

Participation of Women and Men in Entrepreneurship in Various Countries

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Abstract

Purpose: The paper is devoted to the actual problem of the existing differences in women's and men's entrepreneurship. The aim of the research is to assess the prevailing levels of women's and men's participation in entrepreneurial activity in modern national economies.

Methodology: The study dealt with the problem of determining indicator values characterizing the early stage of entrepreneurship; mature (sustainable) entrepreneurship, as well as quitting business activities. The results of the surveys conducted in 59 countries throughout the Global Entrepreneurship Monitor Project were used as initial information.

Findings: In the course of the research, nine indicators characterizing such stages as start-up and sustainable entrepreneurship along with the cessation of this activity were examined. The study developed the functions that show the distribution of the indicators in 59 countries describing women's and men's proportions at three main stages of entrepreneurship.

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Research limitations: The study had limitations on empirical data due to the fact that only 59 countries were considered.

Originality: The attained results have indicated that there is a gender gap among the indicators of entrepreneurship in most countries, which means that women participate in it to a smaller extent than men. The methodological approach to assessing gender differences in entrepreneurship presented in the article can be applied in further research.

Keywords: stages of entrepreneurship, entrepreneurs, women, men, gender differences.

JEL: L26, C31, M20

Przedsiębiorczość kobiet i mężczyzn w różnych krajach

Streszczenie

Cel: ocena dominujących poziomów udziału kobiet i mężczyzn w działalności przedsiębiorczej we współczesnych gospodarkach narodowych.

Metodologia: w artykule poruszono problem wyznaczenia wartości wskaźników charakteryzujących wczesny etap przedsiębiorczości; dojrzałą przedsiębiorczość, a także etap rezygnacji z działalności gospodarczej. Jako wstępne informacje wykorzystano wyniki ankiet przeprowadzonych w 59 krajach w ramach projektu Global Entrepreneurship Monitor.

Wnioski: w trakcie badań przeanalizowano dziewięć wskaźników charakteryzujących takie etapy, jak start-up i dojrzała przedsiębiorczość oraz zaprzestanie działalności. W badaniu opracowano funkcje, które ukazują rozkład wskaźników w 59 krajach, opisujących proporcje kobiet i mężczyzn na trzech głównych etapach przedsiębiorczości.

Ograniczenia badawcze: ograniczenia badania dotyczą danych empirycznych, ponieważ uwzględniono jedynie 59 krajów.

Oryginalność: uzyskane wyniki wskazują, że wśród wskaźników przedsiębiorczości w większości krajów występuje luka międzypłciowa, co oznacza, że kobiety prowadzą działalność gospodarczą w mniejszym stopniu niż mężczyźni. Przedstawione w artykule podejście metodologiczne do oceny różnic między płaciami w zakresie przedsiębiorczości może znaleźć zastosowanie w dalszych badaniach.

Słowa kluczowe: etapy przedsiębiorczości, przedsiębiorcy, kobiety, mężczyźni, różnice między płaciami.

1. Introduction

Nowadays, entrepreneurship is one of the most important sectors of economy in most modern countries. It is entrepreneurs who own about 93% of non-financial companies in the European Union and other economically developed countries, they employ about one half of workforce (Kraemer-Eis, Lang, Torfs, & Gvetadze, 2017). In Austria, China, France, Germany, Indonesia, Italy, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Turkey, the United Kingdom, the USA, entrepreneurs create more than 50% of GDP, and in Egypt and Greece, respectively, 80% and 75% of GDP (Meyer & Meyer, 2019). Starting new businesses increases the efficiency of national economies, strengthens market competition, fosters economic growth, increases the level of employment and creates stability (Decker,

