

Explaining the Male-Female Wage Gap: Do Gender Role Attitudes Matter?¹

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Explaining the Male-Female Wage Gap: Do Gender Role Attitudes Matter? Using data from a unique survey of employees in the Czech Republic, this paper analyzes the relationship between gender-role attitudes and the male-female wage gap while controlling for observable characteristics such as work experience, education, family factors, and job characteristics. The analysis focuses on five factors representing gender-role attitudes that have not been systematically explored in the literature: preferred responsibility for income, preferred responsibility for household chores and child care, life priorities (career, family, others), preference for job flexibility, and prioritizing less demanding and stressful jobs over higher wages. The results demonstrate that in the Czech Republic, traditional gender-role attitudes are significantly correlated with wages and explain a significant part of the gender wage gap. To be effective, policies aiming to promote gender equality in the labor market need to take the prevailing gender norms into account.

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Introduction

Although many countries in the European Union (EU) have made important strides toward gender equality in education and healthcare in recent decades, significant gender gaps in labor force participation and wages still prevail. Women continue to earn less than men in comparable jobs, experience more interruptions in their careers, and are less likely to reach top decision-making or advisory positions (World Economic Forum 2023; European Commission 2023; OECD 2012). According to Eurostat (2024a), in 2022, only 69.3 % of women of working age in the EU were employed, compared to 80.0 % of men, resulting in a gender employment gap of 10.7 percentage points. This employment gap translates to a loss of €370 billion per year. On the other hand, the

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negative impact of motherhood on employment rates has recently begun to recede in some EU countries. In Norway, Sweden, or Denmark, the employment rate of mothers with at least one child under six was already higher than that of childless women in 2022 (cf. Eurostat 2024b). Moreover, the gender gap in average gross hourly earnings in the EU (as a percentage of male earnings) decreased from 16.4 % in 2012 to 12.7 % in 2022 as well (Eurostat 2024c).

The Czech Republic is ranked 101 out of 146 countries (35 out of 36 European countries) in the global gender gap index measured by the World Economic Forum (2023). In 2022, the impact of motherhood on female employment rates was most negative in the Czech Republic. The difference in employment rates between childless women and mothers with a child under six in the age group 25-49 exceeds 45 percentage points (compared to the EU average of 8.8 percentage points) (Eurostat 2024b). Although the government is committed to complying with the principle of equal pay included in the European Union (EU) Treaties and the Directive on gender equality in the area of employment and occupation (2006/54/EC), the country recorded the third-largest gender pay gap among total employees (17.9 %) as well as in the 35-44 age group (21.5 %) in the EU in 2022 (Eurostat 2024c and 2024d).

The gender wage gap is a significant topic in labor market economics and has been systematically researched since the early 1970s. The traditional approach primarily focused on economic neoclassical theories and their contribution to the gender wage gap. According to these theories, differences in human capital and labor market characteristics explain why men and women are differentially rewarded. Due to the traditional division of labor between men and women, women tend to pursue different types of occupations than men, where they may invest less in their human capital to minimize losses due to caring obligations (e.g., Mincer – Polachek 1974; Becker 1993; Tam 1997). They may also choose occupations with lower career advancement opportunities and vertical mobility, as well as lower wage levels, which are compensated by non-pecuniary amenities such as family-friendly working conditions, reduced work risks, and flexible schedules (e.g., Huffman – Velasco 1997).

In line with statistical discrimination theory, employers often make decisions based on (even unfounded) assumptions about the average characteristics of women in the labor market (e.g., frequent absenteeism due to childcare, perceived lack of work commitment), as it may be disadvantageous for them to ascertain the actual individual skills and abilities of job applicants (Phelps 1972; Zajíčková – Zajíček 2021).

However, some explanations offered by economic theories appear to be limited, and a significant portion of the gender wage gap remains unexplained (cf., Křížková et al. 2018; Blau – Kahn 2017; Hedija 2017; Kamal – Blacklow 2022; Xinxin 2024). Zajíčková – Zajíček (2021) provide an overview of studies

on the gender pay gap using Czech datasets over the last 20 years. The unexplained portion of the gender pay gap varies from 9.2 % to 27 %, depending on the time frame, datasets used, methods applied, and their application. Křížková et al. (2018) summarize that neoclassical economic theories view the gender wage gap through a stereotypical lens, emphasizing the different characteristics and abilities of women, including their work competencies, and uncritically accepting the division of gender roles in families.

Sociological and psychological theories offer different perspectives and seek social or psychological mechanisms, influences, and factors that contribute to the production and reproduction of gender pay inequalities (e.g., Křížková et al. 2018; Blau – Kahn 2017; Kamal – Blacklow 2022; Roethlisberger et al. 2023; Xinxin 2024). For example, the dual labor market theory explains the gender wage gap by illustrating how gender inequality and stereotypes lead to men and women being located in different segments of the labor market with varying incomes (e.g., Klimczuk – Klimczuk-Kochańska 2016; Čermáková 1997). Institutional theory focuses on various institutions, such as trade unions, and their influence on the formation or elimination of gender inequalities in the labor market (Hašková 2002). Gender theories explicitly concentrate on gendered labor market phenomena such as gender biases in relation to occupational choice and performance and the intersection of inequalities in the public and private spheres (Křížková et al. 2018; Acker 1990; Čermáková 1997; Galos – Coppock 2023). Within gender theories, attention has been paid to the importance of parenthood in explaining the gender wage gap. The motherhood penalty refers to women facing disadvantages at work, while the fatherhood premium indicates men receiving advantages (Cukrowska-Torzewska – Lovasz 2020).

From this brief overview of the main theoretical concepts, it is apparent that the gender wage gap results from a complex interplay between macro-, meso-, and micro-level factors. Consistent with Křížková et al. (2018), it can be concluded that the macro level is mainly represented by the structural aspects of the labor market (such as segregation into sectors and branches of economic activity, and into individual occupations, etc.). The meso level encompasses the level of employer entities (firms and organizations), while the micro level includes individual characteristics of workers such as education level, length of experience, number of hours worked over a certain period, etc.

Many studies on male-female wage differentials usually rely on micro-data covering only selected observed characteristics such as education, experience, occupation, and industry. Recent research suggests that several other factors influence gender wage differentials, with non-cognitive factors such as personality and social norms playing a significant role (cf. Roethlisberger et al. 2023; Xinxin 2024; Kamal – Blacklow 2022; Lips 2013). Social norms reflect

the different roles that the social context assigns to women and men, highlighting that they do not operate in equivalent contexts with equivalent cultural and social support (Lips 2013). As an important component of social norms, gender role attitudes may affect marital status, family and work choices, and pregnancy and childcare responsibilities, all of which may contribute to the gender wage gap.

Gender-role attitudes, defined as the views held by individuals regarding the roles men and women should play in society (Horst 2014), influence behavior and expectations in the labor market. According to traditional gender-role attitudes, women fulfill their roles through nurturing, homemaking, and parenting activities, while men ensure family income. In contrast, egalitarian gender-role attitudes refer to the idea that men and women may successfully fulfill the same social roles and should have the same opportunities (Kulik 2018). Consequently, the inclination towards traditional or egalitarian gender-role attitudes can lead to different behaviors among men and women who otherwise share similar characteristics (such as age, education, and work experience) in the labor market (e.g., Fortin 2005; Preston 2023).

Where traditional views prevail, women's priorities often center around the household at the expense of their economic empowerment. Women are more likely than men to divide their energy and time between household and work responsibilities. Consequently, they may prefer stable jobs with lower risk, less stress, proximity to home, greater time flexibility, and may also be less assertive in negotiating promotions or wage increases compared to men (Blau – Kahn 2017; Akerlof – Kranton 2000; Polachek 2007; Redmond – McGuinness 2019). This, in turn, impacts employer expectations, leading them to assume that women will take maternity leave, require job flexibility and shorter hours, resulting in more frequent absences and lower productivity. As a result, employers may prefer to hire men or pay women less, aligning with the expected lower marginal product (Tomaskovic-Devey – Skaggs 2002; Hemstrom 1998; Naur – Smith 1998; Hansen 1995). Based on meta-reanalysis of hiring discrimination audit experiments, Galos and Coppock (2023) confirmed strong gender bias in employment. They found out that in better paying occupations dominated by men, the effect of being a woman is negative, while in the lower paying occupations dominated by women, the effect is positive. These signaling effects and the differing priorities of men and women in the labor market due to prevailing gender-role attitudes contribute to male-female wage differences. Research on gender-role attitudes and their impact on the labor market has often focused on individual aspects among these factors and, frequently due to data constraints, has not comprehensively covered key factors that may explain gender pay gaps.

However, these assumptions also have certain limitations, as gender-role attitudes and decisions may simply result from constrained choices, influenced by labor market/workplace conditions, company-based work-family policies, the availability of childcare services, characteristics of parental leave policies, and decisions regarding housework and childcare within the family (e.g., Cutillo – Centra 2017; Roethlisberger et al. 2023; Lomazzi et al. 2018). Furthermore, current research on personality traits and pay gaps largely assumes that personality traits and attitudes are relatively stable. According to Roethlisberger et al. (2023), this is a shortcoming as it fails to account for how our work environment is likely to influence and foster traits that have payoffs. For instance, competition at work may stimulate our need to be assertive, thereby triggering a change in behavior. Similarly, entry into parenthood can lead to more traditional attitudes (see Grinza et al. 2022). Moreover, we can also question the implicit assumption of many cross-national studies that gender-role attitudes fall along a single continuum between traditional and egalitarian. Knight and Brinton (2017) demonstrate distinct varieties of egalitarianism across European countries and suggest analyzing the joint impact of gender-role ideology and institutional arrangements and social policies on consequential macro-level outcomes.

Considering the aforementioned limitations, this research aims to close the knowledge gap regarding the links between gender-role attitudes and the male-female average monthly wage gap. We utilize a unique nationally representative survey of employees in the Czech Republic from 2011. The Czech Republic exhibits one of the highest gender pay gaps within the EU against the backdrop of overall low-income inequality, making it an interesting case for exploring factors associated with the gap. In addition to standard human capital determinants such as work experience and educational level attained, and information on family factors (such as the number and age of children, marital status, and the length of parental leave), as well as job characteristics (occupation, public and private sectors, number of working hours per week), the survey contains novel variables related to gender-role attitudes (such as attitudes towards responsibility for ensuring income and household chores in a family, life priorities, preferences for job flexibility, and prioritizing less demanding and stressful jobs over higher wages). This dataset enables us to gain additional insights into the interplay between gender-role attitudes and the gender wage gap. Recognizing that data from 2011 may no longer provide current information on contemporary gender roles, we conduct at least a partial replication of the analysis using similar data from 2022. Although the new data does not include all variables on gender attitudes as the original data did, they still allow for at least a partial comparison of the evolution of gender roles over time.

