

The Impact of Gender Factors on Economic Development: A Global Comparative Analysis

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ABSTRACT:

The purpose of this study is to determine trends and the current state of the gender issue, as well as the impact of different gender factors, taking into account the period of COVID-19, on the level of Ukrainian GDP compared with the countries of the world in modern conditions and to propose appropriate recommendations for the activation and stimulation of women's participation in business. The authors emphasize that women are disproportionately affected by various social crises: climate change, wars, conflicts and human rights violations etc. The authors analyze the Ukrainian Gender Inequality Index in and make a conclusion that it more than halved during the last decades. The reason for this, especially in recent years, was the COVID-19 pandemic and the subsequent full-scale Russian invasion of Ukraine that had a very negative impact on business. The authors note that Ukraine is situated in 35th place in the European ranking of countries concerning the value of the Gender Inequality Index. A large number of women are generally not involved in the labor market or other economic activities. At the same time, a continuing consequence of the Russian full-scale invasion of Ukraine was a noticeable lack of qualified personnel on the labor market. This is due to the involvement of exclusively men in certain sectors of the economy and their mobilization. The results of the regression analysis indicate that economic participation has the greatest impact on GDP among all the components of the Global Gender Gap Index in the USA, Canada and Poland. Educational attainment is situated on the second place. As for Ukraine, the authors show that as the level of participation of women in the labor force increases, Ukrainian GDP also increases. Taking into account the results of the calculations, the authors conclude that gender factors have a direct impact on the country's economy.

Keywords: gender factors, sustainable development, gender equality, Gender Inequality Index, Global Gender Gap Index, GDP, Ukraine, Poland, The USA, Canada.

1. Introduction

Today there is a number of gender imbalances concerning involving women in various spheres of socio-economic activity: labor law, participation in politics, military service. For example, there is discrimination against women in the Ukrainian labor law to this day. In particular, a number of norms are valid that unjustly consider women incapable of certain types of work. At the same time, there are still certain problems with female servicemen in the Armed Forces of Ukraine and politics. The women's access to resources

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and power is an important criterion for the economic well-being of society.

According to Art. 2 and Art. 3(3) of the Treaty on the European Union, Art. 8 (Convention for the Protection..., n.d.) and Art.153 of the Treaty on the Functioning of the EU, Art. 23 [3] of the Charter of Fundamental Rights of the European Union, equality between women and men is one of the fundamental values of the EU.

The EU follows a three-pronged approach, combining gender mainstreaming, targeted action and policy dialogue. Based on the EU Gender Equality Strategy 2020-2025 (n.d.), the new EU Gender Equality Action Plan 2021-2025 (2023) calls for a gender-equal world and complements the LGBTIQ Equality Strategy 2020-2025. EU Gender Equality Action Plan provides a policy framework for the EU, focusing in particular on:

- strengthening economic and social rights, expanding the rights and opportunities of girls and women;
- promoting equal participation and leadership;
- implementation of the agenda on women, peace and security (Cabeza-García *et al.*, 2018).

Thus, achieving economic independence for women is at the basis of the EU's vision of gender equality worldwide. Economic independence means empowering women to make real choices about their lives through full and equal participation in all areas of life. It is about recognizing paid and unpaid women's work as valuable both socially and economically one, and about policies and systems that value and recognize women's contributions. In addition, in accordance with the provisions of the Convention for the Protection of Human Rights and Fundamental Freedoms (n.d.) concerning prevention of violence against women and domestic violence and the fight against these phenomena (hereinafter referred to as the Istanbul Convention (2022)), granting women independence, including economic, and, accordingly, implementation of *de jure* and *de facto* equality between women and men is a key element in preventing violence against women. At the same time, violence against women and girls is a major obstacle to achieving equality between women and men.

The article by Kam *et al.* (2022) examines the impact of gender inequality on Nigeria's economic growth through mixed methods. First, the authors make an assessment of the impact of gender inequality on economic growth through the regression of panel data, and then a content consistency-based analysis is given that examines the factors responsible for gender inequality and the issues of discrimination, the experience of women in the Nigerian public service. The findings show that gender inequality negatively impacts economic growth and distorts the pool of human capital available to the Nigerian public service and recommends the use of education and outsourcing of some employment functions to effectively address it.

The authors (Pervaiz *et al.*, 2023) believe that gender equality tends to be championed on the basis of social justice. Its intrinsic value is widely recognized among academia and politics. However, apart from its intrinsic value, it may also be considered important because of its significant implications for the economic outcomes of the country's development. The existing literature, despite much discussion about the intrinsic value of gender, paid relatively less attention to its functional aspect. This work is an attempt to empirically investigate the impact of gender equality on economic growth.

