

THE ISSUE OF POSSIBLE REDUCTION OF THE GENDER GAP

Hana Krchová – Katarína Švejnová Höesová

Abstract

The presented article focuses primarily on the issue of differences between men and women. Thanks to the current Covid-19 pandemic, this gender inequality is deepening in all aspects of work and social life in all countries of the world. Although there is a general effort to minimize this gap, there is only limited success. As part of the paper, we focus primarily on the statistical analysis of individually selected parameters on the example of the V4 countries. The aim is to provide an answer to which of our selected factors have a higher degree of significance. Factors on which attention was focused were women's secondary education, the number of women in company leadership positions, the length of maternity leave, and women's unemployment. Based on the regression analysis, it was found that the greatest importance in reducing the gender gap is the secondary education of women and then the length of maternity leave.

Key words: education, gender equality, gender pay gap, unemployment, women

JEL Code: J16, I21

Introduction

Women and the importance of their role in society not only in the point of maternity are growing strong from different aspects of working life. The tendencies that come from the pressure of the society strongly calls for equality. Unfortunately, this is not the case, and it is still necessary to state that it is unfair, rather than equivalent. And although women are becoming more and more involved in the labor market, the huge differences between men and women in salaries for the same kind of work is a well-known phenomenon. Almost 70 years after the principle of equal salary was enshrined in the International Labor Organisation's 1951 Convention on Equal Remuneration, it is still difficult to capture the key factors that would allow this (Whitehouse & Smith, 2020). Since then, virtually all of the world's economies have sought to comply with this declaration. There are studies in all sectors of the economy and in virtually all countries in the world that show pay inequalities for equal work (ILO 2020). Usually, this inequality is based on the sex of the worker. Men are usually paid more for the same work than women.

In our article, we want to focus on the issue of different incomes from the perspective of located in Central Europe, namely the Czech Republic, Hungary, Poland, and Slovak Republic (V4 Countries). Within this group selected by us, the income inequality by gender is still very significant. The group of countries was chosen specifically for the fact that these countries share the similar social history of political and economic development. The factors identified by us may have been relevant in all mentioned countries. The process of transformation in these countries began at the same time. All four countries faced the same political, economic, and societal challenges to subsequently join the European Union and become economically competitive in this rapidly changing period.

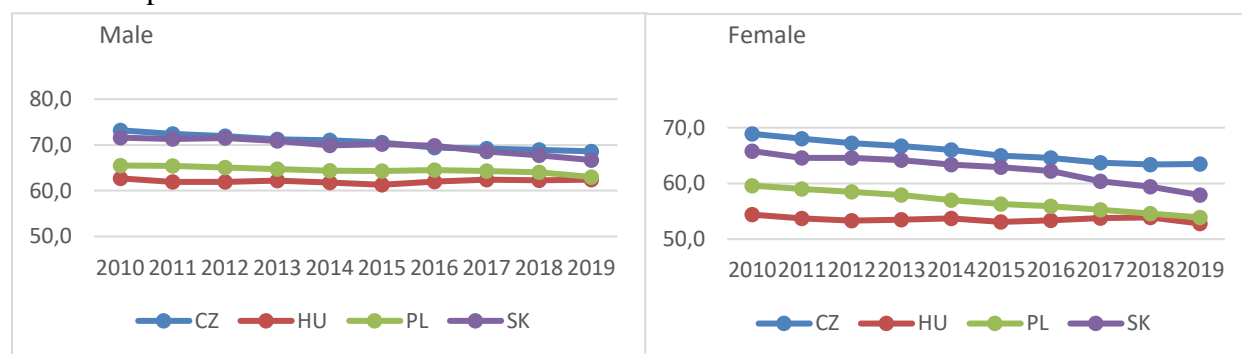
1 Gender Gap

The gender pay gap is a well-known phenomenon. Many studies and organizations have confirmed that it objectively paid women less than men (UN Women, 2015). This is because of various factors - in part because of segregation or gender stereotypes. Various studies focus on the influence of factors on Gender Gap - either the stereotypes mentioned above or also on the impact of reducing inequalities in education, others examine the effects of reducing inequalities in the labor market (i.e. increasing women's participation in the labor market, reducing the pay gap). women and men, reducing gender inequality in economic decision-making), with very few of these studies directly examining the impact of unequal pay (the existence of the so-called gender pay gap - GPG15). However, it is difficult to determine whether the specific effects on economic growth are because of inequalities in education, employment, or remuneration. In most of the developed models, gender inequalities in one dimension led to gender inequalities in other dimensions, with causality taking place in both directions (Klasen & Minasyan, 2017).