The remainder of the paper is organized as follows: After this introduction, Section II reviews the literature on gender-role attitudes, family factors, and the wages of men and women. Section III describes the data and outlines the empirical strategy. Section IV presents the results of the empirical analysis. Finally, Section V concludes and provides policy recommendations.

Literature Review

Ample research already pointed to the impact of conventional gender roles on the labor market outcomes of men and women.⁶ This section thus concentrates on the literature covering gender-role attitudes and family factors in explaining the observed differences in wages between men and women.

Impact of Gender-Role Attitudes on the Wages of Men and Women

One of the first studies investigating gender-role attitudes as factors influencing labor market outcomes was conducted by McCrate (1988). The study examined the mechanisms and consequences of power between men and women at work and in the household. Similarly, a study by Fortin (2005), analyzing the impact of gender roles, utilized data from the World Values Survey and demonstrated that the social representation of women as homemakers and men as breadwinners remains quite stable and significantly predicts women's and men's labor market outcomes.

Langdon and Klomegah (2013), Bertrand et al. (2015), as well as Blau and Kahn (2017), presented new empirical evidence of the gender wage gap in the US, highlighting the significant impact of gender-role attitudes on the wages of men and women. Bertrand et al. (2015) built on Akerlof and Kranton's (2000) concept of the utility model, which suggests that one's identity can influence economic outcomes because behaving differently from what is expected for one's social category could decrease utility. In their utility function, the authors proposed that identity is associated with different social categories and how people in these categories should behave. They further constructed a simple game-theoretic model showing how identity can affect individual interactions. Identity in their model was applied to the gender roles in a society where women are homemakers and men are breadwinners. The model clarified women's lower labor force participation as the result of their identity as homemakers. Differentiation from these social categories brings costs, and therefore it is assumed that people will avoid it. We can expect that gender-role attitudes are strongly influenced by the concept of identity. Bertrand et al. (2015) tested the utility model with an example of aversion to a situation where

⁶ Bertrand (2010) and Pearse and Connell (2016) gave a comprehensive review of the research on gender-related factors as possible reasons for gender differences in the labor market.

a wife earns more than her husband. The authors presented evidence of the impact of this aversion on marriage formation, the wife's labor force participation, the wife's income conditional on working, marriage satisfaction, the division of home production, and others. For example, they found that if the wife's potential income is likely to exceed the husband's, the wife is less likely to participate in the labor market, or if she does, her income is lower than her potential. This pattern could lower the observed relative wages of employed married women.

Pearse and Connell (2016) reviewed literature focusing on economic interpretations and implications of gender roles, emphasizing the specific role of care associated with women as a factor in economic decision-making. Blau and Kahn (2017) further discussed recent research focusing on the gender wage gap and emphasized the importance of investigating gender roles in explaining gender wage differentials in the labor market.

Regarding differences in female labor force participation, in their study on the Netherlands, Khoudja and Fleischmann (2018) found that women's labor market transitions are not only reactions to economic pressure and institutional constraints but also influenced by women's and, to a lesser extent, their partners' gender attitudes. Similarly, based on the German Panel Study Labour Market and Social Security, Lietzmann and Frodermann (2021) applied longitudinal analyses to investigate the influence of gender role attitudes and household context on women's participation in the labor market in Germany. They concluded that overall, equality in gender-role attitudes leads to a higher probability of female employment. Specifically, egalitarian gender-role attitudes contribute to reducing the gender employment gap for single mothers and partnered women, both with and without children. Mothers with moderately egalitarian attitudes are less likely to be employed full-time compared to single mothers and childless women with a partner.

Kleven et al. (2018) provided an analysis of gender-role attitudes through their impact on the child penalty. The child penalty refers to a gender-specific wage gap caused by the responsibility of caring for children. Using the latest Danish data, they found that the child penalty is partially caused by gender-role attitudes that are transmitted through generations, from parents to daughters (but not sons). The results for sons were not statistically significant. According to the authors, the childhood environment plays a role in the formation of women's attitudes toward family and career. They also emphasized the importance of further research on gender roles, as the penalties on wages of women due to child-rearing responsibilities have increased dramatically over time, from about 40 % in 1980 to about 80 % in 2013.

Impact of Family Factors (Children, Marital Status) on Wages of Men and Women

The empirical literature investigating the impact of children on the wages of men and women points to the motherhood penalty and fatherhood premium. Research on U. S. data (Waldfogel 1998) indicated a negative effect of children on the wages of women (-10 %) and a positive effect on the wages of men (4 %). Data on British women revealed similar results (Davies et al. 2000; Joshi – Davies 2002). However, the data also showed some new evidence that the earnings penalty of motherhood has become much lower for highly educated women who are more likely to return to their full-time jobs after childbirth. Waldfogel and Sigle-Rushton (2007) suggested that the lower wages of women with children are connected with the trade-offs women make between wages and flexibility. For instance, women may seek part-time jobs or locations close to home and may exchange higher wages for this type of flexibility. Furthermore, it is supposed that the longer hours that women spend on housework and taking care of children may also decrease the effort they put into their market jobs compared to men or women without children.

Waldfogel and Sigle-Rushton (2007) further compared the long-term earnings of women with children, women without children, and men. The analysis was conducted separately for less educated, moderately educated, and highly educated individuals in Anglo-American, Continental European, and Scandinavian countries. The authors found that, for the most part, mothers in the Continental European group experience the largest earnings differentials (46-63 % of wages of childless women and 40-60 % of wages of men with children), mothers in the Scandinavian countries experience the smallest (80-91 % of wages of childless women and 61-68 % of wages of men with children), and mothers in the Anglo-American countries are in the middle position (58-89 % of wages of childless women and 52-60 % of wages of men with children). The smallest wage differentials in the Scandinavian countries were, according to the authors, the results of family-friendly policies applied in those countries. However, the analysis also showed that there are large gender gaps for childless women in many countries, suggesting that women's greater responsibility for childcare is not the only reason for gender wage differentials.

A growing number of studies point out the unexpected effect of family-friendly policies on women's economic attainments. They have emphasized that although family-friendly policies enhance women's economic independence by facilitating their participation in the paid economy (OECD 2001), other forms of gender inequality begin to appear. One of them is gender-based occupational segregation, which is more evident in the women-friendly Scandinavian labor markets than in liberal market economies like the U.S. and Canada (Morrissey 2017; Chang 2000; Jacobs – Gerson 2004; Jacobs – Lim

1992; Wright et al. 1995). Another consequence of family-friendly policies is employers' reluctance to hire women for high-status, high-income jobs. Family policies that offer long periods of parental leave and reduced working hours may discourage employers from hiring women for lucrative and prestigious jobs requiring high training costs (Hansen 1995; Hemstrom 1998; Naur – Smith 1998; Tomaskovic-Devey – Skaggs 2002).

Goldin et al. (2017) revealed the importance of children for wage differentials between men and women in the U. S. as well. The study showed, using data covering the years 1995 to 2008, that the gender earnings gap is the widest in the 15 to 20 years after school leaving and is even wider for those who are married and have young children.

Cukrowska-Torzewska and Lovasz (2020) demonstrate that the variation in parenthood wage gaps across countries has been attributed to country-specific institutional contexts, especially concerning family policies and cultural attitudes towards the gender division of housework and childcare. They analyzed 26 EU countries, and the results confirm that motherhood negatively affects women's wages in most, but not all of the countries. In Nordic countries, the motherhood wage gap is almost zero. In Southern European countries, motherhood is found to increase women's wages, which is probably driven by low maternal employment. In Anglo-Saxon and Continental European countries, the motherhood wage gaps are slightly greater than in the group of Nordic countries. The group of Eastern European countries, including the Czech Republic, represents in their study the most extreme group, where mothers receive significantly lower wages than childless women, and the motherhood wage gap is an important contributor to the overall gender gap. Furthermore, they found that while very long leaves that are longer than 2 years are associated with a higher wage penalty for mothers, short leaves of at most 1 year seem to mitigate mothers' wage disadvantage.

Another aspect of family factors relates to marital status. Antonovics and Town (2003) pointed out that wage studies consistently find a marital wage premium for men, which is usually explained by two reasons. First, employers favor married over unmarried men because married men are assumed to be more productive, as they can specialize in non-household production. Second, more productive men are more likely to marry. For instance, Hill (1979), Korenman and Neumark (1991), or Antonovics and Town (2003) found a marital wage premium for men and no effect for women. Richardson (2003) offered a brief review of Sweden, Ribar (2004) discussed the literature and provided information on the U. S. The advantages and disadvantages of various models, variables, and methods used to analyze marital wage differentials were also discussed by Gupta et al. (2005). The authors used a large panel dataset from Denmark to estimate a marital and cohabitation premium, too. Their

results indicated that part of the marriage or cohabitation premium for men is not due to marriage or cohabitation itself, but due to having children. In other words, when the wage equations include not only marital status but also children, then only children play a significant role in the wages of men.

As mentioned above, the Czech Republic has one of the highest gender pay gaps and lowest economic activity rates among women in the 25-49 age category within Europe. According to Kalíšková and Munich (2012), the decline in female employment during the period of motherhood in the Czech Republic has been mainly due to the insufficient supply of affordable and high-quality preschool childcare, inadequate part-time work opportunities, as well as lengthy parental leave. Filipová and Pytliková (2017) also highlighted the influence of these factors on the gender wage gap and low fertility rate in the Czech Republic. Moreover, the study by Zajickova and Zajicek (2021) estimated the size of the gender pay gap in the Czech Republic for the years 2006-2017 using data from the European Union Statistics on Income and Living Conditions (EU-SILC) survey and found a relatively stable gender wage gap of around 20%.

