

ANALYSIS OF WAGE DIFFERENCES BETWEEN WOMEN AND MEN IN SLOVAKIA. WHAT IS THE ROLE OF MOTHERHOOD?

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Abstract: *This paper analyses the gender pay gap in Slovakia, with an emphasis on the impact of motherhood, using Blinder-Oaxaca decomposition. The results indicate that the gender wage gap is 16.8%, while the gap between mothers and the rest of the workforce is even higher (18.3%). A significant share of this inequality remains unexplained, suggesting the influence of unobserved factors such as differences in men's and women's decisions, bargaining power, or systemic biases and discrimination. The penalties associated with motherhood are most pronounced in women's 30s and 40s, particularly for those with children under three. In contrast, the difference between mothers and childless women is at 9.9% and is almost entirely explained by observed factors. These findings highlight the need for systemic changes in the working environment to facilitate better career integration and fairer pay for mothers.*

Keywords: *gender pay gap, motherhood, Blinder-Oaxaca decomposition, labour market*

JEL Classification: J16, J13, J31

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1 Introduction

Gender equality remains one of the major challenges that countries across the globe have been striving to address for many years, from breaking down gender stereotypes and ensuring equal opportunities for men and women. As an example, we can use the European Union, which has gender equality as one of its main objectives (Treaty of Lisbon, 2007). However, gender inequality takes many forms. For many years economists have been studying inequality in the labour market, where it is most often manifested through the pay gap between men and women.

Perhaps the most well-known researcher in this field is Claudia Goldin, winner of the Nobel Memorial Prize in Economic Sciences. In her research she points out that one of the main reasons for the gender pay gap in the last century was discrimination against women (Goldin, 2021). However, current research shows that discrimination is no longer the main cause of pay inequalities and that a wide network of socio-economic factors influences their emergence.

Women's participation in the labour market is one such factor, since it directly affects women's ability to earn a wage (Winkler, 2022). Women's participation is therefore often associated with a country's economic growth, but this relationship cannot be considered linear and is more appropriately expressed by a "U" shaped function where participation declines as a country transition from an agricultural to an industrial economy and conversely increases when the service sector is developing (Goldin, 1995).

Not only women's participation in the labour market, but also market segregation has implications for the pay gap. Labour market segregation manifests itself both vertically and horizontally (Barošová, 2009). Women and men often choose or are forced to choose occupations in different segments of the economy. Thus, women often end up in fields where remuneration is lower. Career opportunities for men and women also differ, with the result that women are less likely to hold managerial and leadership positions. Currently, the share of women in senior positions in Slovakia is only 22.9% (World Economic Forum, 2024).

The segregation of the labour market is inherently connected to differences in educational attainment between men and women. Education is a particularly important factor in this issue. As women's educational attainment increases, so

does their labour market participation (England, Gornick and Shafer, 2012), and this of course has implications for their employment and ability to build a career (Blau and Winkler, 2018). However, even though in many countries women are now more educated than men, they acquire their education in different fields, which later lead to lower paid jobs (Goldin, 2021). Compared to men, who are more likely to choose technical and science fields, women prefer the humanities (Francesconi and Parey, 2018).

The tangled web of observed economic factors explaining the gender pay gap repeatedly leads to motherhood. According to several authors, wage differentials result from different work experience and fewer hours of work due to maternity responsibilities (Angelov, Johansson and Lindahl, 2016; Spivey, 2005). Women start to fall behind in career status after the birth of their first child and their chances of holding leadership positions decrease (Kleven, Landais and Søgaaard, 2019). In addition, because of their family responsibilities, women are more likely to prefer jobs with non-financial benefits, such as flexibility or job security, and are more likely to be employed in the not-for-profit sector (Redmond and McGuinness, 2019). Unpaid domestic work also plays a significant role, as it is disproportionately carried out by women, thereby hindering their opportunities for career advancement. (Reich-Stiebert, Froehlich and Voltmer, 2023; Blau and Winkler 2018). These large-scale effects of motherhood and unpaid work can also be seen in the fact that there is almost no pay gap between men and women with the same family responsibilities (O'Neill and O'Neill, 2006).