Haltiwanger, Jarmin, & Miranda, 2014; Simon-Moya, Revuelto-Taboada, & Ribeiro-Soriano, 2016). Business initiative is a vital element for determining competitiveness of economy (Tomovska Misoska, Dimitrova, & Mrsik, 2016). Entrepreneurs play an essential role in promoting technological progress and innovations in modern countries (Zygmunt, 2017; Kegel, 2019). The importance of entrepreneurs notably increases in the times of economic crises since small and medium-sized businesses can adapt to changes in the market environment in a better way (Aceytuno, Sánchez-López, & de Paz-Báñez, 2020). Entrepreneurs fulfill not only commercial, but also social tasks; in the interests of the common good, they strive to improve society, contribute to meeting the needs for goods and services and to the well-being of their societies (De Ruyscher et al., 2017; Brieger & De Clercq, 2019; Hörisch, Kollat, & Brieger, 2019). Considering the above, institutional conditions have now been created in most countries to ensure the development of the business sector of economies (Liebregts & Stam, 2019).

Taking this into consideration, a recent problem for most developed and developing economies is to heighten public interest in this activity, support entrepreneurs and provide all-round support to people who start their own businesses or who are self-employed.

Our study was devoted to the problem of participation of people in the creation of their own businesses. Entrepreneurship is a dynamic process in which individuals start, carry out this activity, and also stop participating in it. The study of the entrepreneurial process is important from both theoretical and practical points of view. It provides vital information on the operation of the business sector at national and regional levels. Our study responds to calls to assess the proportion of entrepreneurs in the total number of adults (from 18 to 64 years old) who participate in entrepreneurship at different stages of this activity, which are formulated in the articles (Patzelt, Preller, & Breugst, 2021; Lu & Wang, 2018). The main stages of entrepreneurship, according to researchers, are the start of a business, sustainable entrepreneurship and the exit of entrepreneurs from this activity.

In the twenty-first century, the role of women in the business sector has increased (Ambepitiya, 2016; Adachi & Hisada, 2017), especially in the service sector. Women create their own businesses with a view to great achievements in their personal and professional lives. As scientific publications show (Stefan et al., 2021; Sajjad et al., 2020), women's entrepreneurship has a significant impact on the development of economies in developed and developing countries. In view of the growing role of gender studies in entrepreneurship (Gill, 2018; Carlianne, Stephens, & Weinstein, 2016), this article focuses on the analysis of the existing differences in women's and men's entrepreneurial activity. It should be noted that in the previous scientific studies, the problem of gender differences at various stages of entrepreneurship was not paid much attention to.

The purpose of our research is to assess the participation of women and men in entrepreneurship in different countries. The study dealt with the problem of determining indicator values characterizing the early stage of entrepreneurship, sustainable entrepreneurship, as well as quitting the business.

2. Literature Review

The analysis of the results of the scientific research made it possible to single out three main stages of entrepreneurship. At the first stage, as shown in scientific research (Nowiński & Haddoud, 2019; Dileo & Losurdo, 2016), there are people who started business activities. They create their own business and have been doing it for less than three and a half years. The features of the first stage of entrepreneurship are described in the following publications (Korent, Vukovic, & Brcic, 2015; Lee & Kim, 2019; Pete, Nagy, Matiu, Gyorfy, Benyovszki, & Petru, 2011). At this stage, entrepreneurs seek to gain recognition of their goods or services in the market. Aspiring entrepreneurs face a very high level of risk in their activities. In case of overcoming the problems that have arisen, entrepreneurs manage to increase their production capacities, and ensure the receipt of operating profit and the accumulation of capital necessary for the development of the established business.

The second stage corresponds to mature (sustainable) entrepreneurship (Espinoza et al., 2019; Markman, Russo, Lumpkin, Jennings, & Mair, 2016; Muñoz & Cohen, 2017; Yang, Deng, & Chen, 2014). Sustainable entrepreneurs are characterized by a high level of management, the introduction of technological innovations, the effectiveness of management decisions, and the expansion of exports of their products (Dinopoulos & Unel, 2017; Görg, & Hanley, 2017; Mohavedi, Shahbazi, & Gaussens, 2017). According to the authors of the articles (Bayarçelika & Özşahin, 2014; Lawal et al., 2018), it is most developed in countries with a favorable business environment created by the joint efforts of governments and public organizations.