Data and Empirical Model

Data

Data utilized in this paper was obtained from a questionnaire containing 64 questions covering information about income, various aspects of work and family life, preferences, personality, and other characteristics of employees and their jobs.⁷ Based on this questionnaire the survey of a representative sample of Czech employees aged 25-54 years was conducted in November 2011. We selected this age category which is referred to as prime-age. The Organization for Economic Cooperation and Development (OECD) typically defines prime-age workers as individuals between the ages of 25 and 54. These are considered to be individuals in their prime working years, often characterized by their highest levels of labor force participation and productivity. In the context of the labor market, prime-age workers play a crucial role in contributing to the workforce and the economy.

The sample was chosen to be representative of the Czech employees based on the quota sampling method using the following criteria of population structure: sex, age, highest achieved education, region, and size of municipality of residence. Respondents were chosen randomly according to quotas.

⁷ Questions for the Survey were designed by the authors of the Czech Science Foundation Grant P402/12/G130: Lenka Johnson Filipova (VSB-TU Ostrava), Jiri Balcar (VSB-TU Ostrava), Mariola Pytlikova (VSB-TU Ostrava), Jaromir Gottvald (VSB-TU Ostrava). Valuable comments were provided also by Alicia Adsera (Princeton University), Tor Eriksson (Aarhus University), Armin Falk (Bonn University), James Heckman (University of Chicago), Leslie Stratton (Virginia Commonwealth University) and anonymous respondents participating in two pilot surveys. The affiliations mentioned above are from the time the questionnaire was designed.

The process resulted in a survey providing detailed information on 1984 employees.⁸

Appendix 1 shows that the surveyed sample is representative of the population of employees aged between 25-54 years in the Czech Republic. The second column shows the structure of the whole population of employees. The third and fourth columns contain the structure of employees in our data sample which corresponds to the structure of the whole population of Czech employees.

We further used the data from wage determination survey conducted in 2022. This dataset is also representative at the level of the Czech Republic and contains information about employees aged 25-54 years. The representativeness of the data is ensured according to the same criteria as the survey from 2011. The resulting dataset comprises 1534 observations. However, the dataset from 2022 is not fully compatible with the dataset from 2011, containing fewer variables providing information about gender roles and also a different expression of the explained variable (natural logarithm of gross monthly wage in 2011 and natural logarithm of net monthly wage in 2022). Nevertheless, it allows for at least partial comparison of the evolution of the relationship between wage levels and gender roles across time.

Empirical strategy

The common tool for analyzing determinants of wages and earnings differences among individuals is the equation of Jacob Mincer where the earnings function is derived from the theory of human capital (Mincer – Polachek 1974).

$$\ln W = \beta_0 + \beta_1 S + \beta_2 X + \beta_3 X^2 + \varepsilon \quad (1)$$

This original form includes $\ln W$ as the logarithm of an employee's wage, S represents a linear function of years of schooling, $X + X^2$ means a quadratic function of potential years of work experience (age minus schooling minus six), and ε is a residual for other variables.

We used the standard approach in this study as well and modified it by implementing more wage determinants. In our model, W stands for the gross monthly wage from the main occupation of an individual. The variable represents the self-reported income of the surveyed respondents. They were asked the question '*Please state your gross monthly income from your main occupation*'.

We use explanatory variables that capture education and work experience, variables reflecting gender-role attitudes and female dummy, family and back-

⁸ The limitation of this data is that we cannot control for the selection bias especially in the case of married women with young children who could decide not to enter the labor force at all if the offered wage is lower than the family income ensured by a partner (as discussed, for instance in Blau - Kahn 2017).

ground characteristics, health limitations of work performance, as well as job and employer characteristics and location. The list of control variables used in the model are displayed below Table 1, under Note 3.

The main focus of this paper is on the female dummy variable, which illustrates wage differentials between men and women, and on variables reflecting gender-role attitudes. The first two variables explore the connections between attitudes towards responsibility for earning income and household chores within a family and wages. Respondents of the survey were asked *who should be responsible for ensuring an adequate income for the family* and second, *who should be responsible for household chores and taking care of children*. The answers were within 5 categories: *almost entirely me*, *mostly me*, *me and partner equally*, *mostly partner*, and *almost entirely a partner*. The nature of the variables allows us to treat them as continuous, and thus we utilize a linear term as a straightforward indicator of the relationship between these gender-role variables and wages.

Another variable related to gender-role attitudes pertains to life priorities. Respondents were asked to rank their top three priorities in life, choosing from career, family, and other options. The actual duration of parental leave is also included in the group of gender-role variables. We anticipate that women or couples with traditional gender-role attitudes will prefer mothers to stay at home with young children, opting for longer parental leave.

The last group of variables reflecting gender-role attitudes includes *job flexibility*, and *less demanding and stressful job*. The respondents were asked if they prefer job flexibility, resp. less demanding and stressful job over higher wages, where 1 means job flexibility, resp. less demanding and stressful job, 0 higher wages.

Ordinary least squares were used to estimate the extent to which the female dummy variable influences earnings, while controlling for other variables.

We also employ the Oaxaca-Blinder decomposition technique (Blinder 1973; Oaxaca 1973) as a robustness check and for further analysis of the factors contributing to the gender wage gap. This technique decomposes the wage differential between men and women into a part explained by the variables utilized in the model and a residual part that is not explained by the wage determinants, often attributed to discrimination.

Based on the linear model of wage determinants

$$\ln W_i = X_i' \beta_i + \varepsilon_i, \quad i \in \{A, B\} \quad (3)$$

where A and B present male and female groups and X is a vector of wage determinants, the mean gross monthly wage difference between men and women can be expressed as follows:

$$R = E(\ln W_A) - E(\ln W_B) = E(X_A)' \beta_A - E(X_B)' \beta_B \quad (4)$$

To identify the contribution of group differences in predictors to the overall outcome difference, we used both three-fold as well as two-fold decomposition. The three-fold decomposition means that the wage difference is divided into three parts and equation (4) is rearranged as follows (see Jann 2008):

$$R = [E(X_A) - E(X_B)]' \beta_B + E(X_B)' (\beta_A - \beta_B) + [E(X_A) - E(X_B)]' (\beta_A - \beta_B) \quad (5)$$

The first summation amounts to the part of the differential that is due to group differences in the wage determinants employed in the model (the “endowments effect”). The second component refers to the differences in the coefficients. The third part is an interaction term of both effects existing simultaneously.

The two-fold decomposition supposes that there is a nondiscriminatory coefficients vector β^* that determines the contribution of the differences in the predictors. The wage difference is then rewritten as

$$R = [E(X_A) - E(X_B)]' \beta^* + [E(X_A)' (\beta_A - \beta^*) + E(X_B)' (\beta^* - \beta_B)] \quad (6)$$

The first component measures the wage differential that is explained by group differences in the wage determinants. The second summation is the unexplained part of wage differences between the two groups.

In this article, we also use the exponentiated form of the two-fold decomposition to re-transform the results to the original scale (Czech crowns).

Results and Discussion

Gender-role attitudes significantly correlated with wages

Descriptive statistics of the variables reflecting gender-role attitudes for men and women are presented in Appendix 2. The results revealed notable differences between the genders. Merely 1 % of women expressed a preference for being responsible for income, contrasting sharply with men, where this figure stood at 65 %. Conversely, 27 % of women reported being responsible for income, a considerable deviation from their expressed preferences. In contrast, men's preferences aligned closely with actual outcomes, as 70 % of them were responsible for income within their families.

48 % of women expressed a preference for being responsible for household chores. However, women were significantly more often responsible for household duties (75 %) than they desired. In contrast, men preferred not to be responsible for household chores, which aligned with the actual outcomes.

Therefore, based on summary statistics, women's preferences regarding the division of family roles did not align with actual outcomes.

In terms of life priorities, both men and women expressed a preference for dedicating more time and energy to family rather than to their careers. However, in practice, they invested more time and energy at work than at home. Nonetheless, there were significant differences in the distribution within these categories. While 68 % of women prioritized family over career, only 47 % of men shared this preference. Conversely, 44 % of women spent more time on family than on their careers, compared to only 27 % of men.

For women, higher job flexibility and a less stressful work environment were more important than higher wages compared to men, and these differences were statistically significant.

We initiated the analysis of the correlation between gender-role attitudes and wages by conducting separate wage regressions for each variable corresponding to gender-role attitudes, aiming to explore their individual relationship with wages. The results presented in Table 1 demonstrated that all the variables examined were statistically significant, with their signs aligning with our expectations regarding their correlation with wages. Notably, the actual duration of parental leave and the preference for assuming responsibility for family income exhibited the most significant association with wages among the gender-role variables investigated, contributing substantially to the gender wage gap. The female dummy decreased notably from 21.8 % to 17.0 %. The significant impact of the length of parental leave on reducing the gender pay gap and thus explaining the wage differences between men and women may be related to the fact that the Czech Republic has the longest state-guaranteed parental leave in the world. Longer parental leave was associated with reduced wages (by 1.8 %), whereas the preference for being the breadwinner correlated with higher wages (by 3.2 %). Although the preference for household chores and childcare exhibited a slightly lower coefficient with wages, they remained highly statistically significant. Prioritizing family as the highest life goal was linked to significantly lower wages (by 4.3 %) compared to prioritizing a career. Similarly, a preference for less demanding and stressful jobs, as well as a desire for flexible working hours, were linked to lower wages (by 2.6 % and 1.7 %, respectively) compared to a preference for higher pay.

In the last column of Table 1 and in subsequent analysis, we included all the factors reflecting gender-role attitudes into one model and examined them as a subset of variables representing gender-role attitudes. Upon controlling for the entire subset of gender-role variables, the coefficient for female dummy decreased significantly from 21.8 % to 12.1 %, while the R-squared value increased from 46.9 % to 48.1 %.