1.1 Education

According to several authors, participation in further education has increased in recent decades, especially in the female part of the population. In the 1990s, there was a rapid increase in interest in university studies. There are currently several countries where the numbers of women studying at universities exceed the numbers of man students, even to pass the school-leaving examinations. This dramatically affects the coded patterns of understanding the differences between men and women (Klesment & Van Bavel 2016, Chovanova Supekova, 2019, Malecki et all 2020). For our research, we analyzed the situation between men and women in terms of secondary and tertiary education for the V4 countries.

Fig. 1: Upper secondary and post-secondary non-tertiary education % of population Male vs Female in period 2010 – 2019



Source: EUROSTAT, own calculation

From Fig 1 it is possible to identify a gradual decline in the category of secondary education for both men and women. The Czech Republic reaches the highest values within the mentioned indicator in both categories. We can observe the lowest proportion of secondary education in the working population in Hungary for both men and women.

1.2 Unemployment

The share of unemployed women and men in the total number of unemployed is very similar in all V4 countries and ranges on average from 51% to 55% for men and from 45% to 49% for women. In the labor's case market, i.e. the unemployment rate and employment, the Czech Republic has an exceptional position not only among the V4 countries but also the entire EU. The Czech Republic is one of the ten states of the European Union that have exceeded the set target of the Europe 2020 strategy, according to which the employment rate of EU member states averaged 75% and reached its national target for employment of 20-64-year-olds. The Czech Republic has the lowest unemployment rate in the entire European Union, where it has replaced countries with a traditionally beneficial situation on the labor market, such as Germany and Austria. In the Czech Republic, the male unemployment rate is as low as 1.8% (according to figures from 2019 from Eurostat). The employment of women in the Czech Republic is gradually increasing, in 2007 only 62.4% of women were employed. The Czech employment of women is also the highest in the V4, where the employment of women in Hungary in 2019 was 67.6%, in Slovakia 66.9%, and in Poland 65.3%. However, the employment of women in the Czech Republic still does not reach the level of many other states, especially the Nordic countries. Sweden has long had the highest female employment rate - around 80% in the last 4 years. Male employment was the highest in the Czech Republic in 2019 in the EU - 87.7%. The

social ideas and expectations mentioned below, as well as family policy, access influence the lower employment of women in the Czech Republic to more flexible working hours, the availability of kindergartens, and more.

1.3 Maternity Leave

Let's take a closer look at the individual V4 countries from the point of view of parental or maternity leave. In all cases, the right to parental leave is a personal non-transferable right of both parents to allow not only the mother but also the father to take care of the child, or both at the same time. Directive 2010/18 / EU also grants this right to persons who have children under the age of three in foster care. Many experts have sought to research the impact of public and employment policies on employment, especially maternity leave, in the continuous breastfeeding of employed mothers. (Steurer, 2017) The length of maternity leave has a direct effect on the relationship between mother and child, but the mother must consider the departure from work duties or their radical reduction. (Stack et al 2018) For our research, we performed a statistical analysis of the length of maternity leave in the V4 countries. It can be seen from Graph 7 that the length of maternity leave is 34 days in the Czech Republic. Poland has the shortest time on maternity leave, 20 days.

1.4 Women in leadership positions

Bridging the gender gap is not only a question of justice but also of effective governance and inclusive growth (OECD, 2020). They have shown companies with more female directors on the board to perform better (Catalyst, 2005). Companies in which women are most strongly represented at the board or top management level are also the best performers (McKinsey & Company, 2007). The presence of women in the labor market is increasingly important for economic growth and development at the national and company levels. The growing participation of women in the labor market is a major driver of global growth and competitiveness (ILO, 2020). Harnessing the power of women's potential is therefore essential for inclusive economic growth in digital economies that are moving towards an aging society. We can see this as a soft engine for sustainable growth, which can be replaced by costly hard investments, which is especially important for emerging economies (Jia & Zhang, 2012). For our research, we use the OECD survey of women in leadership positions. During the period under review, we found the Slovak Republic leads that the highest percentage of women in the presidency of large companies with a percentage of women of 21.6% in 2010 and 29.1% in

2019. The country with the best percentage of women on member boards is in 2010 Poland with a value of 11.6% and Hungary with a value of 12.9% in 2019.