Quitting the business is associated with the third stage, i.e. the cessation of business activities (Cardon, Stevens, & Potter, 2011; Cefis & Marsili, 2011). In an article, Jansen (2020) studied the exit of entrepreneurs from their business by selling it, that is, receiving money. The sale of a business is especially relevant for entrepreneurs who want to minimize their risk in the future. The sale of a business allows an entrepreneur to turn the costs of his or her labor and intelligence into specific income (Wennberg & De Tienne, 2014). In one paper (Marjanski & Sulkowski, 2019), such a variant of entrepreneurs' exit from their business as transferring it to family members (often children) is investigated. Both the sale of their business and the transfer to family members are associated with the so-called positive

reasons for the termination of entrepreneurs' activities. The retirement of entrepreneurs can also be attributed to this option, as indicated in a study (Morris, Soleimanof, & White, 2020). At the same time, there is a significant number of entrepreneurs who leave their business for negative reasons. These reasons are divided into external and internal. External causes ensue from global and local crisis phenomena in economies, changes in the institutional sphere, as well as problems in the markets where entrepreneurs sell their goods and services (Koladkiewicz & Wojtyra, 2016). The main internal reasons for the exit of entrepreneurs from their business, according to researchers, are the difficulties of implementing the set goals, difficulties in managing production processes, lack of financial resources, as well as low production efficiency (Ucbasaran et al., 2012).

3. Methodology and Design

The research included five stages. At the first stage, initial data describing the proportion of women and men belonging to three main entrepreneurial stages indicated earlier in the overall number of the corresponding population's strata in different countries were collected. At the second stage, the indicator values characterizing the levels of three stages of entrepreneurship prevailing in national economies and existing gender differences were assessed. At the third stage, we determined the average indicator values for the countries under consideration and the ranges in which the values of these indicators are located. At the fourth stage, a comparative analysis was carried out, the countries with high and low values of indicators characterizing start-up entrepreneurs, sustainable entrepreneurs and entrepreneurs who stopped entrepreneurial activities were identified.

As the initial information, the study used the results of a survey of the economically active population (adults aged 18–64), conducted in 59 countries during the implementation of the Global Entrepreneurship Monitoring Project (2019). In total, almost 140 thousand people were interviewed, and at least two thousand respondents answered in each of the countries. The list of these countries is below: Angola, Argentina, Australia, Austria, Bosnia & Herzegovina, Brazil, Bulgaria, Canada, Chile, China, Colombia, Croatia, Cyprus, Ecuador, Egypt, Estonia, France, Germany, Greece, Guatemala, India, Indonesia, Iran, Ireland, Israel, Italy, Japan, Kazakhstan, the Republic of Korea, Latvia, Lebanon, Luxembourg, Madagascar, Malaysia, Mexico, Morocco, the Netherlands, Panama, Peru, Poland, Puerto Rico, Qatar, the Russian Federation, Saudi Arabia, the Slovak Republic, Slovenia, South Africa, Spain, Sudan, Sweden, Switzerland, Taiwan, Thailand, Turkey, the United Arab Emirates, the United Kingdom, the United States, Uruguay, Vietnam. The surveys of adult population of these countries made it possible to identify three groups of people directly connected with the phenomenon

of entrepreneurship. The first group included people who were start-up entrepreneurs, i.e. they had been running their own businesses for less than three and a half years. The second group consisted of people who were sustainable entrepreneurs, i.e. they owned enterprises that had been operating for three and a half years or more. The third group included people who had stopped entrepreneurial activity during 2018, i.e. people who had quitted their businesses.

Our study examined nine indicators characterizing women's and men's entrepreneurship as well as the corresponding gender differences in 59 countries in 2018:

- the proportion of women who started business activities in the number of adult women population (indicator 1);
- the proportion of men who started business activities in the number of adult men population (indicator 2);
- the indicator values ratio characterizing women and men who started business activities (indicator 3);
- the proportion of women who were sustainable entrepreneurs in the number of adult women population (indicator 4);
- the proportion of men who were sustainable entrepreneurs in the number of adult men population (indicator 5);
- the indicator values ratio describing women's and men's sustainable entrepreneurship (indicator 6);
- the proportion of women who exited their business in the number of adult women population (indicator 7);
- the proportion of men who exited their business in the number of adult men population (indicator 8);
- the indicator values ratio describing the participation of women and men who exited their business (indicator 9).