Table 1: Gender-role attitudes and wages

| VARIABLES | (1) ln gross monthly wage | (2) ln gross monthly wage | (3) ln gross monthly wage | (4) ln gross monthly wage | (5) ln gross monthly wage | (6) ln gross monthly wage | (7) ln gross monthly wage | (8) ln gross monthly wage |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <i>Gender and gender-role attitudes</i> | | | | | | | | |
| Gender (female) | -0.218*** (0.014) | -0.173*** (0.020) | -0.193*** (0.019) | -0.170*** (0.019) | -0.215*** (0.015) | -0.217*** (0.014) | -0.215*** (0.014) | -0.121*** (0.026) |
| Feeling of responsibility for ensuring an adequate income | | 0.032*** (0.009) | | | | | | 0.024*** (0.009) |
| Feeling of responsibility for ensuring everyday housework/childcare | | | -0.021*** (0.008) | | | | | -0.014* (0.008) |
| Acutal parental leave (months) | | | | -0.018*** (0.004) | | | | -0.016*** (0.004) |
| Work and career as the highest life priority | | | | | baseline | | | baseline |
| Free time as the highest life priority | | | | | yes | | | yes |
| Family as the highest life priority | | | | | -0.043*** (0.016) | | | -0.036** (0.016) |
| Preference for job flexibility | | | | | | -0.017** (0.008) | | -0.008 (0.008) |
| Preference for less demanding/stressful job | | | | | | | -0.026*** (0.008) | -0.019** (0.008) |
| Education, work experience, math skills ^I | yes | yes | yes | yes | yes | yes | yes | yes |
| Family and background characteristics ^{II} | yes | yes | yes | yes | yes | yes | yes | yes |
| Health limitations of work performance | yes | yes | yes | yes | yes | yes | yes | yes |
| Employer and job characteristics ^{III} | yes | yes | yes | yes | yes | yes | yes | yes |
| Location ^{IV} | yes | yes | yes | yes | yes | yes | yes | yes |
| Constant | 8.760*** (0.139) | 8.648*** (0.141) | 8.815*** (0.138) | 8.777*** (0.140) | 8.791*** (0.140) | 8.807*** (0.142) | 8.819*** (0.140) | 8.819*** (0.145) |
| Observations | 1,978 | 1,978 | 1,978 | 1,978 | 1,978 | 1,978 | 1,978 | 1,978 |
| Adjusted R-squared | 0.469 | 0.473 | 0.471 | 0.474 | 0.472 | 0.470 | 0.472 | 0.481 |

Note 1: Robust standard errors (clustered by ZIP code) in parentheses

Note 2: *** p<0.01, ** p<0.05, * p<0.1

Note 3: I. Years of schooling, Tenure, Tenure squared, Work experience, Work experience squared, Grades from math at age 15

II. Relationship status (single, partner without cohabitation, cohabitation with partner), Number of children in 5 age categories (0-2 years, 3-5 years, 6-14 years, 15-18 years, 19 years and older), Mother tongue different from Czech

III. Workload (scheduled working hours per week), Occupation (1-digit ISCO), Prevailing economic activity (1-digit NACE), Number of employees, Ownership

IV. NUTS 3 region, Size of a municipality

Source: Authors

Heterogeneity analysis - the highest reduction in the gender wage gap after accounting for gender-role attitudes among those with lower education, with young children, and working in the private sector

In Table 2, we replicated the same model across different respondent groups based on age, education, employment sector (public or private), and parental or partner status. We present only the results for female coefficients, standard errors, number of observations, and adjusted R-squared values for each regression.

The largest gender wage gaps (around 30 %) were observed in the model excluding gender role variables among individuals aged 35 to 44, with vocational education at most, having children, and working in male-dominated sectors. However, in models augmented with gender role variables, these wage gaps decreased significantly, particularly among individuals with at most vocational education (by 15.7 percentage points), those aged 35 to 44 (by 14 percentage points), individuals working in male-dominated sectors (by 15.5 percentage points), and those living with a partner (by 15.3 percentage points).

These findings are consistent with our expectations regarding the correlation between traditional gender-role attitudes and the gender wage gap. Notably, gender-role attitudes were most strongly associated with the wages of low-educated families with young children and individuals working in the private sector, particularly women navigating the balance between family and career responsibilities, resulting in lower wages for them.

Table 2: Re-estimation of Models 1 and 8 for different groups of respondents

| | Aged 25-34 years | Aged 35-44 years | Aged 45-54 years | With children | Without children | Single | Cohabit. with partner |
|--|----------------------|----------------------|----------------------|-------------------------------------|-----------------------------------|------------------------------|-------------------------------|
| <i>MODEL (without gender-role variables)</i> | (1.1) | (1.2) | (1.3) | (1.4) | (1.5) | (1.6) | (1.7) |
| Gender (female) | -0.215*** (0.024) | -0.304*** (0.022) | -0.212*** (0.030) | -0.292*** (0.018) | -0.196*** (0.026) | -0.193*** (0.027) | -0.282*** (0.019) |
| Other variables as in Model 1 | yes | yes | yes | yes | yes | yes | yes |
| Observations | 662 | 713 | 609 | 1,327 | 657 | 578 | 1,266 |
| Adjusted R-squared | 0.322 | 0.404 | 0.379 | 0.404 | 0.281 | 0.307 | 0.384 |
| <i>MODEL (with gender-role variables)</i> | (8.1) | (8.2) | (8.3) | (8.4) | (8.5) | (8.6) | (8.7) |
| Gender (female) | -0.117*** (0.037) | -0.164*** (0.043) | -0.091 (0.058) | -0.163*** (0.038) | -0.117*** (0.040) | -0.140*** (0.044) | -0.129*** (0.034) |
| Other variables as in Model 8 | yes | yes | yes | yes | yes | yes | yes |
| Observations | 662 | 713 | 609 | 1,327 | 657 | 578 | 1,266 |
| Adjusted R-squared | 0.338 | 0.422 | 0.395 | 0.416 | 0.292 | 0.309 | 0.402 |
| <i>Difference in Gender variable of Models 1.x and 8.x</i> | -0,098 | -0,140 | -0,121 | -0,129 | -0,079 | -0,053 | -0,153 |
| | Vocational school | High school | University | Working in female dominated sectors | Working in male dominated sectors | Working in the public sector | Working in the private sector |
| <i>MODEL (without gender-role variables)</i> | (1.8) | (1.9) | (1.10) | (1.11) | (1.12) | (1.13) | (1.14) |
| Gender (female) | -0.322*** (0.025) | -0.235*** (0.024) | -0.174*** (0.047) | -0.149*** (0.032) | -0.238*** (0.035) | -0.203*** (0.030) | -0.259*** (0.016) |
| Other variables as in Model 1 | yes | yes | yes | yes | yes | yes | yes |
| Observations | 769 | 697 | 307 | 481 | 371 | 417 | 1,459 |
| Adjusted R-squared | 0.284 | 0.258 | 0.251 | 0.393 | 0.375 | 0.431 | 0.353 |
| <i>MODEL (with gender-role variables)</i> | (8.8) | (8.9) | (8.10) | (8.11) | (8.12) | (8.13) | (8.14) |
| Gender (female) | -0.165*** (0.040) | -0.179*** (0.048) | -0.027 (0.071) | -0.059 (0.053) | -0.083 (0.065) | -0.122*** (0.045) | -0.129*** (0.033) |
| Other variables as in Model 8 | yes | yes | yes | yes | yes | yes | yes |
| Observations | 769 | 697 | 307 | 481 | 371 | 417 | 1,459 |
| Adjusted R-squared | 0.312 | 0.261 | 0.281 | 0.444 | 0.391 | 0.437 | 0.371 |
| <i>Difference in Gender variable of Models 1.x and 8.x</i> | -0,157 | -0,056 | -0,147 | -0,090 | -0,155 | -0,081 | -0,130 |

Note 1: Robust standard errors (clustered by ZIP code) in parentheses

Note 2: *** p<0.01, ** p<0.05, * p<0.1

Source: Authors

Robustness check – Oaxaca-Blinder decomposition

Table 3 presents the results for threefold, twofold, and exponentiated Oaxaca-Blinder decompositions of differences in wages between men and women. Initially, we decomposed wage differentials without variables representing gender-role attitudes to illustrate changes in the explained and unexplained parts of the gender wage gap when controlling for gender-role attitudes. Standard variables typically used to assess wage differentials between men and women explained only 3.6 percentage points (14 %) of the gender wage gap, leaving 21.8 percentage points (86 %) unexplained. However, upon including gender-role attitude variables in the model, the unexplained part of the gender wage gap decreased to 12.1 percentage points (47.5 %), while the explained part increased to 13.4 percentage points (52.5 %). The exponentiated decomposition revealed that women earned wages 29 % lower than men (measured by geometric means). Adjusting women's characteristics to match those of men would increase women's wages by 14 %, leaving a gap of 12.8 % unexplained. All three types of decompositions indicated that gender-role attitudes play a crucial role in explaining the gender wage gap.

Detailed decomposition results (refer to Appendix 3) revealed that none of the standard wage determinants could explain as much of the gender wage gap as two gender-role characteristics: the duration of parental leave and the preference of responsibility for ensuring income. Additionally, prioritizing family as the highest life goal and preferring less demanding or stressful jobs explained a significant portion. Among standard wage determinants, weekly working hours, tenure, total work experience, and certain occupation categories played significant roles in explaining the gender wage gap. The number of children under 14 years of age notably contributed to the unexplained part of the gender wage gap in models without gender-role attitudes, indicating that women experience significantly lower wages compared to men when they have young children.

Table 3: Oaxaca-Blinder decompositions (three-fold, two-fold and exponentiated) without and with gender-role attitudes

| ln_income | Without gender-role attitudes | | | With gender-role attitudes | | |
|----------------------|-------------------------------|------------------|-----------------------|----------------------------|------------------|-----------------------|
| | three-fold | two-fold | Exp. | three-fold | two-fold | Exp. |
| Men | 9.964* (.011) | 9.964* (.012) | 21251.2* (223.95) | 9.964* (.011) | 9.964* (.011) | 21251.2* (223.95) |
| Women | 9.710* (.013) | 9.710* (.012) | 16476.54* (190.68) | 9.710* (.012) | 9.710* (.012) | 16476.54* (190.68) |
| difference | .255* (.016) | .255* (.016) | 1.290* (.020) | .255* (.016) | .255* (.016) | 1.290* (.020) |
| endowments | .023 (.020) | | | .071* (.031) | | |
| <i>explained</i> | | .036* (.013) | 1.037* (.014) | | .134* (.022) | 1.143* (.022) |
| coefficients | .214* (.018) | | | .113* (.027) | | |
| <i>unexplained</i> | | .218* (.015) | 1.244* (.018) | | .121* (.024) | 1.128* (.026) |
| interaction | .018 (.022) | | | .071 (.038) | | |
| Observations | 1978 | 1978 | 1978 | 1978 | 1978 | 1978 |
| Observations - men | 1046 | 1046 | 1046 | 1046 | 1046 | 1046 |
| Observations - women | 932 | 932 | 932 | 932 | 932 | 932 |

Note: * 95% conf. interval, robust standard errors in parentheses for two-fold and exponentiated decompositions, and standard errors for three-fold decompositions.
Source: Authors

The enduring nature of the association between attitudes towards gender roles and wage levels across time

This article provides an in-depth examination of the correlation between gender roles and wages within the Czech Republic, drawing on data from 2011. Given its temporal dimension, it serves as a valuable springboard for prospective research aiming to trace the evolution of this correlation over time. Regrettably, the absence of comprehensive gender-related data hampers the complete replication of this study using current datasets. Nevertheless, we can leverage data from the latest iteration of the wage determination survey conducted in 2022, enabling a partial comparison of findings.