2. Date, Methodology and Research Results

In our research, we focused mainly on answering the question: Is it possible to use selected factors to reduce gender differences, which are reflected mainly in the different remuneration of men and women? Based on a literature search, we then selected factors that could affect the different evaluations of men and women. This question is important because we assume that the growth of this ratio can lead to positive results throughout society. We consider the key factors that are subsequently subjected to regression analysis to be the factor that shows the educational attainment of women. Subsequently, we chose a factor that shows the number of unemployed women. Another important factor is the length of maternity leave, the number of women in management positions. We can register research limitations in the quality of the data used got from Eurostat and OECD databases. This part further examines selected determinants using the method of regression analysis of panel data for the period 2010–2019 on data for the Czech Republic, Slovakia, Hungary, and Poland. We got the data source we used for the analysis from Eurostat and OECD databases. The reason for limiting the time series is the lack of current data for the following years.

We focused our research on determining the influence of selected factors on the number of changes in peace in the remuneration of men and women. As the explanatory variable for determining this effect, we use the first number of women who have completed upper secondary and post-secondary non-tertiary education. Another explanatory variable is the representation of women in company leadership positions, the length of maternity leave, and women's unemployment. We draw all data used from Eurostat and OECD databases. Summary statistics on the main variables (including mean, standard deviation, and minimum and maximum values) are given in Table 1.

Table 1: Statistical description of the individual variables

<i>Variable</i>	<i>Mean</i>	<i>Std. Dev</i>	<i>Min</i>	<i>Max</i>
<i>GENDER_WAGE_GAP</i>	14.805	2.842	10.15714	19.1
<i>EDU2F</i>	59.650	5.140	52.8	68.9
<i>FSOS_</i>	14.968	5.184	3.5	29.1
<i>LML</i>	27.000	4.529	20	34
<i>UNF</i>	5.408	2.234	1.7	9.6

Source: the authors

The resulting variables, Gender wage gap indicators, and control variables are marked as "Y", "T", and "X". As usual, b is a constant and a and u are estimates, while we display the error term as E: Earth and time identifiers are "i" and "t". Use of panel data, where we use data for individual V4 countries and data from the time 2009-2019:

- where y: GENDER_WAGE_GAP (is a dependent variable) - percentage difference in pay between men and women:
- X1 EDU2F - the percentage of women with secondary education
- X2 FSOS_ - the percentage of women in company management
- X3 LML - length of mantle leave
- X4 UNF - percentage unemployment of women

The aim of the regression analysis using panel data is to determine the influence of individual determinants on reducing the gender pay gap. Based on the results of previous research on this issue, we have established the following hypotheses:

- Increasing the number of women with secondary education will reduce the Gender pay Gap. (The null hypothesis H0 = Changing the number of women with secondary education has no effect on reducing the Gender pay Gap difference.)
- Increasing the number of women in management positions leads to a reduction in the Gender pay Gap. (The null hypothesis H0 = Changing the number of women in management positions has no effect on reducing the Gender pay Gap difference.)
- Reducing the total length of maternity leave leads to a reduction in the Gender pay Gap difference. (The null hypothesis H0 = Changing the total length of the maternity leave has no effect on reducing the Gender pay Gap difference.)
- Reducing female unemployment leads to a reduction in the Gender pay Gap gap. (Null hypothesis H0 = Change in the female unemployment parameter has no effect on reducing the Gender pay Gap difference.)

Table2: Results of regression analysis of panel data

<i>GENDER_WAGE_GAP</i>	<i>Coef.</i>	<i>Std. Err.</i>	<i>t-Statistic</i>	<i>P> t </i>
<i>EDU2F</i>	0.435	0.033	13.132	0.000
<i>FSOS_</i>	-0.081	0.027	-3.007	0.005
<i>LML</i>	0.229	0.042	5.423	0.000
<i>UNF</i>	-0.541	0.069	-7.793	0.000

Source: the authors

We used a model with random effects, which was based on the results of the Hausmann and Breuch-Pagan test. Several tests subsequently tested the robustness of the results. We got a positive result in all tests.

$$y_{it} = -13.2 + 0.435x_{it1} - 0.081x_{it2} + 0.229x_{it3} - 0.541x_{it4} + u_{it} ,$$

We show the results of the regression analysis of the panel data in Table 2. The analysis of the panel data confirmed the significance of all investigated determinants (rejection of null hypotheses related to these determinants). The results of the regression analysis of the panel data lead to the rejection of all null hypotheses. For further investigation, we also subjected the data to factor analysis using the principal axis factoring method. The values of the correlation matrix determining for factor analysis are clear from Table 3 explaining the deviation from Table 4.