The first three indicators correspond to the first group of people given above, indicators from four to six – to the second group of people, and indicators from seven to the nine – to the third group.

The scientific research carried out earlier allowed us to formulate three hypotheses that were tested in our work. In a number of scientific publications devoted to the gender aspects of the initial stage of entrepreneurship, conclusions are drawn that in most countries men are more likely to create new businesses than women. The presence of such gender disparities is shown, for example, in the papers by Bastian, Metcalfe and Zali (2019), Olarewaju and Fernando (2020) and OECD (2016). Based on this, we formulate the first hypothesis: hypothesis 1 – in most countries, there are gender disparities (gender gaps) in the start-up stage entrepreneurship, that is, women rarely open their own businesses in comparison with men. In recent years, women, according to the authors of the articles (Vracheva & Stoyneva, 2020; Ilie et al., 2021; Bezerra de Mello et al., 2019) began to increase their entrepreneurial activity and reduce the gender gap in creating

their own businesses. This allowed us to propose a second hypothesis: hypothesis 2 – in recent years, there has been an increase in the proportion of women entrepreneurs in the number of adult women population. That is, the ratio of women and men among new entrepreneurs is greater than the same ratio for mature entrepreneurs. As studies show (Cordero & Urbano, 2020; Dilli & Westerhuis, 2018), the national institutional context has a significant impact on the current level of entrepreneurship. Similar conclusions about the presence of country differences characteristic of male and female entrepreneurship are given in the works by Almodóvar-González et al. (2020) and Lewellyn and Muller-Kahle (2016). Thus, it can be assumed that there is significant differentiation in entrepreneurial activity in different countries. This allows us to formulate a third hypothesis: hypothesis 3 – indicators characterizing entrepreneurial activity of women and men have significant differentiation by country.

The estimation of the values of nine indicators under consideration was based on the economic and mathematical modeling of the initial empirical data. As models, we used the density functions of the normal distribution, the method of development of which for estimating the values of specific indicators was proposed in the papers by Pinkovetskaia et al. (2021) and Pinkovetskaia and Slepova (2018). This paper shows some aspects of the use of the technique. Note that in the process of developing the functions, the initial empirical data were grouped according to the ranges of changes in the values of the indicators. These data groups can be geometrically represented as corresponding histograms. Data approximation using normal distribution functions was performed using generally accepted statistical methods. It is important to note that the average value of the considered indicators, as well as their standard deviations for the density functions of the normal distribution, were displayed in the formulas of the developed functions themselves. Therefore, having constructed a specific function, we get the specified parameters of the considered indicators without additional calculations.

To assess the quality of achieved functions, i.e. the level of approximation of empirical data, we used the well-known and well-established Pearson, Kolmogorov-Smirnov, and Shapiro-Wilk statistic tests. Principles of using these tests are given in the scientific literature (Afeez et al., 2018; Rahman & Wu, 2013). The Pearson test is based on grouped data (reflected in the histogram) and allows you to compare the empirical distribution describing specifics indicators of sets of entrepreneurs in countries with the corresponding distribution density function. The Kolmogorov-Smirnov test is based on determining the amount of accumulated discrepancies between two distributions. If the differences between them are not significant and do not reach a critical value, then this is the basis for recognizing a high quality of the approximation. The Shapiro-Wilk quality criterion is used to test the distribution of empirical data that characterize the indicators of sets

of entrepreneurs according to the normal distribution law. In contrast to the Pearson and Kolmogorov-Smirnov criteria mentioned above, it is assumed that the values of the distribution characteristics are not known in advance. The tests of empirical data on the above three alternatives are based on different principles and use different methods. Given this, a comprehensive approach that uses simultaneous consideration of the density functions of the normal distribution according to these three tests can assess the quality of these functions with a high degree of reliability.