Slovakia, which is the main focus of our work, is still a very traditional country in the 21st century, where women are more likely to bear the weight of family responsibilities and unpaid domestic work. This is reflected, for example, in the use of parental leave, which is available to both parents but used significantly more by women (Vagač, 2011). Moreover, the labour market is highly segregated, with women dominating the health, education and social work sectors, while men have a higher share in the private sector and business (Rievajová and Klimko, 2019). Despite women's higher educational attainment, higher education does not bring them the same financial benefits as men (Rizman, 2017). The unexplained part of the wage gap is still significant, suggesting that discrimination and unobserved effects may play a role in addition to objective factors (Novák and Tóth, 2024; Borovská, 2024). In addition, women often face barriers in the form of limited access to nurseries

and day-care centres after returning to work, making it difficult for them to re-enter to employment (Rievajová and Klimko, 2019).

Despite years of efforts by women's rights campaigners, researchers and policy makers, inequality between men and women persists. On the positive side, there is a downward trend in pay inequalities and an upward trend in the ability to explain a significant part of these differences, for example through the aforementioned socio-economic factors. However, the unexplained part of the gap is still present, both in Slovakia and across other countries. In this paper, using Blinder-Oaxaca decomposition, we examine how much of the gender pay gap in Slovakia is accounted for by differences in the characteristics of the observed groups and how much remains unexplained. We also look at how individual variables contribute to this, with an emphasis on identifying the role that motherhood plays in this issue.

2 Methodology

In this work, we use a method called the Blinder-Oaxaca decomposition. This method helps us not only determine the differences between the means of two groups, but also analyse these differences in more detail. We use the Blinder-Oaxaca decomposition to divide the gender wage gap into the so-called explained and unexplained parts. The explained part represents the differences in the averages of the selected groups that result from differences in the groups' characteristics (e.g. number of years of experience or highest educational attainment). The unexplained part refers to the portion of the gap which cannot be explained by the different characteristics of the groups - its essence lies in the different effects of the variables (for example, if each year in employment is reflected more strongly in men's salaries than in women's salaries). The unexplained part is often referred to as discrimination, but it is important to note that this part also includes the effect of unobserved variables.

Blinder-Oaxaca decomposition uses a linear regression method and produces an identical regression model for each of the observed groups. Consider a regression model where the observed groups are males M and females F . Y represents the dependent variable, X represents the independent variable, and β represents the coefficient of the independent variable including the intercept:

$$Y_g = X'_g \beta_g + \varepsilon_g, \quad E(\varepsilon_g) = 0, \quad g \in (M, F)$$

Then we express the difference D in the average Y as:

$$D = E(Y_M) - E(Y_F) = E(X_M)' \beta_M - E(X_F)' \beta_F$$

Subsequent decomposition will allow further adjustment by adding and subtracting a component $E(X_F)' \beta_M$. Then the decomposition of the mean differences of Y takes the form:

$$D = E + U = \{E(X_M) - E(X_F)\}' \hat{\beta}_M + E(X_F)' (\hat{\beta}_M - \hat{\beta}_F)$$

Where:

$$E = \{E(X_M) - E(X_F)\}' \hat{\beta}_M$$

represents the explained component of the mean differences between groups and

$$U = E(X_F)' (\hat{\beta}_M - \hat{\beta}_F)$$

represents the unexplained component of mean differences between groups. In models with multiple independent variables, it is possible to decompose the effects of each independent variable separately.

2.1. Data

In this paper we use data from the Statistics on Income and Living Conditions (SILC), which is an important source of information on the socio-economic situation of the population. This is an EU survey, which is carried out according to Eurostat methodology and provides harmonised data for 32 countries.

