institutions, which comprised the country’s livelihood, have suffered due to Russia’s military aggression. The invasion has also affected small businesses as a part of the country’s economic system. Many small businesses were closed due to the military aggression, others were transferred or changed their activity. However, we can also see a good tendency – from August 2022 to March 2023 the number of small businesses increased from 132 thousand to 202 thousand [1], [2]. According to Forbes Ukraine [31] in June 2023 31,477 small businesses were registered - a record number over the past three years, and from April 2022 to September 2023, 290,910 small businesses stopped their work. The growth of small and medium-sized businesses is breaking pre-war records. Another good tendency of Ukrainian economic development is that more and more women are re-registered and, as a result, a part of enterprises were not re-registered and, as a result, a part of the business is being reoriented to wives.

Today it’s difficult to predict how the small businesses managed by women will operate in the post-war period. Thus, the aim of this piece of research is to give recommendations and ideas for women’s small businesses development in the post-war period in Ukraine. The authors set themselves the following tasks: 1) to find out whether there are any differences in female and male entrepreneurship development; 2) whether an entrepreneur’s gender affects the choice of the industry sector in which he/she works; 3) what best practices and tools can be used for the women’s small entrepreneurship development in Ukraine in the post-war period.

II. WOMEN’S SMALL BUSINESSES DEVELOPMENT IN THE SCIENTIFIC DIMENSION

The issue of women’s small businesses development is comparatively new in the scientific literature. Both Ukrainian and foreign scholars dedicate their research papers to this problem. Their research papers are devoted to the barriers to women’s small business development, gender equality in business, women’s success in business, and women’s leadership in business.

Thus, K.A. Loscocco and J. Robinson [5] highlighted the four main barriers to women’s small business success in the United States: gender segregation in the small business sector, lack of business and managerial skills, lack of access to capital and government contracts, and family responsibilities.

J.S. Johnson [6] distinguished the following barriers to business development among Ukrainian business ladies: lack of support from the state, lack of independent funding, lack of qualified personnel, bureaucracy in state bodies, and lack of confidence in one’s own success.

entrepreneurs under the influence of culture or circumstances. S. Coleman [8] compared access to capital for men and women-owned small businesses. The author revealed that women-owned small companies are less likely to use external funding as a source of capital. It was also revealed that women-owned companies paid higher interest rates than men for their most recent loans.

Ukrainian scholars T. S. Kostyuchenko and T. O. Marseniuk [9] investigated women’s small businesses during the period of social transformations. The authors investigated the female respondents’ attitude to the gender characteristics of entrepreneurship in Ukrainian society; the structure and composition of personal women’s networks in small businesses in order to analyze the use of social capital and transformation of various types of connections at various stages of small business development.

O. M. Hurman [10] studied the gender aspect of leadership in small entrepreneurship in Ukraine. The author made the analysis of regional differences regarding the share of women and men in small businesses.

The analysis of industry and sectoral aspects of entrepreneurship by gender of owners is quite unpopular in modern literature. The authors [32] provide a limited analysis and a list of types of economic activity characterized by the predominance of women small businesses (Table 1).