Using panel data for developing countries, the authors found that gender equality positively and significantly affects the economic growth of developing countries.

The paper by Naveed et al. (2023) pursues a three-pronged objective: (1) empirically examines the relationship between women's economic rights and economic growth for a global sample; (2) examines whether the impact of women's economic rights differs across economies; and (3) uses spatial econometric methods to examine the impact of women's economic rights on neighboring countries. The results show that women's economic rights have a positive impact on growth, but the effect is heterogeneous in different economies. The results of this study are consistent with the EU's policy on women's economic opportunities, which argues that joint efforts to promote women's empowerment by all participants can lead to sustainable development and growth.

The review (Klasen, 2018) shows that, firstly, it is methodologically difficult to determine the valid impact of gender gaps on cost-effectiveness. Secondly, studies that calculate how much GDP will be if gender gaps in employment disappear significantly inflate the likely consequences. Thirdly, theoretical literature has created important insights into the mechanisms linking gender gaps to economic performance. Fourthly, systematic country reviews suggest that reduced gender gaps in education, resulting in higher economic performance, while literature on the impact of other gaps is much more limited. Fifthly, micro-evidence is accumulating on how reducing specific gender gaps at the household, farm or firm level can improve economic performance in specific contexts, with robust results in some areas, and less clear evidence in others.

Analyzing numerous scientific studies reflecting the relationship between gender factors and the level of economic development of countries, it should be noted that sometimes it is quite difficult to determine the level of influence of each individual factor on the resulting indicator. Taking into account the above mentioned, the purpose of this study is to determine trends and the current state of the gender issue, as well as the impact of different gender factors, taking into account the period of COVID-19, on the level of Ukrainian GDP compared with the countries of the world in modern conditions and to propose appropriate recommendations for the activation and stimulation of women's participation in business.

2. Methods

The study was carried out by reviewing and comprehensive analysis of the normative and empirical base: the regulatory basis of the study is the normative legal acts of the EU and its bodies (the European Parliament, the European Commission), international organizations (UN, etc.), plans and strategies of individual EU states, information from official websites of governments and ministries of individual EU states, international organizations and their structures (UN Women, etc.), as well as the results of focus groups and interviews. The conceptual foundation of the study are the positions of:

- dialectics – in the process of choosing of a methodological approach to understanding of the concept of female entrepreneurship in the EU, the concept of EU standards in the field of economic independence of women and understanding the development of female entrepreneurship;
- formal logic, system approach – during the analysis of the EU framework

regulations.

The following scientific methods were also used:

- induction – in order to form general conclusions on the peculiarities of best practices of gender policy;
- analysis and synthesis – in the process of highlighting of the EU standards in the field of economic independence of women and development of female entrepreneurship;
- structural and functional one – to determine the content of the EU standards in the field of economic independence of women and development of female entrepreneurship;
- correlation analysis using the Gender Inequality Index – to find out how the components of the Gender Inequality Index affect the level of GDP in Ukraine and in the countries of the world;
- correlation analysis using the Global Gender Gap Index – to find out how the components of the Global Gender Gap Index affect the level of GDP in the countries of the world.

3. Results

The Istanbul Convention emphasizes that ensuring women's economic independence is not only a human right in itself, but also a way to give women a strategy for getting out of abusive relationships. Increasing women's free will and financial security is both preventive and protective, as it reduces women's vulnerability to violence and gives them a better chance of resisting coercive behavior. In fact, entrepreneurship is the tool that can influence a productive working life for women, reduce unemployment among women, improve their social integration and increase innovation through start-ups. Accordingly, the EU implements a policy of broad encouragement of entrepreneurship with a focus on women. At the same time, it was stated the following in the UN Report on "Progress on the Sustainable Development Goals: The gender snapshot 2022" (n.d.): if the progress towards achieving the goal of gender equality will take place at the current pace, it will take 286 years to eliminate discriminatory laws and destroy the prevailing gaps in legal protection for women and girls". It is well known that women are disproportionately affected by various social crises:

- by the end of 2021, approximately 44 million women and girls have been forced to leave their homes due to climate change, wars, conflicts and human rights violations (UN Women, n.d.);
- more than 380 million women and girls worldwide live in extreme poverty (less than \$1.90 a day);
- the employment rate of women in Ukraine is 59.3% and continues to fall down;
- every fifth person in Ukraine is involved in so-called informal employment (Ministry of Finance of Ukraine, n.d.; State Statistics Service of Ukraine, n.d.).