Table 4: Gender-role attitudes and wages in 2011 and 2022

| VARIABLES | Year 2011 | | | | |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | (1) ln gross monthly wage | (2) ln gross monthly wage | (3) ln gross monthly wage | (4) ln gross monthly wage | (5) ln gross monthly wage |
| <i>Gender and gender-role attitudes</i> | | | | | |
| Gender (female) | -0.229*** (0.015) | -0.181*** (0.021) | -0.208*** (0.019) | -0.177*** (0.020) | -0.224*** (0.015) |
| Feeling of responsibility for ensuring an adequate income | | 0.034*** (0.009) | | | |
| Feeling of responsibility for ensuring everyday housework/childcare | | | -0.018** (0.008) | | |
| Actual parental leave (months) | | | | -0.019*** (0.004) | |
| Work and career as the highest life priority | | | | | baseline |
| Free time as the highest life priority | | | | | yes |
| Family as the highest life priority | | | | | -0.048*** (0.016) |
| Education, work experience, math skills ^I | yes | yes | yes | yes | yes |
| Family and background characteristics ^{II} | yes | yes | yes | yes | yes |
| Health limitations of work performance | yes | yes | yes | yes | yes |
| Employer and job characteristics ^{III} | yes | yes | yes | yes | yes |
| Location ^{IV} | yes | yes | yes | yes | yes |
| Constant | 9.484*** (0.089) | 9.367*** (0.093) | 9.532*** (0.090) | 9.501*** (0.090) | 9.510*** (0.091) |
| Observations | 1,978 | 1,978 | 1,978 | 1,978 | 1,978 |
| Adjusted R-squared | 0.452 | 0.457 | 0.453 | 0.458 | 0.455 |
| VARIABLES | Year 2022 | | | | |
| | (6) ln net monthly wage | (7) ln net monthly wage | (8) ln net monthly wage | (9) ln net monthly wage | (10) ln net monthly wage |
| <i>Gender and gender-role attitudes</i> | | | | | |
| Gender (female) | -0.195*** (0.018) | -0.162*** (0.021) | -0.189*** (0.018) | -0.159*** (0.023) | -0.191*** (0.018) |
| Feeling of responsibility for ensuring an adequate income | | 0.039*** (0.012) | | | |
| Feeling of responsibility for ensuring everyday housework/childcare | | | -0.012 (0.012) | | |
| Actual parental leave (months) | | | | -0.013*** (0.005) | |
| Work and career as the highest life priority | | | | | baseline |
| Free time as the highest life priority | | | | | yes |
| Family as the highest life priority | | | | | -0.057** (0.022) |
| Education, work experience, math skills ^I | yes | yes | yes | yes | yes |
| Family and background characteristics ^{II} | yes | yes | yes | yes | yes |
| Health limitations of work performance | yes | yes | yes | yes | yes |
| Employer and job characteristics ^{III} | yes | yes | yes | yes | yes |
| Location ^{IV} | yes | yes | yes | yes | yes |
| Constant | 10.315*** (0.112) | 10.166*** (0.118) | 10.353*** (0.118) | 10.332*** (0.112) | 10.344*** (0.113) |
| Observations | 1,534 | 1,534 | 1,534 | 1,534 | 1,534 |
| Adjusted R-squared | 0.546 | 0.549 | 0.546 | 0.548 | 0.548 |

Note 1: Robust standard errors (clustered by ZIP code) in parentheses;

Note 2: *** p<0.01, ** p<0.05, * p<0.1

Note 3: I. Years of schooling, Tenure, Tenure squared, Work experience, Work experience squared, Grades from math at age 15, Health status

II. Relationship status (single, partner without cohabitation, cohabitation with partner), Number of children in 5 age categories (0-2 years, 3-5 years, 6-14 years, 15-18 years, 19 years and older), Mother tongue different from Czech
III. Workload, Occupation (1-digit ISCO), Prevailing economic activity (1-digit NACE), Number of employees
IV. NUTS 3 region, Size of a municipality
Source: Authors

Since the dataset for the year 2022 lacks certain variables or defines them differently compared to the 2011 survey, we have partially adjusted Models 1-5 from Table 1 and re-estimated them for both years. Despite the limited comparability of the dependent variables (natural logarithm of gross monthly wage in 2011 and natural logarithm of net monthly wage in 2022), the findings in Table 4 demonstrate a consistent correlation between gender roles and wages over time. Notably, all gender role variables, except the feeling of responsibility for ensuring everyday housework/childcare, remained statistically significant with similar regression coefficient values. This indicates that the conclusions drawn from the 2011 dataset remain pertinent in the present context.

Conclusions

This paper analyzed the linkage between variables reflecting gender-role attitudes and the gender wage gap conditional on working experience, education, family factors, health and job characteristics, based on data from the wide-ranging survey of a representative sample of employees in the Czech Republic in 2011. This survey enabled us to carry out a wider analysis of wage determinants and gain a deeper understanding of the correlation between wages and gender-role attitudes, which had hardly been considered in the previous literature. This analysis was partially replicated using data from a similar survey conducted in 2022. Although the data from 2022 does not include full set of variables related to gender roles as in 2011 dataset, they allow for at least partial comparison of the development of gender-role attitudes and their correlation with income levels.

We investigated six variables representing gender-role attitudes: preferred responsibility for ensuring income; preferred responsibility for household chores and childcare; life priorities (career, family, others); actual length of parental leave; preference for job flexibility; and preference for less demanding, less stressful jobs over higher wages. The results of separate wage regressions for each gender-role attitude investigated showed that all variables were significant and exhibited the expected correlation with wages. Preferred responsibility for income and length of parental leave explained the largest part of the gender wage gap; when these gender-role variables were included in the model, the wage gap decreased from 21.8 % to 17 %. Subsequently, we included all gender-role attitudes in one model as a subset of variables. The results indicated a substantial decrease in the gender wage gap (from 21.8 % to 12.1 %)

when gender-role attitudes were included in the model. In other words, gender-role attitudes accounted for a significant part of the gender wage gap.

As heterogeneity analysis we conducted the same model for the subgroups of respondents according to age, education, working in the public or private sector and having or not having children, resp. Partner. The most significant decrease in the gender wage gap after the gender-role variables were controlled was noted among people with at most vocational education, in the middle age group (35 – 44 years), working in male-dominated sectors and living with a partner. It corresponds with our expectations about the correlation between traditional gender-role attitudes and the gender wage gap in the Czech Republic when especially women have to find a family-career balance with the consequences of their lower wages.

To support the analysis of Mincer wage regressions we performed the Oaxaca-Blinder decomposition as our robustness check. The results showed that if women have the same characteristics as men, their wages would increase by 14 %. A gender wage gap of 12,8 % remained unexplained. When the variables of gender-role attitudes were included in the model, the explained part of the gender wage gap increased importantly from 14 % to 52,5 % of the gender wage gap. Detailed decomposition showed that none of the standard wage determinants could explain as much of gender wage gap as the length of parental leave and the feeling of responsibility for ensuring income.

The results of the analysis conducted on the data from 2022 showed a consistent correlation between gender roles and wages over time. This suggests that the conclusions drawn from the 2011 dataset remain relevant in the current context.

To sum up, the results of this paper support the previous literature hypotheses and findings, and provide detailed and robust evidence that gender-role attitudes are significantly linked with the wages of men and women in the labor market and explain a substantial part of the gender wage gap. In the example of the Czech Republic with the prevalent traditional model of the family, we showed that conservative gender-role attitudes with a man being the breadwinner and a woman homemaker are significantly connected with the lower wages of women. This finding may have a wide implication for the majority of countries since data from the World Values Survey showed the prevalent social representation of women as homemakers and men as breadwinners and this pattern is quite stable over time (Fortin 2005). The study by UN Women (2022) pointed out the prevalence of traditional gender roles in the case of a study conducted in twenty countries, as well.

However, future research should continue to focus on empirical analysis using comprehensive data that can prove the theoretical hypotheses and overcome the limitations of current empirical studies, which often rely on limited

data concerning one specific attribute of gender-related factors. Data surveys should be further improved to enable the control of selection bias. Last but not least, the discrepancy between preferences and reality in the division of roles within families, especially concerning women, could be an interesting topic for future research.

Policies aiming to promote gender equality in the labor market need to take the prevailing gender norms into account. Although data and previous literature indicate that gender roles are not changing much, the recent historical study by Frigo and Fernández (2021) shows the positive influence of offering alternative options on changing gender stereotypes and thus gender equality. In this regard, we can expect a positive impact of newly introduced policies on changing gender stereotypes with an influence on gender equality in the Czech Republic, such as a wider range of preschool facilities for children from the age of 2 or a shortened maximum duration for parental leave to 3 years.

Declarations

The authors have no relevant financial or non-financial interests to disclose. The authors have no competing interests to declare that are relevant to the content of this article.