### TABLE 1. TYPES OF ECONOMIC ACTIVITY CHARACTERISED BY THE PREDOMINANCE OF WOMEN AMONG SMALL BUSINESSES

<table>
<thead>
<tr>
<th>Type of activity (SIC class)</th>
<th>Total number of small businesses, thousand</th>
<th>Among women, thousand persons</th>
<th>Share of women IE, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services provision by hairdressers and beauty salons</td>
<td>58,65</td>
<td>55,13</td>
<td>94</td>
</tr>
<tr>
<td>Activities in the field of accounting and auditing; tax consulting</td>
<td>8,60</td>
<td>7,05</td>
<td>82</td>
</tr>
<tr>
<td>Repair of other household products and personal items</td>
<td>8,83</td>
<td>6,27</td>
<td>71</td>
</tr>
<tr>
<td>Tourist agencies activity</td>
<td>6,03</td>
<td>4,34</td>
<td>72</td>
</tr>
<tr>
<td>Other types of education, not classified in other groups</td>
<td>5,10</td>
<td>3,87</td>
<td>76</td>
</tr>
<tr>
<td>Other outerwear production</td>
<td>4,96</td>
<td>3,77</td>
<td>76</td>
</tr>
<tr>
<td>Other ready-meal delivery</td>
<td>4,95</td>
<td>3,21</td>
<td>65</td>
</tr>
<tr>
<td>Translation services provision</td>
<td>2,83</td>
<td>1,98</td>
<td>70</td>
</tr>
<tr>
<td>Other clothes and accessories production</td>
<td>2,38</td>
<td>1,85</td>
<td>78</td>
</tr>
<tr>
<td>Social assistance provision without guarantee of accommodation for the elderly and disabled</td>
<td>0,80</td>
<td>0,78</td>
<td>97</td>
</tr>
<tr>
<td>Pre-school education</td>
<td>0,61</td>
<td>0,55</td>
<td>91</td>
</tr>
<tr>
<td>Daycare for children</td>
<td>0,32</td>
<td>0,29</td>
<td>91</td>
</tr>
<tr>
<td>Primary education</td>
<td>0,04</td>
<td>0,03</td>
<td>87</td>
</tr>
</tbody>
</table>

The COVID-19 pandemic served as a lever for new research in the field of women’s small businesses development.


Nowadays Ukrainian scholars dedicate their studies to small business development in the conditions of Russia’s military full-scale invasion. Thus, T. Y. Kovytn [14] investigated the peculiarities of state financial support for business sustainability and recovery during wartime. I. Yu. Kramar and V. M. Potiuk [15] studied personnel potential preservation as a component of domestic enterprises’ economic security during the marital state period. I. Ye. Semencha and S. O. Hordienko [16] devoted their study to a business strategy formulation taking into account the conditions of Ukraine’s military economy.

### III. WOMEN’S SMALL BUSINESSES DEVELOPMENT DURING THE FULL-SCALE INVASION

The public organization Ukrainian Centre for Promotion of Investments and Development conducted the research “The Portrait of Ukrainian Women – Entrepreneurs” in 2022 and presented the following results.

As of October 2022, 55% of women entrepreneurs continued their activity, although they didn’t decide on future prospects, 23 % evaluated their state as “remained afloat” and only 6% completely stopped their activity. Table 2 shows the main victories/achievements as of October 2022 [17].

### TABLE 2. THE MAIN VICTORIES/ACHIEVEMENTS AS OF OCTOBER 2022

<table>
<thead>
<tr>
<th>Main victories/achievements</th>
<th>Results, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptation to the war conditions</td>
<td>60%</td>
</tr>
<tr>
<td>Increase in the customer database</td>
<td>13%</td>
</tr>
<tr>
<td>Increase in profit</td>
<td>7%</td>
</tr>
<tr>
<td>Expanding the product range</td>
<td>2%</td>
</tr>
<tr>
<td>Opening branch offices</td>
<td>2%</td>
</tr>
<tr>
<td>Opening new direction of activity</td>
<td>2%</td>
</tr>
<tr>
<td>Expanding the staff</td>
<td>2%</td>
</tr>
<tr>
<td>Attracting grant funding</td>
<td>2%</td>
</tr>
</tbody>
</table>

69 % of women entrepreneurs were sure that there was no difference between male and female-owned businesses. The women attributed a socially responsible approach, work-life balance, multitasking, and the ability to make balanced decisions to the merits of their activity.

Among barriers to women’s entrepreneurship, they highlighted resources for development including financial (31%), sustainability in the country (12%), experience and knowledge (7%), time (5%), informational support (2%), partners in the direction of scaling up of activities (1%), and qualified personnel (1%).

The following aims of women’s small businesses were highlighted: scaling (33 %), increase in the customer database (15%), increase in profit (25%), investment attraction (13%), and franchise (10%) [17].