A large number of women are generally not involved in the labor market or other economic activities. At the same time, a continuing consequence of the Russian full-scale invasion of Ukraine was a noticeable lack of qualified personnel on the labor market. This is due to the involvement of exclusively men in certain sectors of the economy and their

mobilization.

The current dynamics of achieving the goal of gender equality is determined by the fact that implementation of strivings for equality between men and women, declared in international and regional legal acts, is mostly complicated by the lack of political will of states and their ineffective legal policy. The main challenges on the way to achieving real gender equality are still the following:

- the low level of representation of women in political life and their participation in decision-making;
- the wage gap;
- the inequality in employment;
- the persistent gender stereotypes.

In fact, the researchers identify common patterns and challenges concerning female entrepreneurship in any field of activity and any country.

1. Female entrepreneurs face challenges related to gender stereotypes. In particular, domestic circumstances (taking care of children etc.) are more often the cause of:

- pauses in women's entrepreneurial activity, which hinders their ability to accumulate social capital;
- part-time work, which results in the acquisition of limited managerial experience and financial capital.

2. Women engage in entrepreneurship in areas that are less profitable. In particular, according to the 2022-2023 Global Entrepreneurship Monitor "Adapting to a New Normal" Report (2023):

- women around the world remain active in various sectors of the economy, but excessively they are represented among the smallest enterprises in highly competitive markets and in industries with low profitability;
- only 2.7% of women compared to 4.7% of men start their own business in the field of information, computing and technology, which attracts most of the venture capital worldwide and is a so-called male-dominated field – women are only 15% of tech startup founders;
- almost half of female entrepreneurs surveyed worldwide work in the wholesale and retail trade sector, and every fifth female entrepreneur works in the government and social services sector (18.5% of women against 10.1% of men), that is, in sectors that are less attractive for investors and creditors.

3. Women are engaged in entrepreneurship on a smaller scale (wholesale, retail trade), with the involvement of less capital and investments, on their own. Female entrepreneurs, unlike men, mostly do not involve external partners, do not carry out financing or acquisitions, thus limiting themselves in access to various resources.

Women entrepreneurs often choose for business areas related to the provision of services to the population. For example, they open kindergartens and schools, develop online and offline stores, provide beauty services, sew clothes, and manage confectionery enterprises. Also, women are increasingly choosing social entrepreneurship, creating jobs for people with disabilities. In addition, businesses run by women also create jobs for other women.

A McKinsey Global Institute study found that advancing women's equality could

add \$12 trillion to the global economy during 2025. And at best, that number could rise to \$28 trillion (The power of parity..., 2015). This can be achieved by ensuring greater gender equality and increasing opportunities for women. Many women open a business, being in a decree. They are aimed at what a woman lacks at this time. Often niche products or services are created: schools of young parents, creative studios, programming courses, services for finding nannies. All their ideas make it possible for children to develop and close those areas in which men do not work.

Accordingly, it is necessary to provide the following measures by public authorities, financial institutions and business organizations:

- to offer systemic support and programs that allow women to survive and thrive in the new reality;
- to provide women with navigation skills in the digital world;
- to develop a fair, accessible financial services system that supports women's work and entrepreneurship.

It is these investments that can bring the necessary dividends not only to women, but also to society as a whole.

Figure 1 shows the Ukrainian participation of women and men over the age of 15 in the labor force during 1991-2021. From Figure 1, it can be seen that the participation of men over the age of 15 in the labor force in Ukraine is approximately 10% higher than the participation of women over the age of 15 in the labor force during the specified period. Moreover, the participation of women over the age of 15 in the labor force during 2009-2021 is gradually decreasing (Fig. 1). This is a negative trend.