The obtained functions allowed us to determine the average values of each of nine indicators for the countries under consideration, as well as the ranges of their variation that are typical for most countries. In addition, the study identified countries in which the indicators under consideration have values higher than the upper and lower than the lower limits of the ranges. The boundaries of the indicator ranges for 68% of the countries were determined based on the average values of the indicators and the corresponding standard deviations. The lower bound of the interval is equal to the difference between the mean and the standard deviation, and the upper bound is equal to their sum.

4. Results of Computing Experiment

In the course of the computing experiment, the economic and mathematical modeling was carried out in reliance on empirical data. The models that describe the distributions of nine indicators across all 59 countries are shown below:

The proportion of women who started business activities in the number of adult women population, %

$$y_1(x_1) = \frac{126.43}{2.85 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_1 - 4.34)^2}{2 \times 2.85 \times 8.85}}; \quad (1)$$

– the proportion of men who started business activities in the overall number of adult men population, %

$$y_2(x_2) = \frac{147.50}{3.35 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_2 - 6.12)^2}{2 \times 3.35 \times 3.35}}; \quad (2)$$

– the indicator values ratio of women and men who started business activities

$$y_3(x_3) = \frac{14.32}{0.29 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_3 - 0.73)^2}{2 \times 0.29 \times 0.29}}; \quad (3)$$

– the proportion of women who are sustainable entrepreneurs in the number of adult women population, %

$$y_4(x_4) = \frac{147.50}{3.63 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_4 - 5.70)^2}{2 \times 3.63 \times 3.63}}; \quad (4)$$

– the proportion of men who are sustainable entrepreneurs in the adult men population, %

$$y_5(x_5) = \frac{286.57}{6.25 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_5 - 10.27)^2}{2 \times 6.25 \times 6.25}}; \quad (5)$$

– the indicator values ratio describing women's and men's sustainable entrepreneurship

$$y_6(x_6) = \frac{12.64}{0.21 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_6 - 0.61)^2}{2 \times 0.21 \times 0.21}}; \quad (6)$$

– the proportion of women who exited their business in the number of adult women population, %

$$y_7(x_7) = \frac{51.63}{1.57 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_7 - 2.68)^2}{2 \times 1.57 \times 1.57}}; \quad (7)$$

– the proportion of men who exited their business in the number of the adult men population, %

$$y_8(x_8) = \frac{55.72}{1.64 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_8 - 3.35)^2}{2 \times 1.64 \times 1.64}}; \quad (8)$$

– the indicator values ratio describing the participation of women and men who exited their business

$$y_9(x_9) = \frac{12.98}{0.36 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_9 - 0.85)^2}{2 \times 0.36 \times 0.36}}. \quad (9)$$

To analyze the quality of our models, three tests were used – Kolmogorov-Smirnov's, Pearson's and Shapiro-Wilk's. The testing has confirmed a high quality of all the developed functions.

At the next stage of the study, some common factors characterizing women and men who are at three main stages of entrepreneurship were identified. National average indicator values are shown in column 2 of Table 1. The next column of the table shows the upper and lower levels of the indicator values under consideration, they are typical for most countries.

Indicators numbers	Medium values	Values in most countries
1	2	3
Indicator 1, %	4.34	1.49–7.19
Indicator 2, %	6.12	2.77–9.47
Indicator 3	0.73	0.34–1.02
Indicator 4, %	5.70	2.07–9.33
Indicator 5, %	10.27	4.02–16.52
Indicator 6	0.61	0.40–0.82
Indicator 7, %	2.68	1.11–4.25
Indicator 8, %	3.35	1.71–4.99
Indicator 9	0.85	0.49–1.21

Tab. 1. Values of indicators describing entrepreneurs and gender differences. Source: The authors carried out the calculations according to functions (1)–(9).

