

Fostering Gender Equality to Stimulate Economic Growth: Legal and Institutional Measures to Enhance Economic Security of EU Member-states and Ukraine

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Abstract

The article discloses the pathway for enforcing gender equality via legal measures to stimulate economic growth enhancing economic security of EU member-states and Ukraine. Our calculations using Spearman coefficient have shown that the rank correlation coefficient of GDP per capita and gender gap in EU member-states is statistically significant. Therefore, there is a direct and weak connection between gender gap levels and GDP per capita at current market prices of EU member-states. Female empowerment overcoming stereotypes, including gradual eradicating of the false concept of so-called “masculine” jobs, still needs further expansion as only a small percentage of women reach the highest echelons of power influencing domestic and international political, economic and social processes. The global Covid-pandemic creates numerous threats and opportunities caused by social and economic restructuring including the expansion of flexible and remote works, online learning, welfare challenges, etc. The article proves that governments should concentrate on achieving gender equality in health care, education, finance, economy, politics and other spheres to respond to modern challenges. The experience of developed countries, including EU member-states, shows that guaranteeing gender equality results in social and economic progress, therefore, ensuring economic security of the state.

Keywords

Economic development, EU member-states, gender equality, gender gap index, GDP per capita, legal regulation, Ukraine.

Introduction

Ensuring equal rights and opportunities for women and men is top priority for any democratic nation. Gender equality is the value and goal to be achieved to guarantee justice and social development. Female empowerment and gender equality is one of 17 key goals of sustainable development adopted by the United Nations [13], also being the universal criterion for assessing the level of socioeconomic development and freedom. For instance, female empowerment in education improves health care, increases household incomes, and reduces infant mortality.

The United Nations and its different specialized institutions have adopted more than 100 regulations aimed at implementing the principle of gender equality. However, the lack of national legal mechanisms for enforcing international law results in terrible outcomes. For example, women are not entitled to have passports without the consent of their husbands in more than 30 countries that are parties to the Beijing Declaration on Gender Equality [14]. Married females are not allowed to decide which country's citizenship they will receive in 22 countries. Women can not work without the

CPITS-II-2021: Cybersecurity Providing in Information and Telecommunication Systems, October 26, 2021, Kyiv, Ukraine
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CEUR Workshop Proceedings (CEUR-WS.org)

permission of their husbands in more than 20 countries. There are countries where women do not have the right to vote (Saudi Arabia, Vatican), or this right is limited, for example, you need to have primary or higher education (Brunei, Lebanon, UAE). The absence or insufficient number of relevant court precedents discourage females to fight for their rights as they do not believe in justice any more.

In contrast, the “Gender Equality in the European Union” states that equal treatment for men and women has been one of the main principles of the EU since its inception, and the principle of gender equality is central to all its activities [2]. The EU Gender Equality Strategy 2020–2025 foresees that females and males will have equal chances for success and leadership within European society [3]. The European Union is a wonderful example of pursuing the gender equality at the regional level and ensuring its implementation in the process of political decision-making. Therefore, the impact of gender equality on socioeconomic development of EU member-states needs further investigations.

Literature Review

The abundant literature on gender equality discloses a lot of components, problems and prospects for achieving gender equality. For instance, Kabeer [6] demonstrates that patriarchal principles shrink opportunities for economic growth hindering gender equality. Mitra, Bang, and Biswas [9] question the efficiency of fighting for equal outcomes instead of pursuing the meritocratic principle of equal opportunities for men and women. Portalatin [10] points out potential danger of technological progress for women as they are more vulnerable in fighting for the downsizing job market.

Agarwal [1] argues that ending poverty and hunger depends on successful achieving gender equality. Johnson, Kovarik, Meinzen-Dick, Njuki, and Quisumbing [5] proved that legalizing female ownership of agricultural assets stimulates the growth on households’ income. Moreover, Theriault, Smale, and Haider [11] showed that eradicating the stereotype of incapable female managers results in the growing agricultural sustainability. Finally, Kolinets and Tokar [Kolinets] shed light on competitiveness of EU agricultural business entities managed by females.