In 2023, every second new small business is opened by a woman. A total of 36,892 small businesses have been registered since the beginning of the year, of which 51% or 18,776 were created by women.
As of March 2023, a total of 36,892 small businesses have already been registered since the beginning of 2023, of which 51% or 18,776 were created by women. The share of women who start small businesses has been growing since 2017. Female entrepreneurs opened 51% of new businesses in 2020 – 2021, but the full-scale invasion has slightly pushed this indicator back. In total, during 2022, women registered more than 93 thousand small businesses and it is 48% of the total number of new small businesses. The dynamics of small business registration launched by men and women in the period from 2017 to 2023 is shown in Table 3 [18].

Table 3. The Dynamics of Small Business Registration Among Men and Women

<table>
<thead>
<tr>
<th>Year</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>102,119</td>
<td>114,447</td>
</tr>
<tr>
<td>2018</td>
<td>173,498</td>
<td>168,803</td>
</tr>
<tr>
<td>2019</td>
<td>166,944</td>
<td>169,769</td>
</tr>
<tr>
<td>2020</td>
<td>148,161</td>
<td>142,478</td>
</tr>
<tr>
<td>2021</td>
<td>146,521</td>
<td>139,490</td>
</tr>
<tr>
<td>2022</td>
<td>92,964</td>
<td>100,695</td>
</tr>
<tr>
<td>2023</td>
<td>18,776</td>
<td>18,116</td>
</tr>
</tbody>
</table>

So data on the number of registered small businesses by men and women in Ukraine also indicate the relative parity of business openings by men and women (with a deviation of 1-2% in business ownership in different years by men or women). But these data do not take into account the outflow of male businessmen to the war, and as a result, the reorientation of part of their business to their wives.

A third of new small businesses registered by women belong to retail, almost twice as many as men in this category. 10,658 entrepreneurs started their own businesses in the IT area, which takes second place in the number of registrations. Instead, it is only 34% of the total number of small businesses in this category.

In 2022, women took advantage of men in other individual services provision (85% of new businesses are women’s), clothing production, education and HR (75%), social assistance (74%), and health care (72%), etc. On the other hand, the situation with women at the helm of companies is not so positive. Year by year, the number of female directors of medium and large businesses is decreasing. In 2021, only 35% of businesses were headed by women. A year of full-scale Russian invasion reduced their numbers to 29%. In total, 9,405 women-led companies were opened last year. In 2023, an upward trend has emerged. Since the beginning of the year, 3,849 new companies have been opened, and women lead 30% of new companies [18].

In our opinion, the post-war development of women’s small businesses in Ukraine should not be limited to certain types of activities, and therefore IT technologies, electronics, electromechanics, and electrical engineering will be of priority. The difference in conducting business will consist in the personal characteristics of the individual, women and men’s psychological differences. If before the war, a woman entrepreneur aimed to focus on services, trade, child development, and education, now the country is covered by a boom in drones and weapons construction.

Currently, enterprises for producing electric motors, control boards, 3D printing of parts, and REW rifles are opening in every city. The volunteer centre of a well-known female volunteer received a state license for the production and sale of weapons. According to the survey results, the listed directions are appropriate and interesting for modern women entrepreneurs. The presence of mentors, engineers and modern communication allows you to master the technologies of assembling individual elements of electronic equipment on the basis of distributed production.

The described above ways for small businesses development can be used by both men and women. But at the same time, we believe that today Ukrainian women need support, especially IDPs, those who have lost their jobs, and those who want to start a new business.

IV. The Ideas for Women’s Small Businesses Development in Ukraine in the Period of the Post-War Recovery

For the women’s small businesses development in the war and post-war period, modern women have access to any technologies, sectors, and equipment. For example, in Ukraine, a woman entrepreneur can purchase mandrels for repairing and rewinding single-phase and three-phase electric motors from 0.1 to 45 kW. For these purposes, a wide selection of different sets and configurations of mandrels with the same or different size sections is presented. In the same way, for producing the control boards, 3D printing of parts, REW equipment, entrepreneurs first of all need knowledge of business processes.

A woman entrepreneur like no other needs counseling on issues of using the strategy of business cooperation, and distributed production. Business protection will be possible with the wide implementation of e-government. Product promotion is possible with the artificial intelligence introduction in social networks.