5. Discussion

The average percentage of women who started business in 2018 in the countries under review was 4.3%. The corresponding figure for men was slightly higher – 6.1%. That is, every twenty-third woman and every sixteenth man belonged to the first group of entrepreneurs. The trend of exceeding this indicator for men is typical for most countries. Similar conclusions on nascent entrepreneurs are drawn in papers by Murzacheva, Sahasranamam and Levie (2019), Dilli and Westerhuis (2018) and Kelly et al. (2015). Exceptions were observed in a number of countries. In Argentina, Canada, Luxembourg, Thailand, the values of indicators for women and men are equal, and in Indonesia, Kazakhstan, Panama, Taiwan, Vietnam, Israel, Madagascar and Qatar, the values for women were higher than for men. Accordingly, the average value of the ratio of indicators describing the intentions of women and men to create their own businesses was 0.73. That is why hypothesis 1 was proved.

The evaluation of the indicators that characterize the second of the selected groups of people allowed us to draw the following conclusions. The average proportion of women who were sustainable entrepreneurs reached 5.7% in 2018. That is, every seventeenth woman belonged to such entrepreneurs. For men, the value of the corresponding indicator is significantly (1.8 times) higher and is almost 10.3%. Consequently, almost every tenth adult male in the countries under consideration was a sustainable entrepreneur. The trend of exceeding the values of sustainable entrepreneurship indicators for men compared to women is typical for

most countries (Caliendo et al., 2015; Marques, 2017; Van Stel & Van der Zwan, 2020). Exceptions were observed in four countries. In Angola, there was gender equality. The indicators for women which are typical for Kazakhstan, Vietnam, and Saudi Arabia are higher than for men. The average ratio of indicators that characterize women and men who were sustainable entrepreneurs was 0.61 in 2018. A comparison of the average values of indicators 3 and 6 allowed us to conclude that the ratio of women and men among new entrepreneurs (0.73) is greater than the same ratio for sustainable entrepreneurs (0.61). Therefore, the second hypothesis was confirmed.

The assessment of the indicator values that characterize the third of the selected groups of people allowed us to draw the following conclusions. The average proportion of women who stopped doing business in 2018 was almost 2.7%. The value of the same indicator for men was 1.25 times higher and amounted to 3.3%. The trend of exceeding the indicator values for men was observed in most countries. For 20 countries, this trend was not followed. In the Slovak Republic and Sudan, the indicator values for women and men were equal. In Brazil, Canada, Chile, Thailand, Bulgaria, Guatemala, Malaysia, Qatar, Saudi Arabia, South Africa, the United States, Ecuador, Israel, Lebanon, Vietnam, Peru, the United Arab Emirates, Angola and Madagascar, the indicator values for women were higher than for men. Accordingly, the average ratio of the indicator values describing women and men who left the business was 0.85.

It should be noted that, on average, in the countries under consideration, the total proportion of people belonging to the first and second groups was more than 10% for women and 16% for men. That is, one in ten women and one in six men were entrepreneurs in the 59 countries reviewed. A comparison of indicators for beginners and sustainable entrepreneurs with indicators for entrepreneurs who had left their business allowed us to draw the following conclusions:

- the average duration of women's entrepreneurial activity was 3.7 years;
- the average duration of men's entrepreneurial activity was 4.8 years.

In general, the above analysis has led to the conclusion that there are gender differences in most countries for each of the three groups of entrepreneurs under consideration. The proportion of men belonging to start-up, sustainable and retired entrepreneurs in these countries was higher in comparison with the proportion of women in the number of the corresponding strata of the population. Similar conclusions are in studies by Clot, Della Giusta and Razzu (2020) and Zampetakis et al. (2016).

To test the third hypothesis about the differentiation of indicators by countries, an analysis of the scope of variation of each of the indicators was carried out. The variation indices are as follows: index 1 – 66%; index 2 – 55%; index 3 – 40%; index 4 – 64%; index 5 – 61%; index 6 – 34%;

index 7 – 59%; index 8 – 49%; index 9 – 42%. The values of the variation indices showed significant (more 33%) differentiation of all nine indicators across the countries. Therefore, the third hypothesis was confirmed. Proposals on having significant differentiation of indicators characterizing entrepreneurial activity were made also in scientific publications by Bosma and Schutjens (2011) and OECD (2016).