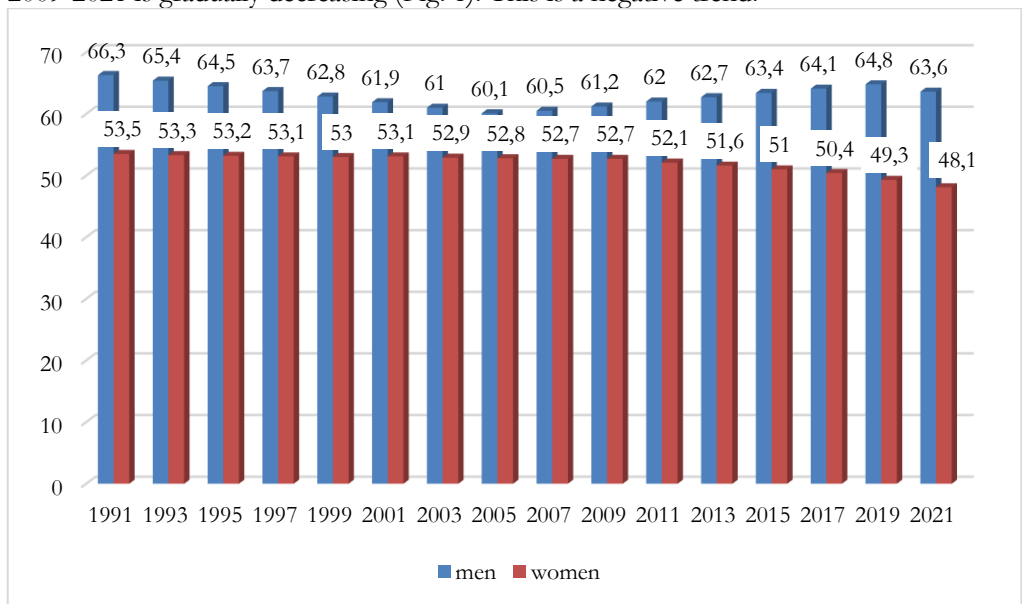


Figure 1: The Ukrainian percentage of the participation of women and men over the age of 15 in the labor force during 1991-2021

Source: created by the authors based on State Statistics Service of Ukraine (n.d.), Global Gender Gap Report (2024).

Table 1 shows the Ukrainian percentage distribution of the population by gender with at least secondary education over the age of 25. Table 1 shows that the share of women with secondary education was lower than the corresponding indicator for men during 1991-2013. Since 2015, this indicator has increased, that is, there has been a tendency to increase the quantity of women with secondary education, and this indicator has even exceeded the corresponding number of men.

Table 1: The Ukrainian percentage distribution of the population by gender with at least secondary education over the age of 25

Year	Men	Women
1991	84.4	76.5
1993	86.4	79.5
1995	88.4	82.4
1997	89.8	83.0
1999	91.2	83.6
2001	92.3	85.6
2003	93.2	89.0
2005	94.1	92.4
2007	95.9	93.4
2009	96.4	94.4
2011	96.9	95.5
2013	97.1	96.9
2015	97.3	98.2
2017	96.6	97.2
2019	95.8	96.2
2021	95.8	96.2

Source: created by the authors State Statistics Service of Ukraine (n.d.).

As for the distribution of seats in parliament of Ukraine by gender, the dynamics of changes concerning this indicator during 1991-2021 is shown on Figure 2 [5]. Thus, Figure 2 shows that the percentage of women in Ukrainian parliament began to increase only from 2013 and amounted up to 20.8% in 2021 that is almost 5.4 times more than in the base year of 1991. However, the ratio of men to women in parliament currently remains at 4:1.

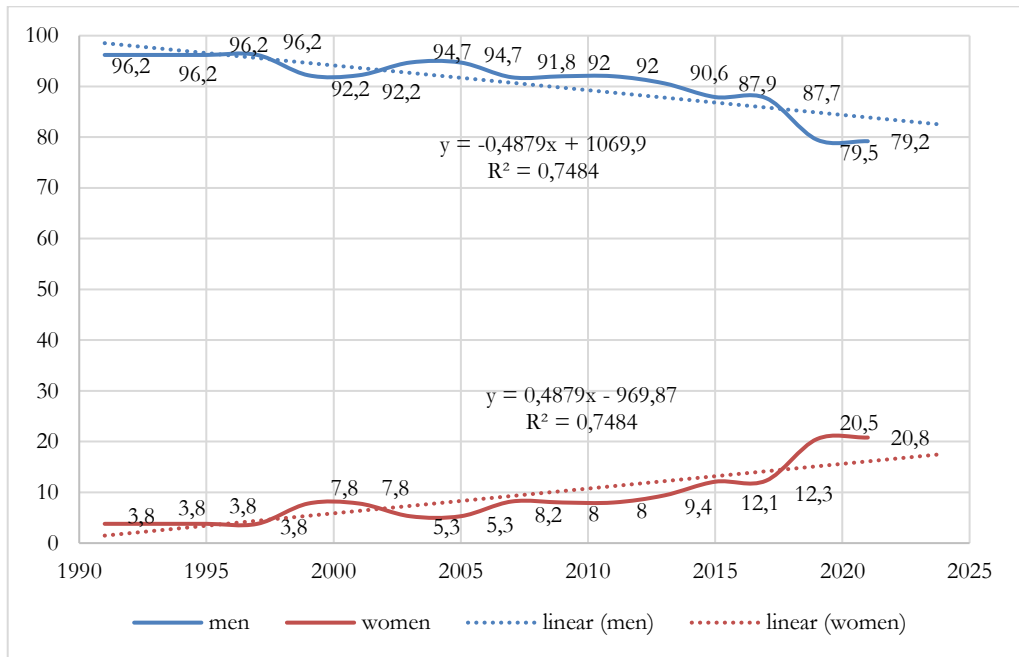


Figure 2: The distribution of seats in Ukrainian parliament by gender during 1991-2021