Vinska and Tokar investigated the interconnection between political female empowerment and economic development and gender equality in European countries; revealed the interplay between gender equality and socioeconomic development, as well as innovation competitiveness of EU member-states; verified the adherence to European standards of gender equality in Ukrainian banks [15-19].

Despite numerous articles on different aspects of gender equality, only Tokar and Wasilewska [12] elaborated the conceptualization of gender equality within the framework of economic security of the state. Therefore, this article aims at expanding this topic disclosing legal measures designed to bridge the gender gap resulting in enhancing economic security.

Methodology

We use the Spearman coefficient to investigate the interplay between GDP per capita at current market prices and values of gender gap index of EU member-states in 2016-2020.

Ошибка! Источник ссылки не найден. shows that the average growth of GDP per capita at current market prices in EU member-states was 11.6 percent in 2016-2020. Luxembourg had the biggest average value of 98235 euros, while Bulgaria was the laggard with only 7938 euros.

Table 1

The ranks of EU Member-states by GDP per capita at current market prices in 2016-2020, in euros

Year	2016	2017	2019	2020	Average	Change, %	Rank
Luxembourg	93930	95170	102200	101640	98235	8.2	1
Ireland	57020	62550	72260	73590	66355	29.1	2
Denmark	49420	51140	53370	53600	51883	8.5	3
Sweden	46990	47730	46390	45850	46740	-2.4	4
Netherlands	41590	43090	46880	45870	44358	10.3	5
Austria	40920	41990	44780	42300	42498	3.4	6

Finland	39580	41080	43510	42940	41778	8.5	7
Germany	38070	39440	41510	40120	39785	5.4	8
Belgium	37960	39130	41460	39110	39415	3	9
France	33430	34250	36140	34040	34465	1.8	10
Italy	28210	28940	29980	27780	28728	-1.5	11
Malta	23190	25010	26920	24630	24938	6.2	12
Spain	23980	24970	26430	23690	24768	-1.2	13
Cyprus	22230	23410	25270	23400	23578	5.3	14
Slovenia	19590	20820	23170	22010	21398	12.4	15
Portugal	18060	19020	20800	19660	19385	8.9	16
Estonia	16670	18130	21220	20440	19115	22.6	17
Czech Republic	16790	18330	21140	20120	19095	19.8	18
Greece	16170	16470	17110	15490	16310	-4.2	19
Slovakia	14920	15540	17220	16770	16113	12.4	20
Lithuania	13560	14950	17470	17510	15873	29.1	21
Latvia	12940	13890	15900	15430	14540	19.2	22
Hungary	11830	12960	14950	13940	13420	17.8	23
Poland	11110	12170	13900	13640	12705	22.8	24
Croatia	11170	11920	13340	12170	12150	9	25
Romania	8630	9580	11510	11290	10253	30.8	26
Bulgaria	6820	7400	8780	8750	7938	28.3	27
<i>Average</i>	<i>27955</i>	<i>29225</i>	<i>31615</i>	<i>30584</i>	<i>29845</i>	<i>11.6</i>	<i>X</i>

Source: authors' own calculations and compilation based on [4]

Ошибка! Источник ссылки не найден. indicates that highest average scores of gender equality among EU Member-states in 2016-2020 belonged to Finland (0.834), Sweden (0.820), and Ireland (0.797), while Cyprus (0.692), Malta (0.691), and Hungary (0.677) were the outsiders.