Table3: Correlation matrix factor analysis

	EDU2F	UNF	LML	FSOS_
EDU2F	1.000	.316	.612	-.050
UNF	.316	1.000	.491	-.100
LML	.612	.491	1.000	.162
FSOS_	-.050	-.100	.162	1.000

Source: the authors

Table4: Correlation matrix factor analysis

Component	Total Variance Explained				
	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
EDU2F	1.957	48.915	48.915	1.957	48.915
UNF	1.060	26.506	75.421	1.060	26.506
LML	.683	17.072	92.493		
FSOS_	.300	7.507	100.000		

Source: the authors

In the examined case, we identified 2 factors whose intrinsic value was higher than 1. Specifically, it was a factor of the number of women with secondary education and the second is the unemployment of women. The first factor explained 48.95% of the variability and the second 26.51%, together they explained 75.421%. These factors of our research are the already mentioned education and unemployment of women.

Conclusion

In our research, we verified the influence of factors in reducing the gender gap. In the statistical analysis, we found that all the factors we have chosen are not only significant but that even two of them can effectively affect the different wage levels for men and women.

If we look at the current development of the current situation affected by the COVID19 pandemic, we must consider the situation stated by the World Economic Forum, namely that the coronavirus pandemic has reversed efforts to make progress in achieving equality between men and women. According to the World Economic Forum, the crisis has delayed achieving gender equality by a decade. The World Economic Forum states in its annual report on gender equality that instead of achieving gender equality in various areas within 99.5 years, as expected by the beginning of 2020, it will take 135.6 years. According to the report, various studies have shown that the pandemic has had a disproportionate effect on women, who have lost more jobs than men and had to take up much more childcare during school breaks. We will feel the consequences, in the long run.

In 2020, the employment rate in the EU was 72.4% for people aged 20-64, falling for the first time since 2013 because of the impact of COVID-19 measures on the labor market. The gender employment gap narrowed from 11.7 to 11.3 percentage points between 2019 and 2020, despite the large impact of Covid-19 measures specifically on women. In 2020, the employment rate in the EU for people aged 20-64 was 72.4%, a decrease compared to 2019, when the employment rate was 73.1%. Throughout 2020, the Covid-19 pandemic had an unprecedented and direct impact on the labor market. We subsequently observed a decline in the employment rate in all but three EU Member States. The employment gap between women and men continued to narrow significantly, reaching 11.3 percentage points (pp) compared to 11.7 percentage points in 2019. The employment rate for people aged 55-64 increased from 59.2% in 2019 to 59.6% in 2020.

Data showing the development of the female unemployment rate within the coronary crisis as a significant factor that could help us reduce the gender gap was the following situation also supplemented this information. In March 2021, the female unemployment rate in the EU was 7.7%, an increase of 1.1 percentage points from 6.6% in February 2021. From the point of view of the V4 countries, the largest increase in the unemployment rate in the corona crisis period occurred in Slovakia at 8.5% (in March 2021) by as much as 2.2 percentage points from the original 6.3% (in March 2020). With Hungary, the unemployment rate increased over this period from 2.9% (3/2020) to 4.4% (3/2021). We can see a similar situation with the Czech Republic where the value increased from 2.2% (3/2020) to 3.9% (3/2021). However, the situation was different with Poland, where the female employment rate did not change at all during the corona crisis period and is at 3% (Eurostat, 2021)

Acknowledgment

The paper is the output of anional scientific project Scientific Paper was elaborated and financed within the framework of the project GA/17/2021 The Impact of Digital Transformation on Changes in Business Models of Slovak Small and Medium-sized Enterprises during the COVID-19 pandemic (Funder: The Grant Agency Academia Aurea) and IGA 4/2020-M Regional disparities in small and medium-sized enterprises in the V-4countries and in Ukraine (Funder: VSEMvs IGA VSEMvs, i.e. School of Economics and Management in Public Administration)