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REFERENCES

- ACKER, J., 1990: Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations. *Gender and Society*, 2, 139–158.
- AKERLOF, G. A. – KRANTON, R. E., 2000. Economics and Identity. *Quarterly Journal of Economics* 115: 715-753. DOI: <https://doi.org/10.1162/003355300554881>
- ANTONOVICS, K. – TOWN, R., 2003: Are All the Good Men Married? Uncovering the Sources of the Marital Wage Premium. San Diego: Department of Economics, UCSD.
<https://pdfs.semanticscholar.org/5c01/809102332f81ada477a11768071f4efe0e9d.pdf>
- BECKER, G. S., 1993: *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (3rd ed.). Chicago: University of Chicago Press.
- BERTRAND, M., 2010: New Perspectives on Gender. In: Ashenfelter, O., Card, D. (eds.): *Handbook of Labor Economics Volume 4B*. Amsterdam: Elsevier. 1545-1592.
- BERTRAND, M. – KAMENICA, E. – PAN, J., 2015: Gender Identity and Relative Income within Households. *The Quarterly Journal of Economics* 130: 571-614.
<https://www.sciencegate.app/document/10.1093/qje/qjv001>
- BLAU, F. D. – KAHN, L. M., 2017: The Gender Wage Gap: Extent, Trends, and Explanations. *Journal of Economic Literature* 55: 789–865.
<https://www.aeaweb.org/articles?id=10.1257/jel.20160995>
- BLINDER, A. S., 1973: Wage Discrimination: Reduced Form and Structural Estimation. *The Journal of Human Resources* 8: 436-455. DOI: <http://dx.doi.org/10.2307/144855>
- CHANG, M. L., 2000: The evolution of sex segregation regimes. *American Journal of Sociology*, 105 (6): 1658-1701. <https://www.journals.uchicago.edu/doi/10.1086/210469>

- CUKROWSKA-TORZEWSKA, E., – LOVÁS, A., 2020: The Role of Parenthood in Shaping the Gender Wage Gap – A Comparative Analysis of 26 European countries. *Social Science Research* 85: 102355. DOI: <https://doi.org/10.1016/j.ssresearch.2019.102355>
- CUTILLO, A. – CENTRA, M., 2017: Gender-Based Occupational Choices and Family Responsibilities: The Gender Wage Gap in Italy. *Feminist Economics*, 23(4), 1-31. DOI: <https://doi.org/10.1080/13545701.2017.1285041>
- ČERMÁKOVÁ, M., 1997: Postavení žen na trhu práce. *Sociologický časopis*, 33, 389–404.
- DAVIES, H. B. – JOSHI, H. E. – PERONACI, R., 2000: Foregone Income and Motherhood: What do Recent British Data Tell Us? *Population Studies* (44): 293-305. <https://www.tandfonline.com/doi/abs/10.1080/713779094>
- DIRECTIVE 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32006L0054>
- EUROPEAN COMMISSION, 2023: Report on Equality between Women and Men in the European Union. https://commission.europa.eu/system/files/2023-04/annual_report_GE_2023_web_EN.pdf
- EUROSTAT, 2024a: Employment Rates by Sex, Age, Educational Attainment Level, Citizenship and NUTS 2 Regions. Online data code: `lfst_r_lfe2emprtn`
- EUROSTAT, 2024b: Employment Rate of Adults by Sex, Age Groups, Educational Attainment Level, Number of Children and Age of Youngest Child (%). Online data code: `lfst_hheredch`.
- EUROSTAT, 2024c: Gender Pay Gap in Unadjusted form. Online data code: `tesem180`.
- EUROSTAT. 2024d: Gender Pay Gap in Unadjusted Form by Age - NACE Rev. 2 Activity (B-S except O), Structure of Earnings Survey Methodology. Online data code: `earn_gr_gpgr2ag`.
- FILIPOVÁ, L. – PYTLIKOVÁ, M., 2017: The Czech Republic. In: Razzu, G. (ed): *Gender Inequality in the Eastern European Labor Market: Twenty-five Years of Transition Since the Fall of Communism*. London: Routledge Press. 44-76.
- FORTIN, N., 2005: Gender-role Attitudes and Women's Labor Market Outcomes Across OECD Countries. *Oxford Review of Economic Policy* 21: 416-438. <https://oa.mg/work/10.1093/oxrep/gri024>
- FRIGO, A. – FERNÁNDEZ, E. R., 2021: Roots of Gender Equality: the Persistent Effect of Beguinages on Attitudes Toward Women. *Journal of Economic Growth* 27: 91–148. DOI: <https://doi.org/10.1007/s10887-021-09198-7>
- GALOS, D. R. – COPPOCK, A., 2023: Gender Composition Predicts Gender Bias: A Meta-reanalysis of Hiring Discrimination Audit Experiments. *Science Advances*, 9 (18). <https://www.science.org/doi/10.1126/sciadv.ade7979>
- GOLDIN, C. – KERR, S. P. – OLIVETTI, C. – BARTH, E., 2017: The expanding gender earnings gap: Evidence from the LEHD-2000 census. *American Economic*

- Review: Papers & Proceedings 107: 110–114. https://scholar.harvard.edu/files/goldin/files/gkob_longerversion.pdf
- GRINZA, E. – DEVICIENTI, F. S. M. – ROSSI, M. – VANNONI, D., 2022: How Entry into Parenthood Shapes Gender Role Attitudes: New Evidence from The UK. *Feminist Economics*, 28(4):194-220. DOI: <https://doi.org/10.1080/13545701.2022.2081352>
- GUPTA, N. D. – SMITH, N. – STRATTON, L. S., 2005: Is Marriage Poisonous? Are Relationships Taxing? An Analysis of the Male Marital Wage Differential in Denmark. IZA Discussion Paper No. 1591. <https://pdfs.semanticscholar.org/de2a/3a4ffde6952acc5e61984687b19f746d3496.pdf>
- HANSEN, M. N., 1995: The Vicious Circle of the Welfare State? Women's Labor Market Situation in Norway and Great Britain. *Comparative Social Research* 15: 1–34. https://eige.europa.eu/library/resource/KVI_VOY9274292
- HAŠKOVÁ, H., 2002: Postoje české vysokoškolsky vzdělané populace k pozici žen na trhu práce. *Sociologický časopis*, 36(4), 441–457.
- HEDIJA, V., 2017: Sector-specific Gender Pay Gap: Evidence from the European Union Countries, *Economic Research-Ekonomska Istraživanja*, 30:1, 1804-1819, DOI: <https://doi.org/10.1080/1331677X.2017.1392886>
- HEMSTROM, M., 1998: Gender Differences in Pay Among Young Professionals in Sweden. In: Persson I, Jonung Ch (eds.): *Women's Work, and Wages*. London: Routledge Press. 145-169.
- HILL, M. S., 1979: The Wage Effects of Marital Status and Children. *Journal of Human Resources* 14: 579-594. DOI: <https://doi.org/10.2307/145325>
- HORST, M., 2014: Gender-role Attitudes. In: Michalos, A.C. (ed): *Encyclopedia of Quality of Life and Well-being Research*. Dordrecht: Springer Springer, Dordrecht. 106 s.
- HUFFMAN, M. L. – VELASCO, S. C., 1997: When More Is Less. *Work and Occupation* 24(2): 214–244.
- JACOBS, J. A. – GERSON, K., 2004: *The Time Divide: Work, Family, and Gender Inequality*. Cambridge, MA: Harvard University Press.
- JACOBS, J. A. – LIM, S. T., 1992: Trends in Occupational and Industrial Sex Segregation in 56 Countries, 1960-1980. *Work and Occupations* 19: 450-486. DOI: <https://doi.org/10.1177/0730888492019004006>
- JANN, B., 2008: The Blinder-Oaxaca Decomposition for Linear Regression models. *The Stata Journal* 8(4): 453-479. DOI: <https://doi.org/10.1177/1536867X0800800401>
- JOSHI, H. – DAVIES, H., 2002: Women's Incomes Over a Synthetic Lifetime. In: Ruspini, E., Dale, A. (eds.): *The Gender Dimension of Social Change*. Bristol: The Policy Press. 111-131.
- KAMAL, M. – BLACKLOW, P., 2022: Attitudes and Personality in the Australian Gender Wage gap, *Applied Economics*, 54:47, 5442-5459, DOI: <https://doi.org/10.1080/00036846.2022.2045000>

- KALÍŠKOVÁ, K. – MUNICH, D., 2012: Czech Women: Underutilized National Potential. IDEA CERGE-EI Short Study No. 3. Center for Economic Research and Graduate Education – Economics Institute Prague website. https://idea.cerge-ei.cz/documents/kratka_studie_2012_03.pdf
- KHOUDJA, Y. – FLEISCHMANN, F., 2018: Gender Ideology and Women's Labor Market Transitions Within Couples in the Netherlands. *Journal of Marriage and Family* 80(5): 1087-1106. DOI: <https://doi.org/10.1111/jomf.12510>
- KLEVEN, H. – LANDAIS, C. – SØGAARD, J. E., 2018: Children and Gender Inequality: Evidence from Denmark. NBER Working Paper No. 24219. National Bureau of Economic Research web. <https://www.nber.org/papers/w24219.pdf>
- KLIMCZUK, A. – KLIMCZUK-KOCHANÁSKA, M., 2016: Dual Labor Market. In: Naples, A. Wong, M. Wickramasinghe, R. C. Hoogland (eds.), *The Wiley-Blackwell Encyclopedia of Gender and Sexuality Studies*, Wiley-Blackwell, Hoboken, New Jersey 2016: pp. 1–3 DOI: <http://dx.doi.org/10.1002/9781118663219.wbegss529>.
- KNIGHT, C. – BRINTON, M. C., 2017: One Egalitarianism or Several? Two Decades of Gender-Role Attitude Change in Europe. *American Journal of Sociology*, 122 (5):1485-1532.
- KORENMAN, S. – NEUMARK, D., 1991: Does Marriage Really Make Men More Productive? *Journal of Human Resources* 26: 282-307. DOI: <https://doi.org/10.2307/145924>
- KŘÍŽKOVÁ, A. – POSPÍŠILOVÁ, K. – MAŘÍKOVÁ, H. – MARKOVÁ VOLEJNÍČKOVÁ, R., 2018: Rozdíly v odměňování žen a mužů v ČR. Pracoviště, zaměstnání, stejná práce a rozklad faktorů. Praha: Ministerstvo práce a sociálních věcí. ISBN 978-80-7421-162-1.
- KULIK, L., 2018: Explaining Egalitarianism in Gender-Role Attitudes: The Impact of Sex, Sexual Orientation, and Background Variables. *Asian Women*, 34(2), 61-87. DOI: <https://doi.org/10.14431/aw.2018.06.34.2.61>
- LANGDON, D. L. – KLOMEGAH, R., 2013: The Gender Wage Gap and its Associated Factors: An Examination of Traditional Gender Ideology, Education, and Occupation. *International Review of Modern Sociology* 39: 173-203. <https://www.jstor.org/stable/43496468>
- LIETZMANN, T. – FRODERMANN, C., 2021: Gender Role Attitudes and Labour Market Behaviours: do Attitudes Contribute to Gender Differences in Employment in Germany? *Work Employment and Society*. DOI: <https://doi.org/10.1177/09500170211011318>
- LIPS, H. M., 2013: The Gender Pay Gap: Challenging the Rationalizations. Perceived Equity, Discrimination, and the Limits of Human Capital Models. *Sex Roles*, 68(3-4): 169-185. DOI: <https://doi.org/10.1007/s11199-012-0165-z>
- LOMAZZI, V. – ISRAEL, S. – CRESPI, I., 2018: Gender Equality in Europe and the Effect of Work-family Balance Policies on Gender Role Attitudes. *Social Sciences*, 8(1): 1-29. DOI: <https://doi.org/10.3390/socsci8010005>