SILC aims to collect detailed data on income, household material conditions, employment, education, health and various aspects of quality of life. Data are collected annually through a sample survey, with individuals and households as the basic units of observation. The survey tracks not only the main sources of income, but also expenditure, the availability of basic necessities and the level of social exclusion.

For this paper, we use the SILC 2021 data for Slovakia. This database provides us with sufficient data not only on the gross income of individuals but also

information on hours worked, type of employment and other factors affecting the wages of individual observations. An important aspect of the SILC survey is the inclusion of information on minor children in households. These data allow for an analysis of how parenthood affects women's earnings relative to men's. Several adjustments have had to be made to the database, most often by categorising continuous variables or defining new variables from the available data. A description of all the variables used in further analysis can be seen in Table 1.

Table 1: Description of variables

Label	mean	sd	min.	max.
ln_income	9.193	.564	3.555	10.878
Hours worked per week	10.878	4.794	5	72
Years as employed	23.151	12.198	0	59
Number of children	.463	.836	0	10
female	.508			
mom	.140			
Age categories				
Age < 20	.003			
Age 20-29	.137			
Age 30-39	.206			
Age 40-49	.293			
Age 50-59	.277			
Age > 60	.084			
Education				
Primary (ISCED 1-2)	.035			
Secondary (ISCED 3-4)	.682			
Bachelor's degree (ISCED 5-6)	.041			
Master's degree (ISCED 7)	.231			
PhD (ISCED 8)	.012			
NACE sectors				
Agriculture (NACE A)	.022			
Industry & Construction (NACE B-F)	.332			
Commerce & Hospitality (NACE G-J)	.254			
Financial & Professional Serv. (NACE K-N)	.082			
Public administration (NACE O)	.114			
Social & Cultural Serv. (NACE P-S)	.197			

ISCO occupations	
High skilled (ISCO 1-3)	.376
Medium ski. white collar (ISCO 4-5)	.288
Medium sk. blue collar (ISCO 6-8)	.266
Low skilled (ISCO 9-10)	.070
Finite term contract	.085
Part time job	.031
Leading position	.112
Age of youngest child	
< 3 years	.130
3-7 years	.081
7-15 years	.146
> 15 years	.643
Legal partnership	.540

Source: own processing.

3 Results

For the purpose of this paper, three decompositions were created with identical independent variables as well as an identical dependent variable describing monetary income. In each of the models, we worked with different groups of observations. The first model, "Males/Females", shows the differences between men and women; the second model, "Everybody/Moms", describes the differences between mothers and the rest of the labour force; and the last model "Non-moms/Moms" decomposes the differences between childless women and mothers.

3.1 Total Wage Differentials

In the results of the overall decomposition, shown in Table 2, we observe that there are significant differences between men and women, the whole population and mothers, as well as between childless women and mothers. The gender gap is 0.156 log points, which corresponds to about 16.8%, while the gap between the rest of the labour force and mothers is slightly higher at 0.168 log points, or about 18.3%. The difference between women without children and mothers is smaller but still significant at 0.0946 log points, implying a difference of almost 9.9% in average earnings.

The analysis shows that for both the gender gap and the gap between mothers

and the rest of the workforce a substantial part of the gap is unexplained. This may indicate the existence of labour market discrimination, or the presence of unobserved factors not captured in the available data. The unexplained part of the gender gap may reflect systemic barriers, such as stereotypes about women's lower productivity or their under-representation in better-paid managerial positions. Similarly, the higher unexplained gap between mothers and the rest of the workforce may indicate the penalisation of women after returning from maternity leave or a lower willingness of employers to invest in their career development. This negative impact may also have some rational basis, as prolonged absence from the labour market during maternity leave may lead to a partial devaluation of women's human capital.

In contrast, the difference between mothers and women without children is largely explained by differences in observed characteristics. This suggests that the wage penalisation of mothers is primarily due to objective factors such as choice of industry, working hours or lower accumulation of work experience. This difference is therefore not mainly attributable to discrimination, but rather due to the different work decisions that women make depending on their parental status.