The next step was to identify the countries where the maximum and minimum values of each indicator were noted. In this case, the maximum values are those that exceed the upper limits of the ranges specified in column 3 of Table 1, and the minimum values are those that are lower than the lower limits of the specified ranges. The analysis results are shown in Table 2. Along with the lists of countries, this table also provides the division of the identified countries by their geographical location and income level.

Indicator number	Countries with high indicator values	Countries with low indicator values
1	2	3
1	Chile, Sudan, Ecuador, Indonesia, Madagascar, Thailand, Guatemala, Lebanon, Brazil, Angola. Located in Asia (three countries), Africa (three countries), and Latin America (four countries). Income of the population: high (one country), medium (four countries), low (five countries).	Poland, Sweden, Bosnia and Herzegovina, Greece, Italy, Japan. Located in Europe (five countries), Asia (one country). Income of the population: high (five countries), medium (one country).
2	Turkey, Chile, Indonesia, Thailand, Guatemala, Sudan, Brazil, Angola, Vietnam, Lebanon. Located in Latin America (three countries), Asia (five countries), and Africa (two countries). The income of the population is high (one country), medium (six countries), low (three countries).	Poland, Bosnia and Herzegovina, Italy, France, India, Germany. Located in Europe (five countries), Asia (one country). Income of the population: high (four countries), medium (one country), low (one country).
3	Indonesia, Kazakhstan, Panama, Taiwan, Vietnam, Israel, Madagascar, Qatar, Ecuador. Located in Asia (six countries), Latin America (two countries), and Africa (one country). Income of the population: high (four countries), medium (two countries), low (three countries).	Greece, the Slovak Republic, Sweden, Egypt, Japan, Morocco, Puerto Rico. Located in Europe (three countries), Asia (one country), Latin America (one country), Africa (two countries). Income of the population: high (four countries), medium (one country), low (two countries).

Table cont.

Indicator number	Countries with high indicator values	Countries with low indicator values
1	2	3
4	The Republic of Korea, Poland, Taiwan, Indonesia, Ecuador, Lebanon, Angola, Brazil, Thailand, Madagascar. Located in Europe (one country), Asia (five countries), Latin America (two countries), Africa (two countries). Income of the population: high (three countries), medium (four countries), low (three countries).	The United Arab Emirates, Bosnia and Herzegovina, Mexico, Puerto Rico, Egypt, South Africa, France. Located in Europe (two countries), Africa (two countries), Latin America (two countries), Asia (one country). Income of the population: high (three countries), medium (three countries), low (one country).
5	Ecuador, Taiwan, Iran, Thailand, Vietnam, Brazil, Madagascar, Lebanon. Located in Asia (five countries), Africa (one country), Latin America (two countries). Income of the population: high (one country), medium (four countries), low (three countries).	Bosnia and Herzegovina, Mexico, Kazakhstan, Puerto Rico, South Africa, Saudi Arabia, France, the UAE, China, Luxembourg. Located in Europe (three countries), Latin America (two countries), Asia (four countries), Africa (one country). Income of the population: high (five countries), medium (five countries).
6	Spain, Thailand, Indonesia, The Russian Federation, Angola, Kazakhstan, Vietnam, Saudi Arabia. Located in Europe (two countries), Asia (five countries), Africa (one country). Income of the population: high (two countries), medium (four countries), low (two countries).	Egypt, Iran, the UAE, Turkey, Bosnia and Herzegovina, Croatia, Greece, Italy, Mexico, Puerto Rico. Located in Europe (four countries), Latin America (two countries), Asia (three countries) and Africa (one country). Income of the population: high (five countries), medium (four countries), low (one country).
7	Egypt, Chile, Guatemala, Malaysia, South Africa, Thailand, Saudi Arabia, Ecuador, Peru, Sudan, Angola. Located in Asia (three countries), Africa (four countries), and Latin America (four countries). Income of the population: high (two countries), medium (six countries), low (three countries).	Switzerland, Bosnia and Herzegovina, Indonesia, Japan, Cyprus, France, Italy, the Russian Federation, Germany, Poland. Located in Europe (six countries), Asia (two countries). Income of the population: high (five countries), medium (three countries).