- MCCRATE, E., 1988: Gender Difference: The Role of Endogenous Preferences and Collective Action. *The American Economic Review*, 78: 235-239. DOI: <https://www.jstor.org/stable/1818129>
- MINCER, J. – POLACHEK, S., 1974: Family Investments in Human Capital: Earnings of Women. *Journal of Political Economy* 82: 76-108. DOI: <https://www.jstor.org/stable/1829993>
- MORRISSEY, T. W., 2017: Child Care and Parent labor force participation: a review of the research literature. *Review of Economics of the Household* 15: 1–24. DOI: <https://doi.org/10.1007/s11150-016-9331-3>
- NAUR, M. – SMITH, N., 1998: Cohort Effects on the Gender Wage Gap in Denmark. In: Persson I., Jonung, Ch. (eds.): *Women's Work, and Wages*. London: Routledge Press:122-143.
- OAXACA, R., 1973: Male-Female Wage Differentials in Urban Labor Markets. *International Economic Review* 14: 693–709. DOI: <https://doi.org/10.2307/2525981>
- OECD, 2001: *Balancing work and family life: helping parents into paid employment*. OECD Publishing, Paris. <http://www.oecd.org/employment/emp/2079435.pdf>
- OECD, 2012: *Closing the Gender Gap: Act Now*. OECD Publishing, Paris, DOI: <https://doi.org/10.1787/9789264179370-en>.
- PEARSE, R. – CONNELL, R., 2016: Gender Norms and the Economy: Insights from Social Research. *Feminist Economics* 22: 30-53. DOI: <https://doi.org/10.1080/13545701.2015.1078485>
- PHELPS, E. S., 1972: The Statistical Theory of Racism and Sexism. *American Economic Review*, 62(4), 659–661.
- POLACHEK, S. W., 2007: *Earnings Over the Lifecycle: The Mincer Earnings Function and Its Applications*. IZA Discussion Paper No. 3181. DOI: <http://dx.doi.org/10.2139/ssrn.1048301>
- PRESTON, A., 2023: *Changing Gender Role Attitudes and the Changing Gender Gap in Labour Force Participation*. *Journal of Industrial Relations*, DOI: <https://doi.org/10.1177/00221856231177118>
- REDMOND, P. – McGUINNESS, S., 2019: The Gender Wage Gap in Europe: Job Preferences, Gender Convergence and Distributional Effects. *Oxford Bulletin of Economics and Statistics*, 81(3):564-587. DOI: <https://doi.org/10.1111/obes.12282>
- RIBAR, D., 2004: *What Do Social Scientists Know About the Benefits of Marriage? A Review of Quantitative Methodologies*. IZA Discussion Paper No. 998. Institute for the Study of Labor web. <http://dx.doi.org/10.2139/ssrn.500887>
- RICHARDSON, K., 2003: *The Evolution of the Marriage Premium in the Swedish Labor Market 1968-1991*. Mimeo. https://www.researchgate.net/publication/5095703_The_evolution_of_the_marriage_premium_in_the_Swedish_labor_market_1968-1991
- ROETHLISBERGER, C. – GASSMANN, F. – GROOT W. – MARTORANO, B., 2023: *The Contribution of Personality Traits and Social Norms to the Gender Pay*

- Gap: A Systematic Literature Review.” *Journal of Economic Surveys* 37 (2): 377–408. DOI: <https://doi.org/10.1111/joes.12501>
- TAM, T., 1997: Sex Segregation and Occupational Gender Inequality in the United States: Devaluation or Specialized Training? *American Journal of Sociology* 102, 1652–1692.
- TOMASKOVIC-DEVEY, D. – SKAGGS, S., 2002: Sex Segregation, Labor Process Organization, and Gender Earnings Inequality. *American Journal of Sociology* 108: 102-128. DOI: <https://www.journals.uchicago.edu/doi/10.1086/344214>
- UN Women Report, 2022: The Levers of Change Gender Equality Attitudes Study 2022. https://www2.unwomen.org/-/media/files/un%20women/unsta/resources/the_levers_of_change_2022.pdf?la=en&vs=4036
- WALDFOGEL, J., 1998: Understanding the ‘Family Gap’ in Pay for Women with Children. *The Journal of Economic Perspectives* 12: 137-156. <https://www.aeaweb.org/articles?id=10.1257/jep.12.1.137>
- WALDFOGEL, J. – SIGLE-RUSHTON, W., 2007: Motherhood and Women's Earnings in Anglo-American, Continental European, and Nordic Countries. *Feminist Economics* 13: 55-91. DOI: <https://doi.org/10.1080/13545700601184849>
- WORLD ECONOMIC FORUM, 2023: The Global Gender Gap Report. World Economic Forum web. https://www3.weforum.org/docs/WEF_GGGR_2023.pdf
- WRIGHT, E. O. – BAXTER, J. – BIRKELUND, G. E., 1995: The Gender Gap in Workplace Authority: a Cross-national Study. *American Sociological Review* 60: 407-435. DOI: <https://doi.org/10.2307/2096422>
- XINXIN, M., 2024: Gender Role Attitudes and the Gender Wage Gap: Evidence from China, *Journal of the Asia Pacific Economy*, DOI: <https://doi.org/10.1080/13547860.2024.2304391>
- ZAJICKOVA, D. – ZAJICEK, M., 2021: Gender Pay Gap in the Czech Republic - Its Evolution and Main Drivers. *Prague Economic Papers* 30(6): 675-72. DOI: [10.18267/j.pep.787](https://doi.org/10.18267/j.pep.787)

Appendix

Appendix 1: Example of sampling procedure: frequencies of the surveyed population according to quota sampling

| 2010 | Full population of employees | Survey sample | |
|----------------------------------|------------------------------|---------------|--------------------------|
| | Relative frequencies (%) | Numbers | Relative frequencies (%) |
| | 100 | 1984 | 100 |
| <i>Age</i> | | | |
| 25-34years | 34.18 | 662 | 33.37 |
| 35-44 years | 35.41 | 713 | 35.94 |
| 45-54 years | 30.41 | 609 | 30.69 |
| Total | 100 | 1984 | 100 |
| <i>ISCED* education attained</i> | | | |
| Primary - ISCED 1,2 | 4.56 | 85 | 4.28 |
| Lower secondary - ISCED 3 | 37.89 | 769 | 38.76 |
| Upper secondary - ISCED 3,4 | 38.38 | 767 | 38.66 |
| Tertiary - ISCED 5,6 | 19.15 | 363 | 18.29 |
| Total | 99.986 | 1984 | 100 |
| <i>Size of municipality</i> | | | |
| <=4999 | 37.31 | 719 | 36.24 |
| 5000-19999 | 18.91 | 363 | 18.30 |
| 20000-99999 | 21.74 | 452 | 22.78 |
| =>100000 | 22.05 | 450 | 22.68 |
| Total | 100 | 1984 | 100 |
| <i>Sex</i> | | | |
| Male | 53.34 | 1048 | 52.82 |
| Female | 46.66 | 936 | 47.18 |
| Total | 100 | 1984 | 100 |

Source: Own survey, authors' calculations

Appendix 2: Summary statistics of variables

| Variable | Men | | Women | | Mean(men) - Mean(women) (Std. Err.) | t-stat of difference in mean (p-value) |
|---|----------------------|------------------------|---------------------|------------------------|---|---|
| | Obs (Min/Max) | Mean (Std. Err.) | Obs (Min/Max) | Mean (Std. Err.) | | |
| Ln of income | 1048 (8.69/11.40) | 9.96 (.01) | 936 (8.29/11.00) | 9.71 (.01) | .25 (.01) | 16.19 (0.00) |
| <i>Gender-role attitudes</i> | | | | | | |
| Actual parental leave (in years) | 1048 (0/10) | .07 (.02) | 936 (0/11) | 3.31 (.09) | -3.24 (.08) | -38.25 (0.00) |
| <i>Preferences for income responsibility</i> | | | | | | |
| Me | 1048 (0/1) | .65 (.01) | 936 (0/1) | .01 (.00) | .64 (.02) | 40.48 (0.00) |
| Equally | 1048 (0/1) | .33 (.01) | 936 (0/1) | .49 (.02) | -.15 (.02) | -6.87 (0.00) |
| Partner | 1048 (0/1) | .011 (.00) | 936 (0/1) | .50 (.02) | -.49 (.02) | -31.11 (0.00) |
| <i>Actual income responsibility</i> | | | | | | |
| Me | 1048 (0/1) | .71 (.01) | 936 (0/1) | .27 (.01) | .43 (.02) | 21.39 (0.00) |
| Equally | 1048 (0/1) | .23 (.01) | 936 (0/1) | .32 (.02) | -.09 (.02) | -4.79 (0.00) |
| Partner | 1048 (0/1) | .07 (.01) | 936 (0/1) | .40 (.02) | -.34 (.02) | -19.63 (0.00) |
| <i>Preferences for household responsibility</i> | | | | | | |
| Me | 1048 (0/1) | .04 (.01) | 936 (0/1) | .48 (.02) | -.44 (.02) | -26.54 (0.00) |
| Equally | 1048 (0/1) | .36 (.01) | 936 (0/1) | .50 (.02) | -.15 (.02) | -6.65 (0.00) |
| Partner | 1048 (0/1) | .60 (.02) | 936 (0/1) | .02 (.00) | .59 (.02) | 35.67 (0.00) |
| <i>Actual household responsibility</i> | | | | | | |
| Me | 1048 (0/1) | .17 (.01) | 936 (0/1) | .75 (.01) | -.57 (.02) | -31.36 (0.00) |
| Equally | 1048 (0/1) | .21 (.01) | 936 (0/1) | .21 (.01) | -.01 (.01) | -0.30 (0.76) |
| Partner | 1048 (0/1) | .62 (.02) | 936 (0/1) | .04 (.01) | .58 (.02) | 34.07 (0.00) |
| <i>Preferences for life priorities</i> | | | | | | |
| Career | 1048 (0/1) | .36 (.01) | 936 (0/1) | .22 (.01) | .14 (.02) | 6.76 (0.00) |
| Family | 1048 (0/1) | .47 (.02) | 936 (0/1) | .68 (.01) | -.21 (.02) | -9.59 (0.00) |
| Others | 1048 (0/1) | .17 (.01) | 936 (0/1) | .10 (.01) | .07 (.02) | 4.67 (0.00) |
| <i>Actual energy devoted to life areas</i> | | | | | | |
| Career | 1048 (0/1) | .61 (.02) | 936 (0/1) | .51 (.02) | .11 (.02) | 4.74 (0.00) |
| Family | 1048 (0/1) | .27 (.01) | 936 (0/1) | .44 (.01) | -.17 (.02) | -8.20 (0.00) |
| Others | 1048 (0/1) | .12 (.01) | 936 (0/1) | .05 (.01) | .07 (.01) | 5.47 (0.00) |