Table 2

The ranks of EU Member-states by Gender Gap Index in 2016-2020

Year	2016	2017	2019	2020	Average	Change, %	Rank
Finland	0.823	0.821	0.832	0.861	0.834	0.038	1
Sweden	0.816	0.822	0.820	0.823	0.820	0.007	2
Ireland	0.794	0.796	0.798	0.800	0.797	0.006	3
Germany	0.778	0.776	0.787	0.796	0.784	0.018	4
France	0.778	0.779	0.781	0.784	0.781	0.006	5
Denmark	0.776	0.778	0.782	0.768	0.776	-0.008	6
Latvia	0.756	0.758	0.785	0.778	0.769	0.022	7
Spain	0.746	0.746	0.795	0.788	0.769	0.042	8
Slovenia	0.805	0.784	0.743	0.741	0.768	-0.064	9
Lithuania	0.742	0.749	0.745	0.804	0.760	0.062	10
Belgium	0.739	0.738	0.750	0.789	0.754	0.050	11
Bulgaria	0.756	0.756	0.727	0.746	0.746	-0.010	12
Portugal	0.734	0.732	0.744	0.775	0.746	0.041	13
Netherlands	0.737	0.747	0.736	0.762	0.746	0.025	14
Estonia	0.731	0.734	0.751	0.733	0.737	0.002	15
Austria	0.709	0.718	0.744	0.777	0.737	0.068	16
Poland	0.728	0.728	0.736	0.713	0.726	-0.015	17
Croatia	0.711	0.712	0.720	0.733	0.719	0.022	18
Luxembourg	0.706	0.712	0.725	0.726	0.717	0.020	19

Romania	0.708	0.711	0.724	0.700	0.711	-0.008	20
Italy	0.692	0.706	0.707	0.721	0.707	0.029	21
Slovakia	0.694	0.693	0.718	0.712	0.704	0.018	22
Czech Republic	0.688	0.693	0.706	0.711	0.700	0.023	23
Greece	0.692	0.696	0.701	0.689	0.695	-0.003	24
Cyprus	0.684	0.684	0.692	0.707	0.692	0.023	25
Malta	0.682	0.686	0.693	0.703	0.691	0.021	26
Hungary	0.670	0.674	0.677	0.688	0.677	0.018	27
<i>Average</i>	<i>0.736</i>	<i>0.738</i>	<i>0.745</i>	<i>0.753</i>	<i>0.743</i>	<i>0.017</i>	<i>X</i>

Source: authors' own calculations and compilation based on [20-23]

Moreover, the logical and legal method has enabled us to identify the effectiveness of international law in ensuring gender equality. Finally, we used the system and structural method to substantiate possible legal measures aimed at enhancing the level of economic security of Ukraine.

Results

Ошибка! Источник ссылки не найден. consists of ranks assigned to attribute Y (GDP per capita) and factor X (gender gap).

Table 3

Ranks of EU Member-states by Gender Gap Index and GDP per Capita in 2016-2020

Gender gap (X)	GDP per capita (Y)	Rank X, dx	Rank Y, dy
0.737	42498	12	22
0.754	39415	17	19
0.746	7938	14	1
0.719	12150	10	3
0.692	23578	3	14
0.700	19095	5	10
0.776	51883	22	25
0.737	19115	12	11
0.834	41778	27	21
0.781	34465	23	18
0.784	39785	24	20
0.695	16310	4	9
0.677	13420	1	5
0.797	66355	25	26
0.707	28728	7	17
0.769	14540	20	6
0.76	15873	18	7
0.717	98235	9	27
0.691	24938	2	16
0.746	44358	14	23
0.726	12705	11	4
0.746	19385	14	12
0.711	10253	8	2
0.704	16113	6	8
0.768	21398	19	13
0.769	24768	20	15
0.820	46740	26	24

Source: authors' own calculations

Ошибка! Источник ссылки не найден. is the reshaped matrix due to the necessity to overcome the problem of the same ranks contained in **Ошибка! Источник ссылки не найден.**

Table 4
The Reshape Matrix of Ranks

Rank X, dx	Rank Y, dy	(dx - dy) ²
12.5	22	90.25
17	19	4
15	1	196
10	3	49
3	14	121
5	10	25
22	25	9
12.5	11	2.25
27	21	36
23	18	25
24	20	16
4	9	25
1	5	16
25	26	1
7	17	100
20.5	6	210.25
18	7	121
9	27	324
2	16	196
15	23	64
11	4	49
15	12	9
8	2	36
6	8	4
19	13	36
20.5	15	30.25
26	24	4
Sum: 378	Sum: 378	Sum: 1799

Source: authors' own calculations

We calculate the checksum to verify the matrix:

$$\sum x_{ij} = \frac{(1+n)n}{2} = \frac{(1+27)27}{2} = 378 \quad (1)$$

We compute the Spearman correlation coefficient:

$$\rho = 1 - 6 \frac{\sum 6d^2 + A + B}{n^3 - n} \quad (2)$$

Where:

$$A = \frac{1}{12} \sum (A_j^3 - A_j) \quad (3)$$

$$B = \frac{1}{12} \sum (B_k^3 - B_k) \quad (4)$$

j – numbers of bundles in order for the attribute x;

A_j - the amount of identical ranks in the j-th bundle in x;

k – numbers of bundles in order for the attribute y;

B_k – the amount of identical ranks in the k-th bundle in y.

$$\rho = 1 - \frac{6 * 1799 + 1}{27^3 - 27} = 0.451$$

The attribute Y and factor X are connected directly, but weakly.

