

2.2 IS THERE A GLASS CEILING IN HUNGARY? GENDER WAGE GAP BY EDUCATIONAL ATTAINMENT

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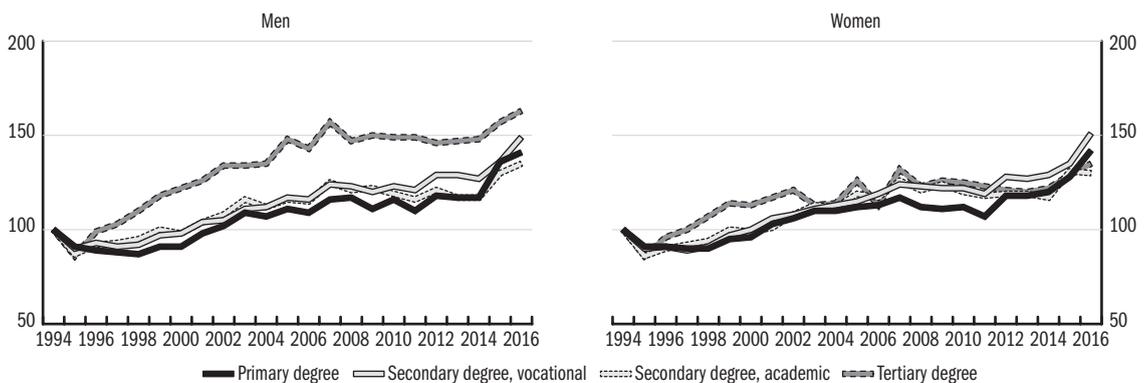
The average gender wage gap has been decreasing in Hungary since the beginning of the 1990's. Investigating the gender wage gap by educational attainment, however, reveals that it is decreasing only among those who have at most a secondary degree while it is still increasing among those having a tertiary degree. This phenomenon might be due to the *glass ceiling*: while the gender wage gap is decreasing in lower-level positions, above a certain level of labour market success the gender wage gap is widening. The *glass ceiling* metaphor refers to an invisible barrier in the corporate ladder that holds women (and other discriminated groups of employees) back from career advancement.

Research question

Earlier empirical research has focused on the average gender wage gap and aimed at identifying its causes. This chapter looks at the distribution of the gender wage gap by looking at whether its magnitude depends on educational attainment. We use the individual-level wage data of the Structure of Earnings (Béttarifa) survey from the private sector.

Figure 2.2.1 shows the evolution of average monthly wages of men and women in the last 20 years relative to 1994, net of consumer price inflation. Strikingly, the real wage growth of graduated men has been far above the real wage growth of both less-than-tertiary-educated men and women of all educational attainment levels, including graduated women as well.

Figure 2.2.1: The evolution of real wages in the private sector, 1994–2016 (1994 = 100)



Sample: full-time employees of firms with more than 20 workers in the private sector.

Vertical axis: real wage index relative to 1994. Real wages are constructed using the consumer price index of all years published by the Hungarian National Statistical Office.

Source: Own estimation using the Structure of Earnings (Béttarifa) survey.

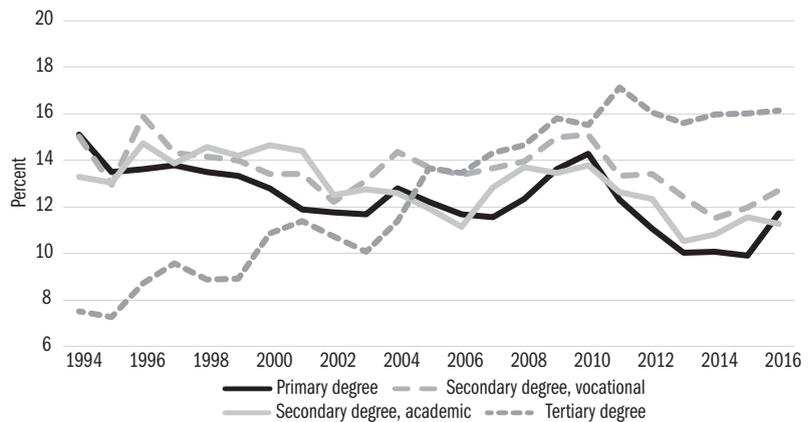
Wage differences among genders might occur as a result of women being more likely to work in occupations or at companies that offer lower wages on average to everybody. Thus, in the next section, we are looking at the evolution of the gender wage gap net of the effects of women and men working in positions and companies that are different in terms of their labour market returns. This *conditional gender wage gap* is considered as the upper limit of labour market discrimination.

Conditional gender wage gap by educational attainment

We estimate the conditional gender wage gap using Mincerian wage models. Based on *Pendakur–Woodcock (2010)*, we are investigating within-firm wage gaps that capture wage differences of men and women working at the same firms, in the same positions, who are of the same age and have the same level of educational attainment.¹ The effect of age is modelled using a second-degree polynomial while positions are coded using 4-digit occupation (FEOR) categories. We are also controlling for whether individuals are new entrants at the firm, and, for the difference between the share of graduated women and men within occupations and sectors as a proxy for the increasing relative supply of graduated women over time. We estimate separate equations in all years between 1994 and 2016, and, our dependent variable is the natural logarithm of gross nominal monthly wages.

Our results show that the conditional gender wage gap has decreased among those holding primary or secondary degrees, while it has been steadily increasing among college and university graduates (*Figure 2.2.2*). There is a particularly large improvement among those having at most a primary degree, mostly due to the fact that the minimum wage has been raised several time in this period.

Figure 2.2.2: Within-firm gender wage gap by educational attainment



¹ Estimating within-sector wage gaps instead of within-firm wage gaps gives very similar results and leads to the same conclusion.

Sample: full-time employees of firms with more than 20 workers in the private sector. The plotted coefficients are estimated in Mincerian wage models by linear regressions each year, and are derived using the interaction term of gender and

educational attainment. The vertical axis shows -1 -times the gender wage gap, i.e. 16% should be interpreted as conditional on firm and occupation fixed effects, age and the relative share of graduated women vs. men in sectors and occupations as detailed in the text, women on average earn 16% less than men. The explanatory power (R^2) of the yearly models is about 60%, sample size is between 90–130 thousand individuals.

Source: Own estimation using the Structure of Earnings (Bértarifa) survey.

Although a large higher education (HE) expansion took place in Hungary in the last 20 years, the share of those having a tertiary degree in the working age population is still around 75% of the comparable EU-average according to Eurostat data (28.5% vs. 21.4% in 2018, Eurostat Main Indicators Database). As our results suggest, the conditional wage returns of HE graduation are lower for women than for men. Theoretically, this could be the results of women being more likely to choose university courses that offer lower labour market returns; however, we measure the wage gap net of this effect as we control for firm and occupation fixed effects. Furthermore, we only use wage data from the private sector, thus, most low-paid, traditionally female occupations (teacher, nurse) are not included in our sample.

Conclusions

We find that the conditional gender wage gap is 50% larger among those having a tertiary degree than among the non-graduated. The average graduated woman, working at the same firm, having the same occupation and being of the same age, earned 16% less in 2016 than the average graduated man, while this difference was 11% among women and men who did not have a HE degree. This is due to the phenomenon that while the average wages of graduated men increased enormously in the last 20 years, the wage growth of graduated women was much more contained.

References

- PENDAKUR, K.–WOODCOCK, S. (2010): Glass Ceilings or Glass Doors? Wage Disparity Within and Between Firms. *Journal of Business & Economic Statistics* Vol. 28. No. 1. pp. 181–189.