The proposed ideas implementation is possible due to the creation of a hub for women entrepreneurs on the basis of the Department of Public Management and Administration, where they can exchange their ideas; to take courses for female aspiring entrepreneurs; to discuss their ideas with the leadership representatives of territorial communities.

For this reason, the Department of Public Management and Administration, Odessa Polytechnic National University is developing a project to create the hub for female entrepreneurs, where they can exchange their ideas. This idea is implemented thanks to the Twinning R&I programme in Great Britain and Ukraine (twinningukraine.com) "Mechanisms of small business development in the context of ensuring national security and post-war restoration of territorial communities of Ukraine".

Let’s consider these ideas in more detail.

Effective e-government implementation could play a particularly significant role in making it easier for SMMEs to access and utilize business registration and licensing systems, as it holds within it the possibility of easing the time, costs, and process elements, associated
with the business regulation challenges, currently faced by SMMEs [19]. Entrepreneurship is one of the areas that benefit from e-government in two directions: the open information concept, and infrastructure and services [20, p.38].

D. Viana Thompson, R. T. Rust, and J. Rhoda [21] state that e-government can potentially broaden the markets whilst government websites provide information related to possible income prospects, together with posting of commercial enterprise leads, sub-contracting listings, the buyers’ network, and so on, help firms to search for revenue prospects to improve their businesses.

In Ukraine, e-government is implemented by the Ministry of Digital Transformation, which developed the Diia App. In 2020 they launched a full-scale national project for the development of entrepreneurship and export Diia.Business. Since May 2021 the project has been realized by the Ministry of Digital Transformation together with Entrepreneurship and Export Promotion Office [22], a government institution responsible for developing and supporting Ukrainian entrepreneurship on domestic and international markets.

Diia Business has also created a special page for women entrepreneurs where they can get information on the ideas how to start their business, educational programmes for women entrepreneurs via online courses, about the portrait of a woman entrepreneur, and programmes for supporting women’s business [23].

Thus, women’s small businesses can interconnect with e-government in order to improve their services and get governmental support.

Another important point for small businesses development is to create a special international hub platform where young and entrepreneurs can exchange their ideas. P. Wild [24, p. 43] states that the importance of global business hubs for such SMEs is actually rising as internationalizing SMEs’ burden of mediating intercultural differences and managing tangible and intangible resources across geographic distances and time zone remains, despite the borderless characteristic of international business network.

Therefore, the creation of a hub for women entrepreneurs at the local, national and global levels can help future women entrepreneurs stay abreast of trends in the global market and network with experienced women entrepreneurs around the world, transfer technology and train staff to enter non-traditional for women entrepreneurs sectors of industry (for example, electrical engineering, electrical installation, electromechanics).

The data received within framework of our grant research show that 42.6% of entrepreneurs think that logistics hubs will help business development in their communities, 21.3% think that it will make no sense, the other 36.1% hesitate. For greater visibility we present the data in Figure 1.

It will be also a good idea to create special hubs at universities for female students where they would be able to try to open their small start-ups as part of their future small businesses with the support of the university administration, professors, and stakeholders.

Another urgent point in women’s small businesses development in the post-war period is applying artificial intelligence and social media for gathering and analyzing customer data in order to work with the target audience and adhere to its needs.

Automation and AI can improve the efficiency and productivity of small businesses. Identifying areas for automation and assessing business readiness are key factors to success. This involves looking at the technical, organizational, and financial aspects of business and making a plan for how to put automation systems in place. Small businesses can achieve success by adopting a structured and comprehensive approach to automation and AI systems and reaping the benefits of increased efficiency and competitiveness [25].

Companies recognize the competitive advantage AI may attribute to their value chains, in particular when it comes to automation and increased process efficiency [26].

Nowadays AI is revolutionizing the way businesses approach marketing, taking into account new insights and opportunities for growth. Through AI-powered marketing intelligence tools, businesses can automate their marketing efforts, freeing up valuable time and resources for more strategic activities. Moreover, AI-powered marketing intelligence can help businesses to stay ahead of the competition by delivering real-time insights into market trends and consumer behaviour. AI-powered marketing intelligence will play an increasingly important role in the success of businesses across industries [27]. AI–powered marketing intelligence can be also used in small businesses development and management either by women or men.