Source: created by the authors based on State Statistics Service of Ukraine (n.d.), Global Gender Gap Report (2024).

As for the Gender Inequality Index in Ukraine, the dynamics of its change are shown on Figure 3. Accordingly, if we analyze this indicator during the 1991-2021, it can be seen that it more than halved in 2021. The reason for this, especially in recent years, was the COVID-19 pandemic and the subsequent Russian invasion of Ukraine (starting from 2014) that had a very negative impact on business.

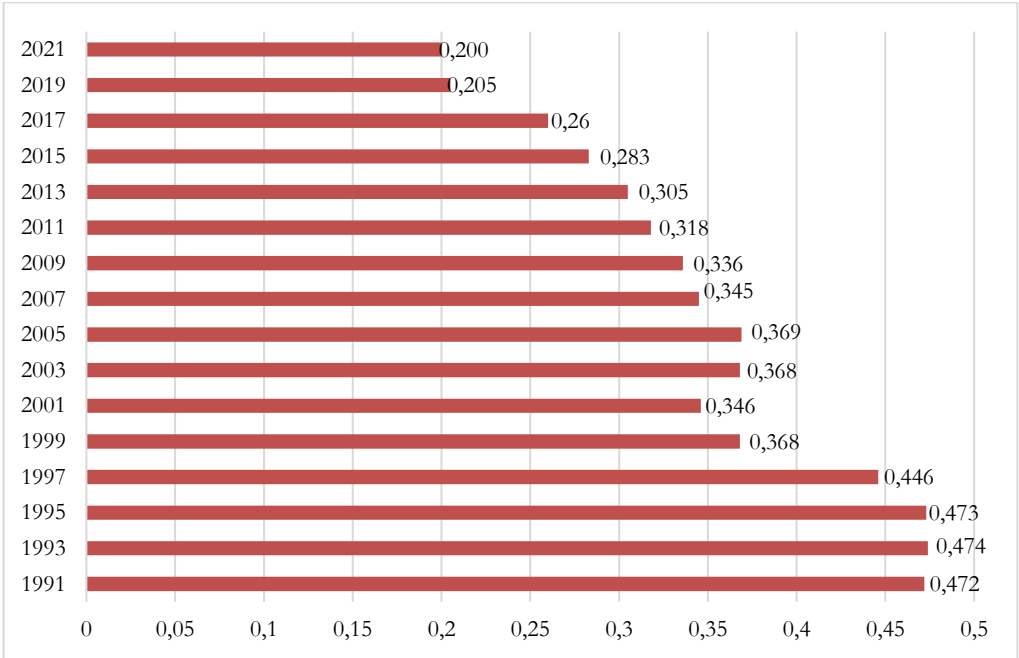


Figure 3: The dynamics of change of the Gender Inequality Index in Ukraine during 1991-2021
 Source: created by the authors based on State Statistics Service of Ukraine (n.d.), Index of gender inequality in Ukraine and Europe (2023).

It should be noted that Ukraine is situated in 35th place (0.200) in the European ranking of countries concerning the value of the Gender Inequality Index. Especially now, with the hostilities in Ukraine caused by the full-scale Russian invasion, many women have lost their jobs, leaved the region in which they used to live and work, or left the country at all (Table 2).

Table 2: The European ranking of countries concerning the value of the Gender Inequality Index

Country	Gender Inequality Index	Country	Gender Inequality Index
Denmark	0.013	Poland	0.109
Norway	0.016	Greece	0.119
Switzerland	0.018	Montenegro	0.119
Sweden	0.023	Czech Republic	0.120
Netherlands	0.025	Cyprus	0.123
Finland	0.033	Serbia	0.131
Iceland	0.043	North Macedonia	0.134

Luxembourg	0.044	Bosnia and Herzegovina	0.136
Belgium	0.048	Albania	0.144
Austria	0.053	Latvia	0.151
Italy	0.056	Malta	0.167
Spain	0.057	Slovakia	0.180
Portugal	0.067	Ukraine	0.200
Slovenia	0.071	Russian Federation	0.203
Germany	0.073	Moldova	0.205
Ireland	0.074	Bulgaria	0.210
France	0.083	Armenia	0.216
Croatia	0.093	Hungary	0.221
United Kingdom	0.098	Turkey	0.272
Estonia	0.100	Georgia	0.280
Belarus	0.104	Romania	0.282
Lithuania	0.105	Azerbaijan	0.294

Source: created by the authors based on Index of gender inequality in Ukraine and Europe (2023).