The critical point is:

$$T_{critical} = t(\alpha, k) * \sqrt{\frac{1 - \rho^2}{n - 2}} \quad (5)$$

Where:

n – the sample size;

ρ – the Spearman’s rank correlation coefficient;

$t(\alpha, k)$ – the critical point of the two-sided critical region, which is found from the table of critical points of the Student's distribution, according to the significance level α and the number of degrees of freedom $k = n - 2$.

If $|\rho| < T_{critical}$, then we do not reject the null hypothesis, and the rank correlation is not significant. If $|\rho| > T_{critical}$, then the null hypothesis is rejected, and the rank correlation is significant. Applying the Student’s table, we discover that $t(\alpha/2, k) = (0.05/2; 25) = 2.385$.

$$T_{critical} = 2.385 * \sqrt{\frac{1 - 0.451^2}{27 - 2}} = 0.43$$

As $T_{critical} < \rho$, we reject the null hypothesis. Therefore, the rank correlation coefficient of GDP per capita at current market prices and gender gap levels of EU member-states is statistically significant and the rank correlation between the scores for two tests is significant.

The idea of the possibility of gender equality considering physiological features of males and females raises many questions to which there are not always unambiguous answers. Recently, there have been debates as to whether equal rights result in equal opportunities. After all, the very idea of gender equality is about the result. Will a woman and a man be able to achieve equal results as a result of the same actions and circumstances? Despite the fact that women, along with men, have the right to education, work, the right to vote in elections, etc., most women face a “glass ceiling” when it comes to top management in both public and private sectors. But why?

Women between the ages of 20 and 45 are not an “attractive” workforce for employers, as there is a high probability that such a woman will take a maternity leave. This stereotype creates fears in women who postpone the birth of a child indefinitely, and as a result have complications during late pregnancy, moreover, generally refuse to give birth, referring to the statistics of congenital malformations of the child, due to the “old” age of the mother.

Such situation negatively affects demographics and violates men’s right to parenthood! A woman who sacrifices her career for the sake of having a child, and at the same time gives the highest positions to men who do not have to leave social and working life due to childbirth and childcare. Ultimately, trying to combine a career, motherhood, and a large array of “family responsibilities” leads to mental disorders and shortens a female life expectancy.

Legislative support for a gender approach in the labor sphere, which includes ensuring the “absence” of women during pregnancy and care for children from the social and working environment can be a separate incentive for women and as a result positively influence national economies. It is economically responsible and efficient to equip children's rooms, ensure flexible hours for working mothers, etc. Moreover, the EU member-states proved that certain incentives can motivate men to take a childcare leave on a par with women. Thus, more than 80 countries ensure the right of a parent to take a paid childcare leave. Therefore, the creation of gender-friendly jobs, the provision of quality education, medical care and the creation of effective, gender-oriented social programs and full access to information are the prerequisites of a stable national economic growth resulting in enhancing economic security of the state.

Moreover, ensuring economic security of the state requires the consideration of gender equality. We support the idea of Tokar and Wasilewska [12] to amend the Order of the Ministry of Economic Development and Trade of Ukraine “On Adopting the Methodical Recommendations on Evaluating the Level of Economic Security of Ukraine” including gender aspect in the process of evaluating economic security of the state.

Ошибка! Источник ссылки не найден. contains recommendations for modifying the set of indicators of economic security of the state.