References

- Catalyst, 2005. *Corporate Performance and Women's Representation on Boards*.
<http://www.catalyst.org/media/companies-more-women-board-directors-experience-higherfinancial-performance-accoeding-latest/> Retrieved 11 March 2021.
- EIGE (2020) European Institute for Gender Equality: Gender Equality Index.
<https://eige.europa.eu/gender-equality-index/2020> Retrieved 20 March 2021
- Eurofound, 2016. The gender employment gap: Challenges and solutions, Publications Office of the European Union, Luxembourg.
https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1638en_1.pdf Retrieved 20 March 2021
- Eurostat, 2021. Eurostat - Euroindicators 30.April 2021.
<https://ec.europa.eu/eurostat/documents/2995521/11563067/3-30042021-CP-EN.pdf/5e5aae01-e15d-b8bd-71fb-4096b88f4120?t=1619705933576> Retrieved 20 March 2021
- Glass, C., & Cook, A. (2017). Do women leaders promote positive change? Analyzing the effect of gender on business practices and diversity initiatives. *Human Resource Management*, 57(4), 823–837. <https://doi.org/10.1002/hrm.21838>
- Glass, C., & Cook, A. (2017). Do women leaders promote positive change? Analyzing the effect of gender on business practices and diversity initiatives. *Human Resource Management*, 57(4), 823–837. <https://doi.org/10.1002/hrm.21838>
- Chovanová Supeková, Soňa. Advertising on social networks from the perspective of Y and Z generation. In: SWS 2019 International Scientific Conference on Social Sciences: conference proceedings. Sofia: STEF92 Technology, 2019, s. 357-364.
<https://doi.org/10.5593/SWS.ISCSS.2019.2/S05.044>

- ILO (2020), Global Wage Report 2020–21: Wages and minimum wages in the time of COVID-19 https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/--publ/documents/publication/wcms_762534.pdf Retrieved 20 March 2021.
- Jia, M., & Zhang, Z. (2012). Critical Mass of Women on BODs, Multiple Identities, and Corporate Philanthropic Disaster Response: Evidence from Privately Owned Chinese Firms. *Journal of Business Ethics*, 118(2), 303–317. <https://doi.org/10.1007/s10551-012-1589-7>
- Klasen, S., & Minasyan, A. (2017). Gender Inequality and Growth in Europe. *Intereconomics*, 52(1), 17–23. <https://doi.org/10.1007/s10272-017-0637-z>
- Klesment, M & Van Bavel, J. (2016). The Reversal of the Gender Gap in Education, Motherhood, and Women as Main Earners in Europe. *European Sociological Review*. <https://doi.org/10.1093/esr/jcw063>
- Malecki, C. K., Demaray, M. K., Smith, T. J., & Emmons, J. (2020). Disability, poverty, and other risk factors associated with involvement in bullying behaviors. *Journal of School Psychology*, 78, 115–132. <https://doi.org/10.1016/j.jsp.2020.01.002>
- McKinsey & Company, 2007. *Women Matter 2007: Gender Diversity, a Corporate Performance Driver*. McKinsey & Company, New York.
- Stack, S. W., McKinney, C. M., Spiekerman, C., & Best, J. A. (2018). Childbearing and maternity leave in residency: determinants and well-being outcomes. *Postgraduate Medical Journal*, 94(1118), 694–699. <https://doi.org/10.1136/postgradmedj-2018-135960>
- Steurer, L. M. (2017). Maternity Leave Length and Workplace Policies' Impact on the Sustainment of Breastfeeding: Global Perspectives. *Public Health Nursing*, 34(3), 286–294. <https://doi.org/10.1111/phn.12321>
- Whitehouse, G., & Smith, M. (2020). Equal pay for work of equal value, wage-setting and the gender pay gap. *Journal of Industrial Relations*, 62(4), 519–532. <https://doi.org/10.1177/0022185620943626>

Contact

Ing. Hana Krchová, Ph.D.

Department of Management and Marketing, Faculty of Economy and Business, Pan-European University, Bratislava, Slovakia

Mail: hana.krchova@paneurouni.com

Ing. Katarína Švejnová Höesová

Department of Management, School of Economics and Management of Public Administration
in Bratislava, Bratislava, Slovakia

Mail: katarina.svejnova@vsemvs.sk