In order to find out how the above-mentioned gender factors affect the Ukrainian GDP, a correlation analysis was carried out in the work, within which pairwise correlation coefficients were calculated. The initial data for calculations are shown in Table 3.

Table 3: The initial data for the correlation analysis concerning impact of the components of the Gender Inequality Index on the GDP of Ukraine

Year	GDP of Ukraine, USD million	Participation of women over the age of 15 in the labor force, %	Women with at least secondary education over the age of 25, %	Participation women in the parliament, %
2003	50133	52.9	89.0	5.3
2005	86142	52.8	92.4	5.3
2007	142719	52.7	93.4	8.2
2009	117228	52.7	94.4	8.0
2011	163160	52.1	95.5	8.0

2013	183310	51.6	96.9	9.4
2015	90615	51.0	98.2	12.1
2017	112154	50.4	97.2	12.3
2019	153781	49.3	96.2	20.5
2021	199770	48.1	96.2	20.8
2017	112154	50.4	97.2	12.3
2019	153781	49.3	96.2	20.5
2021	199770	48.1	96.2	20.8

Source: created by the authors based on State Statistics Service of Ukraine (n.d.), Ministry of Finance of Ukraine (n.d.), Progress on the Sustainable Development Goals (n.d.).

The results of calculations are shown in Table 4. This shows that as the level of participation of women in the labor force increases, Ukrainian GDP also increases, with a correlation coefficient of 0.97.

It should be noted in this regard that the use of an exclusively correlation method to analyze the impact of the Gender Inequality Index on the GDP of Ukraine is limited by the following factors:

- the investigated processes are nonlinear;
- the non-equilibrium of the investigated processes;
- the presence of a time lag;
- the presence of a limiting effect;
- the simultaneous interaction of many independent variables on a dependent variable;
- a change in relationships over time;
- the complexity of a direct unambiguous assessment of the investigated process.

In this regard, it should be noted that in research practice there has long been a tendency to combine methods during research, since the use of a combination of different methods is often the best solution for a more detailed and thorough assessment of socio-economic processes.

When combining methods, they complement (complementarity) and control (triangulation) of each other, and the limitations of one method are balanced by the capabilities of the other one, therefore, when simultaneously applying several methods, it is necessary to take into account the nature and limitations of each of them.

Thus, in the future, it is rational to combine the method of correlation analysis with the method of expert assessments, which, in turn, would allow to form a list of gender factors that have the greatest impact on the GDP of the countries of the world, in particular, Ukraine.

Table 4: The results of the correlation analysis concerning gender factors affection on the GDP of Ukraine

Indicators	GDP of Ukraine, USD million	Participation of women over the age of 15 in the labor force, %	Women with at least secondary education over the age of 25, %	Participation of women in the parliament, %
GDP of Ukraine, USD million	1.000	-	-	-
Participation of women over the age of 15 in the labor force	0.967	1.000	-	-
Women with at least secondary education over the age of 25	0.608	0.582	1.000	-
Participation women in the parliament	0.564	0.557	0.577	1.000

Source: created by the authors.

Besides, it is advisable to study the relationship between the components of the Global Gender Gap Index and the GDP in other countries during last years. For example, Table 5 contain the initial data on the analysis of the dependence of GDP of Poland, United Kingdom, Canada and USA on the components of the Global Gender Gap Index.

Table 5: The initial data for the correlation analysis concerning impact of the components of the Global Gender Gap Index on the GDP of Poland, the USA and Canada

Year	Economic Participation	Health and Survival	Educational Attainment	Political Empowerment	GDP, USD million
Poland					
2019	0.710	0.980	1.000	0.270	1347313
2020	0.705	0.996	0.980	0.171	1376575
2021	0.711	0.996	0.980	0.256	1527349
2022	0.695	0.992	0.980	0.171	1720330
2023	0.669	0.997	0.980	0.211	1814627
The USA					
2019	0.770	0.970	1.000	0.250	21521395

2020	0.756	1.000	0.976	0.164	21322950
2021	0.754	1.000	0.970	0.329	23594031
2022	0.778	0.996	0.970	0.332	25744108
2023	0.780	0.995	0.970	0.248	27360935
Canada					
2019	0.750	0.970	1.000	0.330	1899695
2020	0.751	1.000	0.971	0.365	1847837
2021	0.741	1.000	0.968	0.381	2133013
2022	0.736	1.000	0.968	0.370	2415836
2023	0.740	1.000	0.968	0.374	2472062

Source: created by the authors based on Global Gender Gap Report (2024), UNECE. Gross domestic product (n.d.).