Table 2: Overall Decomposition of the Pay Gap

	Males/Females ln_income	Everybody/Moms ln_income	Non-moms/Moms ln_income
overall			
group_1	9.296*** (892.31)	9.241*** (1204.93)	9.167*** (830.65)
group_2	9.141*** (915.68)	9.072*** (422.57)	9.072*** (422.54)
difference	0.156*** (10.78)	0.168*** (7.38)	0.094*** (3.92)
explained	-0.0116 (-1.08)	-0.0976*** (-4.89)	0.102** (2.02)
unexplained	0.167*** (11.41)	0.266*** (9.87)	-0.00704 (-0.14)
Observations	4540	4540	2320

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Source: own processing.

3.2 Explained Wage Differentials

The explained part of the Oaxaca decomposition can be seen in Table 3. This analysis shows what part of the wage gap can be attributed to differences in observable characteristics and we find several interesting observations. In the comparison between men and women, the explained fraction has a value of -0.0116, which is quite low and statistically insignificant. However, this suggests that the observable differences between men and women slightly reduce the wage gap. For example, women are more likely to have a university degree than men, which has a positive effect on their wages. If men were to achieve the same level of the observed factors as women, the difference might be even larger. The same is true when comparing the rest of the workforce and mothers where the explained fraction is -0.0976 and it is statistically significant. In contrast, in the case of the comparison of childless women and mothers, the explained fraction is positive and takes on a statistically significant value of 0.102, implying that the observable characteristics largely account for the differences between these groups and if these differences were equalized, the wage gap would narrow.

We can further decompose the explained part of the wage differentials into the effects of individual variables. For example, we see that the wage gap increases until about age 40 when comparing men and women and until about age 30 in Models 2 and 3. Thereafter, at each subsequent age, the explained part of the wage gap starts to shrink. This may be related to women dropping out of the labour market due to maternity responsibilities and then returning at an older age.

Education also emerges as statistically significant in the first two models. Achieving only secondary or post-secondary education widens the wage gap, but with higher educational attainment the wage gap narrows, and we also see that this effect is slightly stronger in the model comparing other labour force and mothers.

The industry in which individuals work also has a significant impact. In some sectors, such as agriculture and financial and professional services, differences in sectoral structure tend to reduce the wage gap. Conversely, in sectors such as social and cultural services, differences in representation contribute to a larger wage gap, suggesting that this sector may be a major source of wage

disadvantage for women and mothers.

Differences in work intensity and career experience are also important. For example, differences in the number of hours worked per week generally increase the wage gap. Similarly, differences in the number of years of experience can have different effects. In some cases, longer tenure may help to reduce the gap, while in other cases, particularly where women are more likely to face career breaks, it may ultimately widen the gap. Part-time employment also contributes to an increase in the wage gap, reflecting the lower earnings associated with shorter working hours.

Marital status and related variables, such as the number of children or the age of the youngest child, also have an impact. These variables capture the economic consequences of having children, including possible career breaks and the associated reduction in work experience or the number of hours worked. The way in which these family-related characteristics differ between groups can significantly shape the wage gap.

Table 3: Explained Part of Decompositions

	Males/Females ln_income	Everybody/ Moms ln_income	Non-moms/ Moms ln_income
explained			
Age group (Base < 20years)			
Age 20-29	0.0541*** (2.83)	0.0931*** (2.95)	0.0614*** (7.24)
Age 30-39	0.0388** (2.52)	-0.143*** (-2.99)	-0.172*** (-8.22)
Age 40-49	-0.0190 (-1.56)	-0.210*** (-2.92)	-0.226*** (-8.28)
Age 50-59	-0.0556** (-2.45)	0.152** (2.50)	0.215*** (7.12)
Age > 60	-0.00974 (-1.50)	0.0557** (2.23)	0.0727*** (5.73)
Education (Base ISCED 0-2)			
Secondary (ISCED 3-4)	0.0148*** (3.05)	0.0176*** (2.86)	0.00580 (1.23)