Table cont.

Indicator number	Countries with high indicator values	Countries with low indicator values
1	2	3
8	Chile, Thailand, Kazakhstan, Peru, Iran, Uruguay, Ecuador, Egypt, Morocco, Sudan. Located in Asia (five countries), Africa (two countries), and Latin America (three countries). Income of the population: high (one country), medium (five countries), low (four countries).	Bosnia and Herzegovina, Japan, Indonesia, Germany, Spain, Bulgaria, Italy, the Republic of Korea, Poland, Switzerland. Located in Europe (seven countries), Asia (three countries). Income of the population: high (seven), medium (three countries).
9	Ecuador, Israel, Lebanon, Vietnam, Peru, the UAE, Angola, Madagascar. Located in Asia (four countries), Africa (two countries), Latin America (two countries). Income of the population: high (two countries), medium (three countries), low (three countries).	Switzerland, Cyprus, France, Iran, Luxembourg, the Russian Federation, Great Britain. Located in Europe (six countries) and Asia (one country). Income of the population: high (five countries), medium (one country), low (one country).

Tab. 2. Countries with high and low indicator values. Source: Developed by the authors on the basis of data from Table 1 and the Global Entrepreneurship Monitoring Project.

Table 2 provides information on the geographical location of countries with high (column 2) and low (column 3) values for each of the nine indicators evaluated in our study. The analysis of this information showed that there is no relationship between the indicator values and the territorial location of countries, as well as the income level of the population in these countries. That is, countries with high and low indicator values are located in different parts of the world and are characterized by different income levels of the population. Similar conclusion was drawn in the article by Dominko and Verbič (2021).

6. Conclusion

Our research has made a definite contribution to gaining new knowledge on the problem of gender differences in entrepreneurship. It should be noted that gender asymmetry in the business sector of the economy in recent years has attracted great interest from both academic circles and government authorities; this was indicated, for example, in papers by Feder and Nitu-Antonie (2017), Crespo (2017) and Paolini and Lombardi (2018).

The purpose of the study, which was to evaluate indicators describing men and women who are at one of the three stages of the evolution of

entrepreneurs according to survey data in 2018, was achieved. Conclusions that have scientific novelty and originality include:

1. The assessment of men's and women's participation in entrepreneurship, as well as the termination of this activity, was carried out for 59 countries.
2. The distribution of nine indicators describing the gender differences that arise at each of the three main stages of entrepreneurship is modeled.
3. It is proved that the share of women who are at each of the three stages of entrepreneurship in most countries is lower than that of men.
4. It is shown that the highest values of indicators are typical for the second stage of entrepreneurship. The values of the indicators for the initial stage of entrepreneurship are lower. The proportion of women and men who stop their businesses is even lower.
5. In 2018, there were significant differences in the values of the nine indicators under review across countries.
6. The countries with the highest and lowest values of these nine indicators were identified.
7. A comparison of the indicator values for Russia and foreign countries was carried out.

The results of our work have a certain theoretical and practical significance for governments and entrepreneurs. The results of the research have shown that there is significant potential for the development of women's entrepreneurship in most countries. To do this, governments should implement measures to reduce the gender gap in entrepreneurial activity by supporting the creation of women's own businesses. It is necessary to change public opinion about the expediency of developing women's entrepreneurship and ensuring that existing prejudices are overcome in a number of countries that restrain broad participation of women in independent economic activity. The results of our work are of interest to entrepreneurs (especially beginners), as they demonstrate a high level of involvement of adults in the creation of start-ups and sustainable entrepreneurship, as well as a relatively low level of business failures.

The methodological approach to the assessment of gender differences in entrepreneurship presented in the article can be used in further research. The new knowledge gained is of interest and can be used in the educational process at universities.

The study had limitations on empirical data due to the fact that 59 countries were considered. The sample was quite large, since it accounted for almost a third of the total number of all countries. It should be noted that the sample of the countries under consideration includes all the largest economies located in all parts of the world (Europe, Asia, Africa, North and Latin America). This allows us to transfer the conclusions made in our study to all countries.

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