The results of the correlation analysis are shown in Table 6.

Table 6: The results of the correlation analysis concerning impact of the components of the Global Gender Gap Index on the GDP of Poland, the USA and Canada

Indicators	Economic Participation	Health and Survival	Educational Attainment	Political Empowerment	GDP
Poland					
Economic Participation	1.000	-	-	-	-
Health and Survival	-0.424	1.000	-	-	-
Educational Attainment	0.385	-0.963	1.000	-	-
Political Empowerment	0.351	-0.527	0.654	1.000	-
GDP	0.844	0.507	0.568	0.340	1.000
The USA					
Economic Participation	1.000	-	-	-	-
Health and Survival	-0.287	1.000	-	-	-
Educational Attainment	0.004	-0.943	1.000	-	-
Political Empowerment	0.223	0.072	-0.288	1.000	-
GDP	0.808	0.354	0.636	0.466	1.000
Canada					
Economic Participation	1.000	-	-	-	-

Health and Survival	-0.544	1.000	-	-	-
Educational Attainment	0.614	-0.996	1.000	-	-
Political Empowerment	0.642	0.956	0.972	1.000	-
GDP	0.924	0.495	-0.562	0.559	1.000

Source: created by the authors.

The results of calculations indicate that economic participation has the greatest impact on GDP among all the components of the Global Gender Gap Index in all selected countries of the world. Educational attainment is situated on the second place.

Taking into account the results of the calculations, it should be noted that gender factors have a direct impact on the economy of countries of the world. Accordingly, it is advisable to ensure women's access to the market through the following measures:

- expansion of the labor market, increasing the level of its inclusiveness, especially for entrepreneurs from low-mobility population groups, internally displaced persons and mothers who raise a child independently;
- recognition of self-employment as a form of work with the guarantee of adequate social safety and introduction of sanctions for false self-employment;
- creation of accountability mechanisms for initiatives concerning gender equality and integration between and within state bodies;
- periodic reporting by companies on gender representation in their ranks and publicity of such information;
- implementation of measures to ensure access of more women to management positions, to positions related to decision-making in various areas (courts, media, etc.), as well as to sectors of the economy that are more profitable and in which participation of women is low;
- guaranteeing fair selection for positions with priority given to the underrepresented gender and transparency of the results of such selection;
- ensuring the possibility of submitting an anonymous resume during the hiring process in companies and public administrations to prevent gender bias;
- improving regulations, creating policies and budgets concerning protecting women from direct and indirect discrimination, especially regarding hiring, professional training, pay and promotion of women in both public and private sectors.

4. Discussion

Discussing the results of the study, the following should be noted. The work by Stefko *et al.* (2020) determined a certain relationship between gender health inequality and economic prosperity through regression analysis. The variable that determines economic prosperity was represented by gross domestic product. The results of the study showed that if there is some reduction in gender inequality in health care, economic prosperity in the studied countries will increase. The article by Juhásová *et al.* (2023) considers the evolution of GDP per capita in the countries of the European Union during 2015-2019.

Using panel regression, the authors investigated the change in GDP per capita through five variables. The results of the analysis showed that the employment rate of women is the most statistically significant and positive variable of GDP.

The authors analyzed the relationship between economic growth and gender factors in the countries of the world. The study was conducted using dynamic models. The authors concluded that the high birth rate of women negatively affects economic growth. However, when women have greater access to secondary education and the labor market under conditions of equality, the consequences are positive.

Unlike previous studies, the given study highlights the impact of the components of both the Gender Inequality Index and the Global Gender Gap Index on GDP of the countries of the world through the prism of different groups of indicators with the help of correlation analysis. In particular, in the case of Poland, the USA and Canada, we consider the impact of economic participation, health and survival, educational attainment and political empowerment on GDP. As for Ukraine, then we investigate the impact of women's participation in the labor force, women's secondary education and women's participation in the parliament.

The results of this study may be useful in the formulation and implementation of social policy (Stuart et al., 2019), regional sustainability policy (Palinchak et al., 2022), post-war reconstruction policy (Lemishko et al., 2022) and Ukraine's post-war reconstruction plans for sustainable development (Makarenko et al., 2023).