Social media can be called a part of AI. They can help small businesses to collect data and information from consumers. There are several aspects of using social media in business development that should be taken into account by women entrepreneurs. For one thing, social media allow small businesses and customers to connect in ways that were impossible in the past. This connectivity is made possible through a variety of “platforms: social networking (Facebook, LinkedIn, Google+); Microblogging (Twitter, Tumblr); photo sharing (Instagram, Snapchat, Pinterest); video sharing (YouTube, Facebook Live, etc.)” Secondly, the way customers and businesses interact and influence each other has changed. Such activities as sharing, analysis, debate, and discussions rely on communication and interaction.
Thirdly, the explosion of social media has enabled businesses to improve customer relationship management and business decisions. Thus, once used and exploited to their best value, social media can contribute to shaping brand identity, brand image, and company performance in today's marketing competition [28].

ChatGPT AI is now entering all the areas. ChatGPT AI is transforming business operations and enhancing customer experience in customer service, e-commerce, healthcare, finance, marketing, and developer business sectors. The negative effect of chat ChatGPT is lack of human interaction and human touch [29].

Social media can play a crucial role in small businesses development, especially at the stage of start-up. They help to present products, services and ideas to the public mainly for free and they are a significant interaction between small businesses and consumers.

According to the data of our research within the grant (which also includes men) 52.5% of respondents would like to take courses on entrepreneurship skills development, and 31.1% hesitate. For greater visibility, we present the data in Figure 2.

![Figure 2: The necessity for entrepreneurship courses](image)

The most important topics according to the pole were: finance management (56.1%), entrepreneurship basics (22%), human resources management (46.3%), economic analysis (53.7%), procurement management (19.5%), image and ethics in managerial activity (51.2%). For greater visibility, we present the data in Figure 3.

![Figure 3: Topics for entrepreneurship courses](image)

Thus, one more important aspect for women’s small businesses development can be creating special courses for aspiring women individual entrepreneurs from territorial communities on the basis of “Polytech-Consult” Consulting and Training Centre for Entrepreneurship and Innovation Activity [30].

“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 activity, 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.

In our opinion, it is necessary to use a careful and structured approach based on technological innovations and methodology in creating women’s small businesses in any area in the post-war period. And especially such an approach will be applicable in the post-war period when one wants (in our case a woman) to create one’s own small business. Topics that could be suitable for novice entrepreneurs should be devoted to the importance of female-owned small businesses launching in the Ukrainian territorial communities, basics of management, HR management, marketing, accounting, corporate finance, basics of computer design, investment attraction, Business English, business etiquette, and conflict management. Thus, it is necessary to develop a highly competitive women professional who will be able to launch her own small business and be competitive in the post-war period.

The described above ways for small businesses development can be used both by men and women. But at the same time, we consider it necessary to focus on women’s small businesses development since a sufficient part of the business has now passed under women’s control. This will encourage and support Ukrainian women.

V. CONCLUSIONS

Women’s small businesses can become a lever for the post-war recovery of the Ukrainian economy. In the women's small businesses development, such aims as scaling, increasing the client base, increasing profits, attracting investments, and franchising were highlighted.

The women’s small businesses development in the post-war period has no industry restrictions, provided that there is mentoring and technological support. Using new approaches to the design of women’s small businesses on the basis of distributed production in combination with business cooperation strategies will allow us to move into a new, low-competitive niche of electrical engineering.

The innovative educational hubs creation for individual consultations of women entrepreneurs, where they can exchange their ideas, and get acquainted with technological processes of electrical engineering precisely on the basis of polytechnic institutions, will allow to support and develop such enterprises.

ACKNOWLEDGMENT

This project was made possible through the UK-Ukraine R&I twinning grants scheme, funded by Research England with the support of Universities UK International and UK Research and Innovation.

REFERENCES


[2] “Almost 150,000 brave businesses have opened since the invasion
“Every second small business in Ukraine is started by women.”