Bachelor's degree (ISCED 5-6)	-0.00873*** (-3.59)	-0.0103*** (-2.70)	-0.00511 (-1.53)
Master's degree (ISCED 7)	-0.0272*** (-4.42)	-0.0286*** (-3.34)	-0.0129* (-1.71)
PhD (ISCED 8)	-0.00101 (-0.89)	-0.00140 (-0.73)	-0.000607 (-0.45)
Sector (No Base)			
Agriculture (NACE A)	-0.00202** (-2.13)	-0.00121* (-1.76)	-0.000347 (-0.50)
Industry & Construction (NACE B-F)	0.00138 (0.35)	0.00168 (0.87)	-0.000263 (-0.33)
Commerce & Hospitality (NACE G-J)	0.000969 (1.52)	0.000873 (1.22)	0.00000315 (0.02)
Financial & Professional Serv. (NACE K-N)	-0.00210** (-2.44)	-0.00209* (-1.92)	-0.00188 (-1.14)
Public administration (NACE O)	-0.00237*** (-2.61)	-0.000324 (-0.46)	0.000878 (0.99)
Social & Cultural Serv. (NACE P-S)	0.0124*** (3.03)	0.00922*** (3.70)	-0.000304 (-0.48)
Occupation (No Base)			
High skilled (ISCO 1-3)	-0.0143*** (-5.51)	-0.0115*** (-3.30)	-0.00469 (-1.14)
Medium ski. white collar (ISCO 4-5)	0.00732*** (2.78)	0.00505*** (3.15)	-0.0000141 (-0.03)
Medium sk. blue collar (ISCO 6-8)	0.000315 (0.07)	0.00391 (1.61)	0.000238 (0.50)
Low skilled (ISCO 9-10)	0.00209** (2.04)	-0.000111 (-0.08)	-0.00193 (-0.99)
Job characteristics			
Finite term contract = 1	-0.00317 (-1.50)	0.000107 (0.04)	0.00208 (0.70)
Hours worked per week	0.0154*** (5.11)	0.0133*** (4.06)	0.00591* (1.68)

Years as employed	-0.0188*** (-3.91)	0.0378*** (4.36)	0.0400** (2.56)
Part time job = 1	0.00961*** (3.89)	0.0115*** (2.78)	0.00534 (1.61)
Leading position = 1	0.00106 (0.98)	0.00172 (1.15)	0.00152 (0.81)
Family Status			
Number of children	0.000786 (0.68)	-0.0351** (-2.01)	0.0321 (0.78)
Age of youngest child (Base			
>15 years)			
< 3 years	-0.00704* (-1.86)	0.000751 (0.79)	0.0406*** (3.49)
3-7 years	0.000162 (0.48)	-0.0171** (-2.04)	0.0101 (0.65)
7-15 years	0.000405 (0.40)	-0.0458*** (-3.45)	0.0173 (0.71)
Legal partnership = 1	-0.000143 (-0.40)	0.00446 (1.46)	0.0162*** (3.51)

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Source: own processing.

3.3 Unexplained Wage Differentials

An important aspect of the unexplained component of the Blinder-Oaxaca decomposition is that it highlights potential differences in the returns to these characteristics. Even if two individuals are similar in age, education level, and work experience, the fact that women and mothers consistently receive lower wages suggests that unobserved factors may be at play. These factors may include differences in bargaining power, differences in the quality of work that are not easily measured, or systemic biases and discrimination that affect pay. In addition, the way in which education is measured in research does not take into account qualitative differences in education, such as differences between schools, faculties or fields of study, which may affect future earnings. Self-selection of women into less stressful, less dynamic or less rewarding positions

are also an important factors that are not captured by the available data but may be reflected in an unexplained part of the pay gap. The unexplained part of the pay gap can be seen in Table 4.