Finally, this study makes it possible to analyze the influence of gender factors on the economy of the countries of the world from different angles and in different contexts. Taking into account the recommendations given in the article, it may also be advisable to increase the level of entrepreneurial culture of women as follows:

- encouragement and popularization of female entrepreneurship by the state from an early age;
- encouraging girls and women to study STEM subjects at school and university;
- development of strategies aimed at strengthening the digital integration of girls and women, digital financial inclusion in areas related to STEM, artificial intelligence and the research and innovation sector;
- support of information, communication and educational campaigns regarding female entrepreneurship;
- gender mainstreaming at all stages of the process of developing support measures for women entrepreneurs and consultation with a diverse group of potential and active women entrepreneurs;
- supporting the organization of conferences, discussions, forums and follow-up activities to promote the discussion of the role and contribution of policy on female entrepreneurial skills to achieve competitive and sustainable economic growth;
- creation of working groups, technical meetings and other events to promote discussion, mutual learning and exchange of experience;
- allocating funds and carrying out a campaign to increase awareness and training, support networks for female entrepreneurship;

- providing more incentives to promote female entrepreneurship, supporting and promoting female leadership initiatives and creating various European networks for female entrepreneurs;
- promotion of education and career in the financial sphere for women in order to support the development of a reliable network of female investors;
- providing effective platforms for the promotion of female role models and leaders at the international, national and local levels;
- promoting female role models in STEM and ICT, the media industry's portrayal of women in STEM and ICT-related professions, and diversity and opportunities in this field;
- using the Internet to conduct campaigns, forums and increase the visibility of female models in business.

5. Implications and further research

This study identifies trends and the current state of the gender issue, as well as the impact of various gender factors, taking into account the COVID-19 period, on the level of Ukraine's GDP compared to countries around the world in modern conditions, and offers recommendations for activating and stimulating women's participation in business.

It is expected that during the post-war reconstruction of Ukraine there will be a development of such sectors of the economy as the construction sector and health care (rehabilitation institutions). Due to the death of men in the war, their injuries, mental problems and because of the destruction, closure or relocation of those enterprises where men worked before the war, women will work more often in those sectors of the economy and in those positions that were traditionally considered as "male" ones and will more often occupy leadership positions in enterprises.

Thus, it is expected that during the post-war reconstruction, women will become those who will restore the country, in particular with active involvement in the spheres in which men dominated in the pre-war period. That is why today it is extremely necessary to train women in new skills and professions – and this can also become one of the tasks of grant support programs that international organizations can provide to companies.

It is important to support the development of female entrepreneurship; this should become one of the priorities at the state level. It is also worth paying special attention to the implementation of projects for the provision of psychological assistance to women affected by violence and women who are dismissed from the Armed Forces of Ukraine, as well as projects aimed at supporting the return of women to Ukraine.

Thus, in order to intensify the participation of women in business, which, accordingly, will positively affect the development of the Ukrainian economy, it is advisable to implement the following measures:

- creation of mentoring schemes and support programs, in particular using the advice and experience of retired entrepreneurs, successful business women;
- creation of motivational and psychological support programs to increase the confidence of women entrepreneurs;

- conducting investment readiness programs with business schools and organizations that can help women to create viable business plans and find and identify potential investors;
- supporting women entrepreneurs' access to growth potential assessments conducted by experienced consultants who measure risk potential;
- introduction of cross-border cooperation programs aimed at creating cross-border support centers for women entrepreneurs;
- creating programs that promote creativity in innovation to ensure entrepreneurship in the labor market and added women's value to society;
- implementation of measures to improve diversification of entrepreneurship and promotion of social and collective forms of entrepreneurship of women;
- development of standardized administrative packages for women entrepreneurs in the early stages of starting a business;
- creation of entrepreneurship programs that finance women and girls who start technological projects or new companies;
- promotion of activities and actions to help and advice women who decide to become entrepreneurs.

One of the future research directions is to study the impact of gender factors on the level of economic development of Ukrainian regions in the context of a full-scale Russian invasion of Ukraine. Because of the persistence of insecurity and disruption of supply chains during the full-scale Russian invasion, there is a danger that in some regions people will find themselves in even more critical situations in terms of hunger and malnutrition. In particular, this applies to those regions that depend on female-headed households. Due to the massive forced displacement of women, these regions are largely food insecure. The situation is similar in the fields of education and medicine, where in the occupied and border regions there is an acute shortage of personnel.

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