Table 5
Modified Indicators of Economic Security of the State Considering Gender Equality

#	Modified Indicators	Component of Economic Security of the State
1	The ratio: female health life expectancy over male value, percent	Demographic Security
2	The ratio of infant mortality of girls and boys (mortality of children under one year) per one thousand live births, percent	
3	The ratio of the rate of natural increase per one thousand people of the existing population, percent	
4	The ratio of women and men of elderly age, percent	
5	The ratio of difference between labor productivity indices and real average monthly wages of women and men, percent	Macroeconomic Security
6	The ratio of unemployment rates of women and men, percent	
7	The ratio of long term unemployment (over 12 months) of women and men	
8	The ratio of wages to social benefits and other current transfers of women and men, percent	
9	The ratio of employment of women and men in the informal sector of economy, percentage to the total number of women and men, respectively, percent	Social Security
10	The ratio of women and men with average total earnings per capita per month below 75 percent of median total income level, percent	
11	The ratio of HIV-infected women and men diagnosed for the first time per 100,000 population, percent	
12	The ratio of women and men with active tuberculosis diagnosed for the first time per 100,000 population, percent	
13	Employment ratio of women and men aged 15-70 years, percentage of population of the relevant age group, percent	

Source: [12, p. 124]

We suggest that this Order should be modified considering the current pandemic, and new indicators, such as the ratio of females and males infected by the Covid-19 in total and different age groups should be added to it.

We agree with Tokar and Wasilewska [12], that gender security indicators, as component of the set of indicators for assessing the level of economic security of the state, should include findings of the World Economic Forum (**Ошибка! Источник ссылки не найден.**).

Table 6
The Global Gender Gap Index Structure

Sub-index	Indicators	Source of Information
Economic participation and opportunity	The ratio: female labor force participation over male value	International Labor Organization
	Wage equality between women and men for similar work (survey, data, normalized on a 0-to-1 scale)	World Economic Forum, Management Survey Questionnaire
	The ratio: female estimated earned income over male value	Calculations of the World Economic Forum on the basis of Methodology of the United Nations Development Program (Methodology Described in the Human Development Report 2007/2008)
	The ratio of legislators, public high-rank officials, and female and male executives	International Labor Organization
	The ratio: female professional and technical workers over male value	International Labor Organization
Education	The ratio: female literacy rate over male value	United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Literacy Statistics Institute
	The ratio: female net primary enrollment rate over male value	United Nations Literacy Statistics Institute
	The ratio: female net secondary enrollment rate over male value	United Nations Literacy Statistics Institute
Healthcare and survival	The ratio: female gross tertiary enrollment ratio over male value	United Nations Literacy Statistics Institute
	The sex ratio at birth (converted to female-over-male ratio)	United Nations Population Unit, World Population Forecasts
Participation in Political Life	The ratio: female health life expectancy over male value	World Health Organization, Global Observations on Healthcare
	The ratio: females with seats in parliament over male value	Inter-Parliamentary Union, Women in Politics Reviews
	The ratio: females at ministerial level over male value	Inter-Parliamentary Union, Women in Politics Reviews
	The ratio: number of years with a female head of state (last 50 years) over male value	Calculations of the World Economic Forum

Source: [12, p. 125-126]

The mixture of supranational and national legislation on gender security, as well as international and national mechanisms for implementing measures aiming at female empowerment are the only solution for improving the status quo.

Conclusion

Our calculations have shown that the rank correlation coefficient of GDP per capita and gender gap in EU member-states is statistically significant. Therefore, there is a direct and weak connection between gender gap levels and GDP per capita at current market prices of EU member-states. Thus, ensuring gender equality stimulates economic growth and results in enhancing economic security of the state.

In spite of logical incentives for female empowerment and numerous efforts of the global community to create the international legal framework to ensure equal rights and opportunities for women and men, the latter ones continue to hold key positions in the management of large corporations and public authorities, control the technological and defense sectors. With rare exceptions, males are heads of national law enforcement agencies, armies, and the judiciary. Males hold key positions in international agencies and organizations.

The efficiency of ensuring gender equality depends on effective combination of national and international legal and institutional measures. Legal amendments include modification of regulations on economic security of the state by ensuring the consideration of gender while assessing the level of economic security and enhancing it, including the expansion of the set of indicators of economic security of the state. The prospects of further research include elaborating applied legal and administrative measures at local, national and supranational level aimed at eradicating gender stereotypes and inequality.

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