When comparing men and women, this unexplained fraction has a value of 0.167, indicating that even after all measurable factors have been balanced, there remains a significant difference that may be associated with discriminatory practices or different valuations of the same qualities. In the comparison of the rest of the labour force and mothers, this residual effect is even more pronounced, reaching a value of 0.266, suggesting that factors not included in the model have a significant impact on the wage disadvantage of mothers. For these models, the unexplained part is statistically significant. In contrast, when comparing childless women and mothers, the unexplained part is statistically insignificant and almost negligible (-0.00704), implying that the differences between these groups are almost completely explained by observable characteristics.

Of particular interest are the unexplained coefficients for age groups in the models. In the unexplained part, the age groups 30-39 and 40-49 contribute positively in models involving mothers. Similarly, unexplained differences in returns to education, sectoral and occupational characteristics suggest that the labour market rewards these characteristics more for men and childless women. The greatest statistical significance of the coefficients can be seen when decomposing by childless women and mothers.

Not only the number of children but also the age of the youngest child increases the unexplained gap. The greatest statistical significance is shown for children under three years of age. Legal partnership also shows an interesting unexplained effect, especially when compared between men and women. This positive effect on wage inequality could be capturing unobserved aspects of household dynamics, such as the amount of unpaid work performed by each gender. This finding could imply that wage inequalities associated with motherhood do not begin to widen after the birth of a child but rather from the beginning of a partnership.

Table 4: Unexplained Part of Decompositions

	Males/Females ln_income	Everybody/ Moms ln_income	Non-moms/ Moms ln_income
explained			
Age group (Base < 20years)			
Age 20-29	0.0166 (0.50)	0.0199** (2.35)	0.0184*** (3.41)
Age 30-39	0.0206 (0.36)	0.209** (2.05)	0.175*** (3.45)
Age 40-49	0.00273 (0.03)	0.285* (1.86)	0.277*** (3.39)
Age 50-59	-0.00235 (-0.02)	0.0406 (1.53)	0.0570* (1.83)
Age > 60	-0.00271 (-0.09)	0.00123 (0.37)	0.00640 (0.80)
Education (Base ISCED 0-2)			
Secondary (ISCED 3-4)	0.0936 (1.46)	0.133* (1.67)	0.0810 (0.90)
Bachelor's degree (ISCED 5-6)	0.00310 (0.67)	0.00950 (1.00)	0.00597 (0.57)
Master's degree (ISCED 7)	0.0246 (1.02)	0.0438 (1.12)	0.0215 (0.50)
PhD (ISCED 8)	0.00233 (1.17)	0.00323 (1.00)	0.00118 (0.35)
Sector (No Base)			
Agriculture (NACE A)	0.00156 (0.78)	0.00556 (1.21)	0.00576 (1.31)
Industry & Construction (NACE B-F)	0.00265 (0.25)	-0.0344* (-1.77)	-0.0402** (-2.10)
Commerce & Hospitality (NACE G-J)	0.0141 (1.64)	-0.0121 (-0.57)	-0.0240 (-1.10)
Financial & Professional Serv. (NACE K-N)	-0.00722* (-1.88)	-0.0142 (-1.41)	-0.0100 (-1.01)