Appendix 2: Continued

| | | | | | | |
|--|----------|-------|-----------|-------|-------|--------|
| | 1048 | .18 | 936 | .23 | -.05 | -3.01 |
| Job flexibility | (0/1) | (.01) | (0/1) | (.01) | (.02) | (0.00) |
| Less demanding and stressful job | 1048 | .27 | 936 | .39 | -.12 | -5.68 |
| | (0/1) | (.01) | (0/1) | (.01) | (.02) | (0.00) |
| <i>Education, work experience, workload, math skills</i> | | | | | | |
| Education (years of schooling) | 1048 | 13.20 | 936 | 13.40 | -.20 | -2.07 |
| | (9/21) | (.06) | (9/18) | (.06) | (.09) | (0.03) |
| | 1048 | 8.00 | 936 | 6.76 | 1.24 | 4.25 |
| Tenure (in years) | (.08/37) | (.21) | (.17/34) | (.19) | (.29) | (0.00) |
| Work experience apart from current employment (in years) | 1048 | 9.81 | 936 | 8.01 | 1.80 | 5.06 |
| | (0/35) | (.25) | (0/31.83) | (.24) | (.35) | (0.00) |
| Scheduled working hours per week | 1048 | 39.76 | 936 | 38.85 | .90 | 5.37 |
| | (15/75) | (.09) | (4/60) | (.14) | (.16) | (0.00) |
| Grades in mathematics at the end of primary school | 1048 | 2.45 | 936 | 2.25 | .20 | 5.18 |
| | (1/4) | (.02) | (1/4) | (.02) | (.03) | (0.00) |
| <i>Family and background characteristics</i> | | | | | | |
| Marriage/Partnership (Living separately) | 1048 | .06 | 936 | .07 | -.00 | -0.51 |
| | (0/1) | (.00) | (0/1) | (.00) | (.01) | (0.60) |
| Marriage/Partnership (Living together) | 1048 | .63 | 936 | .63 | .00 | 0.02 |
| | (0/1) | (.01) | (0/1) | (.01) | (.02) | (0.98) |
| Number of children aged 0 - 2 years | 1048 | .10 | 936 | .03 | .06 | 5.57 |
| | (0/2) | (.00) | (0/2) | (.00) | (.01) | (0.00) |
| Number of children aged 3 - 5 years | 1048 | .12 | 936 | .11 | .00 | 0.46 |
| | (0/2) | (.01) | (0/2) | (.01) | (.01) | (0.63) |
| Number of children aged 6 - 14 years | 1048 | .33 | 936 | .35 | -.01 | -0.51 |
| | (0/3) | (.01) | (0/3) | (.02) | (.02) | (0.60) |
| Number of children aged 15 - 18 years | 1048 | .14 | 936 | .19 | -.04 | -2.61 |
| | (0/2) | (.01) | (0/2) | (.01) | (.01) | (0.00) |
| Number of children aged 19 years and older | 1048 | .36 | 936 | .55 | -.18 | -5.17 |
| | (0/5) | (.02) | (0/4) | (.02) | (.03) | (0.00) |

Source: Own survey, authors' calculations

Appendix 3: Detailed two-fold Oaxaca-Blinder decompositions of wage differentials in the models with and without gender-role variables

| | Without gender-role variables | | With gender-role variables | |
|--|-------------------------------|-----------|----------------------------|-----------|
| | Coef. | Robust SE | Coef. | Robust SE |
| <i>Explained</i> | | | | |
| Sum | 0.036* | 0.013 | 0.134* | 0.022 |
| Feeling of responsibility for ensuring an income | | | 0.035* | 0.013 |
| Feeling of responsibility for ensuring housework/childcare | | | 0.017 | 0.010 |
| Parental leave (months) | | | 0.051* | 0.013 |
| Family as the highest life priority | | | 0.008* | 0.003 |
| Preference for job flexibility | | | 0.001 | 0.001 |
| Preference for less demanding/stressful job | | | 0.004* | 0.002 |
| Years of schooling | -0.006* | 0.003 | -0.005* | 0.003 |
| Tenure | 0.018* | 0.006 | 0.018* | 0.005 |
| Tenure squared | -0.008* | 0.004 | -0.009* | 0.004 |
| Work experience | 0.014* | 0.005 | 0.014* | 0.005 |
| Work experience squared | -0.011* | 0.005 | -0.013* | 0.005 |
| Grades from math at age 15 | -0.010* | 0.003 | -0.010* | 0.003 |
| Number of children (age 0-2) | 0.001 | 0.002 | 0.002 | 0.002 |
| Number of children (age 3-5) | 0.000 | 0.001 | 0.000 | 0.001 |
| Number of children (age 6-14) | -0.000 | 0.001 | -0.001 | 0.001 |
| Number of children (age 15-18) | -0.000 | 0.001 | -0.002 | 0.001 |
| Number of children (age 19+) | 0.001 | 0.002 | -0.003 | 0.002 |
| Marital status: partner without cohabitation | -0.000 | 0.001 | -0.000 | 0.001 |
| Marital status: partner with cohabitation | -0.000 | 0.001 | -0.000 | 0.001 |
| Mother tongue different from Czech | 0.000 | 0.001 | 0.000 | 0.001 |
| Health limitations | 0.001 | 0.001 | 0.001 | 0.001 |
| Scheduled working hours per week | 0.016* | 0.004 | 0.016* | 0.004 |
| ISCO 1 | 0.001* | 0.004 | 0.009* | 0.004 |
| ISCO 2 | -0.016* | 0.005 | -0.015* | 0.005 |
| ISCO 3 | -0.013* | 0.006 | -0.013* | 0.005 |
| ISCO 4 | -0.023* | 0.005 | -0.023* | 0.005 |
| ISCO 5 | -0.011* | 0.003 | -0.011* | 0.003 |
| ISCO 6 | -0.000 | 0.001 | -0.000 | 0.001 |
| ISCO 7 | 0.035* | 0.007 | 0.032* | 0.007 |
| ISCO 8 | 0.018* | 0.004 | 0.017* | 0.004 |
| <i>Unexplained</i> | | | | |
| Sum | 0.218* | 0.015 | 0.121* | 0.024 |
| Feeling of responsibility for ensuring an income | | | 0.053 | 0.054 |
| Feeling of responsibility for ensuring housework/childcare | | | 0.019 | 0.055 |
| Parental leave (months) | | | -0.045* | 0.022 |
| Family as the highest life priority | | | -0.032 | 0.018 |
| Preference for job flexibility | | | 0.051 | 0.032 |

Appendix 3: Continued

| | | | | |
|--|--------|-------|--------|-------|
| Preference for less demanding/stressful job | | | -0.026 | 0.037 |
| Years of schooling | -0.076 | 0.113 | -0.079 | 0.112 |
| Tenure | -0.020 | 0.041 | -0.016 | 0.041 |
| Tenure squared | 0.006 | 0.021 | 0.005 | 0.021 |
| Work experience | 0.053 | 0.043 | 0.051 | 0.043 |
| Work experience squared | -0.033 | 0.025 | -0.031 | 0.025 |
| Grades from math at age 15 | 0.024 | 0.043 | 0.027 | 0.043 |
| Number of children (age 0-2) | 0.007* | 0.003 | 0.006 | 0.003 |
| Number of children (age 3-5) | 0.010* | 0.005 | 0.009 | 0.005 |
| Number of children (age 6-14) | 0.016* | 0.007 | 0.014 | 0.009 |
| Number of children (age 15-18) | 0.005 | 0.005 | 0.006 | 0.007 |
| Number of children (age 19+) | 0.012 | 0.009 | 0.013 | 0.013 |
| Marital status: partner without cohabitation | 0.003 | 0.004 | 0.003 | 0.004 |
| Marital status: partner with cohabitation | 0.032 | 0.019 | 0.033 | 0.020 |
| Mother tongue different from Czech | 0.001 | 0.001 | 0.001 | 0.001 |
| Health limitations | -0.002 | 0.005 | 0.000 | 0.005 |
| Scheduled working hours per week | -0.340 | 0.232 | -0.336 | 0.232 |
| ISCO 1 | -0.004 | 0.003 | -0.004 | 0.003 |
| ISCO 2 | -0.014 | 0.008 | -0.015 | 0.008 |
| ISCO 3 | -0.011 | 0.013 | -0.013 | 0.013 |
| ISCO 4 | -0.017 | 0.009 | -0.016 | 0.009 |
| ISCO 5 | 0.001 | 0.009 | 0.000 | 0.009 |
| ISCO 6 | -0.000 | 0.001 | -0.000 | 0.001 |
| ISCO 7 | -0.013 | 0.008 | -0.013 | 0.008 |
| ISCO 8 | -0.006 | 0.007 | -0.006 | 0.007 |
| Constant | 0.559* | 0.273 | 0.434 | 0.291 |

Note 1: * p<0.05

Note 2: All decompositions contain all other variables as in our wage regressions, e.i. Prevailing economic activity (1-digit NACE), Number of employees, Ownership, Entrepreneur dummy, NUTS 3 region, Size of a municipality

Source: Authors