Public administration (NACE O)	0.00384 (0.89)	-0.00809 (-0.69)	-0.0114 (-0.93)
Social & Cultural Serv. (NACE P-S)	-0.0120* (-1.65)	-0.0413 (-1.45)	-0.0316 (-1.06)
Occupation (No Base)			
High skilled (ISCO 1-3)	-0.00753 (-0.75)	0.0167 (0.89)	0.0270 (1.36)
Medium ski. white collar (ISCO 4-5)	-0.0206*** (-2.69)	-0.0219 (-1.63)	-0.00105 (-0.07)
Medium sk. blue collar (ISCO 6-8)	-0.000447 (-0.07)	0.00593 (0.68)	0.00170 (0.21)
Low skilled (ISCO 9-10)	0.00537* (1.85)	-0.00178 (-0.43)	-0.00540 (-1.21)
Job characteristics			
Finite term contract = 1	-0.00272 (-0.57)	-0.00563 (-0.78)	-0.00483 (-0.65)
Hours worked per week	-0.271* (-1.80)	-0.544** (-2.04)	-0.488* (-1.69)
Years as employed	0.0698 (0.88)	-0.00142 (-0.01)	-0.0652 (-0.61)
Part time job = 1	-0.290** (-2.34)	-0.453*** (-2.88)	-0.370** (-2.12)
Leading position = 1	-0.00483 (-1.00)	-0.00883 (-1.27)	-0.00783 (-1.06)
Family Status			
Number of children	0.0172 (1.36)	0.0875** (2.33)	0.0127 (0.98)
Age of youngest child (Base >15 years)			
< 3 years	0.0155** (2.55)	0.0394*** (3.35)	-0.00287 (-0.70)
3-7 years	0.00311 (0.63)	0.0250 (1.52)	-0.00503 (-0.52)
7-15 years	0.00764 (1.14)	0.0587** (2.45)	-0.0103 (-0.94)

Legal partnership = 1	0.0558*** (3.24)	0.00948 (0.31)	-0.0280 (-0.94)
Constant	0.428 (1.12)	0.419 (0.78)	0.408 (0.80)

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Source: own processing.

4 Conclusions

Inequality between men and women is a long-standing problem in many countries around the world. In this paper, we focus on a closer analysis of the gender wage gap in Slovakia using Blinder-Oaxaca decomposition in order to observe the effects of individual socio-economic factors and with an emphasis on the impact of motherhood. Data from the European SILC 2021 were used in this work.

We analysed three different models, each of which revealed significant differences in pay. The overall gender pay gap is approximately 16.8%. The inequality is even more pronounced when comparing mothers with other employees, where the gap is 18.3%. However, when focusing only on the difference between mothers and childless women, we observe a smaller but still statistically significant deviation of 9.9%.

Like the authors before us, we show that a significant part of the gender pay gap in Slovakia is unexplained (Novák and Tóth, 2024; Borovská, 2024). We see a similar result when comparing mothers and the rest of the workforce, which may indicate the presence of discrimination or other unobserved factors, such as the quality of education or different preferences of women and men when it comes to job characteristics.

However, when comparing mothers and childless women, we see that the differences are largely explained by observed characteristics, in particular age categories, the presence of young children under the age of three, and marital status. In contrast, for the overall gender gap between men and women, these factors play a role mainly in the unexplained part, suggesting that their influence is specific to women. In fact, men do not have a similar negative effect on wages and, on the contrary, a 'paternal premium' may be present, where higher

earnings reflect the expectation that the man, as the main breadwinner, will strive for financial stability.

We contribute to the study of the issue mainly by focusing on mothers themselves. We observe that differences in mothers' pay are not only related to having children, but also to when women became mothers. The penalties associated with motherhood seem to be most pronounced in the 30s and 40s, a crucial period for career advancement. The age of the youngest child is also an important factor in the unexplained component, with children under three showing the greatest statistical significance. Another interesting finding is the unexplained effects of partnership, which may imply an increase in unpaid work and other unobserved factors prior to motherhood itself.

These findings underline that the gender pay gap is not only a consequence of the different work decisions of women and men but also reflects deeper structural inequalities in the labour market. The significant share of the unexplained part of the wage gap suggests that, in addition to observable characteristics, factors that are not directly measurable, such as gender stereotypes, the bargaining power of employees or employers' expectations of mothers also play a role. Particularly for women with young children, it is clear that the combination of family responsibilities and barriers to career advancement leads to long-term disadvantages that can cumulate over a lifetime of work.

These results underline the importance of policies aimed at reducing the gender pay gap. Better access to pre-school care, the promotion of flexible working arrangements or measures to eliminate bias in career progression could help to reduce the unexplained part of the pay gap. The question for the future is how we can better understand the long-term effects of motherhood on women's wage progression and what role systemic measures can play in reducing economic inequalities.

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