2.1.1 Do women have better opportunities in the public sector? An analysis of the gender pay gap and occupational segregation in the public and private sector

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In Hungary, similarly to many other countries, a large number of working women are employed in the public sector. There might be various reasons for this: women are more likely to choose traditional female occupations – teacher, nurse etc. – that are mainly in the public sector, or some features of public sector jobs (e.g. job security, working time and expectations, less stress) are more popular among women. Furthermore, women might prefer public sector jobs because they might think they are less likely to face discrimination thanks to stricter workplace policies (e.g. pay scales, promotion). However, the latter assertion is difficult to prove or quantify because pay (relative to men) and occupation depend on a number of other factors (individual or workplace characteristics previously highlighted) that are often unobservable.

International findings (*Barón and Cobb-Clark,* 2010, *Chatterji, Mumford and Smith*, 2011, *Melly* 2005, *Mora and Ruiz-Castillo,* 2004) suggest that there is less discrimination in the public sector. It might be valuable to examine the extent of discrimination by sector; in the event that there is a difference, it might have a significant influence on women's decisions. Estimates for the extent of discrimination are compared in two ways: the pay gap and the probability of achieving a management position. The analysis uses data from the Wage Tariff Survey covering the period between 2002–2008; this is a representative sample of both sectors and enables us to take into account both worker and institutional characteristics. *Table B2.1.1.* compares the ratio of women and mean wages in the two sectors.

Labour market discrimination can be manifested in pay – if a woman with comparable characteristics (productivity) is paid less than a man. Mean wage difference is the most commonly used indicator of gender differences in the literature (*Altonji and Blank,* 1999), but unexplained wage differential is a better approximation of discrimination because it also eliminates the effect of covariates re-

Table B2.1.1: The ratio of women and mean pay by occupation and sector, 2002–2008

	Ratio of women		Mean pay (forint)	
	private sector	public sector	private sector	public sector
Managers: HSCO first digit = 1	0.312	0.653	384,400	370,320
Managers: using more precise definition	0.246	0.713	364,503	333,562
Tertiary independent	0.402	0.754	355,545	235,637
Tertiary and secondary	0.599	0.863	203,527	163,815
Clerical	0.905	0.951	148,094	135,503
Services	0.528	0.728	105,552	117,844
Agriculture	0.258	0.277	101,930	109,655
Manufacturing	0.198	0.118	128,995	126,334
Machine operators	0.232	0.017	137,642	137,324
Unskilled	0.466	0.803	90,956	99,721

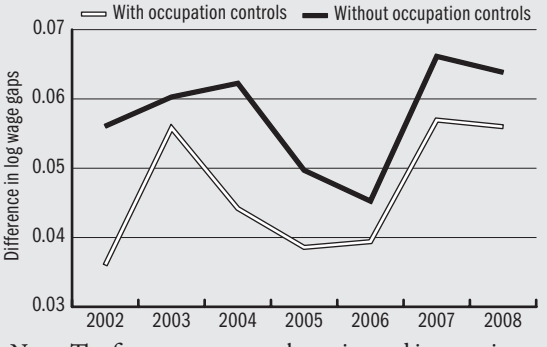
Note: The public sector includes public service employees, civil servants, judges and prosecutors, while the private sector includes employees of businesses. In the first row managers were defined based on the first digit of the HSCO code, in the second row a more precise definition was used for each industry. Mean pay was computed from individual pay based on total monthly gross income (mean of basic pay and incidental benefits in the previous year), in forints, at 2008 value deflated with the annual consumer price index.

Source: *Wage Tariff Survey.*

lated to worker and workplace characteristics. This study will estimate individual wage equations using observable worker and employer characteristics, gender and sector dummy variables, and their interaction as control variables. The estimated coefficient of the interaction is the measure of the unexplained pay differential between the two sectors.* *Figure B2.1.1.* shows the development of this measure over time, while *Table B2.1.2.* summarises the main coefficients of wage equations estimated by quantile. In the public sector unexplained wage difference is on average 5–6 per cent lower. Nevertheless, there is a significant – around eight percentage points – unexplained difference between the mean wage of men and women. Looking at different points of pay distribution, it emerges that the disadvantage of women is greater at the higher end of the distribution, suggesting a glass ceiling effect (*Arulampalam, Booth and Bryan,* 2007); however the increase of the difference is smaller in the public sector.

Another form of discrimination can be manifested in hiring and promotions – if employers are

Figure B2.1.1: Difference in unexplained gender pay differential between sectors, 2002–2008



Note: The figure represents the estimated interaction coefficient of the *public sector* and *women* dummy variables based on wage equations for each year between 2002 and 2008. The control variables are: employee characteristics (education, potential work experience and its square), institutional characteristics (size and region), and job characteristics (lunch break, type of work contract, difference between actual and official working time). For the estimations individual and institutional weightings were used. Occupation control variables are dummies generated from the first digit of HSCO codes.
Source: *Wage Tariff Survey*.

* It should be emphasised that the unexplained pay gap should be considered the upper range limit of discrimination because there are other, unobserved differences in employee characteristics that might skew upwards the estimated extent of discrimination. When comparing wage differentials between sectors, selection bias between sectors is an issue. This is not corrected here due to the lack of data but it might be argued that it can potentially lead to underestimating the relative advantage of the public sector (*Tansel,* 2004, *Greene and Hoffnar,* 1996).

Table B2.1.2: Unexplained pay differentials between the two sectors, percentiles

	Percentiles									
	10th		25th		50th		75th		90th	
Women	–0.041	(0.001)	–0.078	(0.001)	–0.126	(0.001)	–0.185	(0.002)	–0.236	(0.002)
Public sector	0.246	(0.003)	0.153	(0.003)	0.002	(0.004)	–0.148	(0.006)	–0.255	(0.008)
Public sector × women	0.019	(0.003)	0.040	(0.003)	0.057	(0.004)	0.084	(0.005)	0.121	(0.007)
N	1,401,418									

Notes: Columns contain the coefficients of individual wage equations estimated by quantiles (standard error in brackets). The coefficients of *Women* dummy variable indicate the disadvantage of women compared to men in the private sector. The coefficients of Public sector dummy variable measure the advantage or disadvantage of the public sector in comparison to the private sector, for both genders. Interaction coefficients of the two variables measure the disadvantage of women in the public sector compared to the private sector. For a description of the dependent and other control variables – such as experience – the definition of public sector and weighting see the note for Table 1 in *Lovász* (2013). *N* is the number of individual observations.
Source: *Wage Tariff Survey,* 2002–2008.

less likely to hire women than men or promote them to higher positions (the "glass ceiling" effect). To grasp this phenomenon we will compare the likelihood of women and men with similar characteristics to get to management positions in the two sectors. The ratio of women in management positions is considerably higher in the public sector; however this might be due to their higher ratio within the public sector workforce. Therefore their ratio within occupations is also included among the control variables. The results of probit estimations (*Table B2.1.3*) suggest that the odds of women are no smaller in the public sector, while in the private sector they have an approximately two-percent disadvantage compared to men with similar characteristics.

These results suggest similar trends to wage differentials: the estimated extent of discrimination against women is smaller in the public sector than in the private sector. Although there are significant unexplained gender pay differences in the public sector, overall it seems that regulation limiting the employer's scope for individual discretion can be successful in improving the opportunities of women in the labour market. It is unlikely that there have been major changes in unequal gender treatment since 2008 in the absence of substantial gender-related changes that would affect the regulation of the public sector. It is likely that data in 2013 would still show that limiting the possibilities of employers for individual discrimination improves the labour market opportunities of women in the public sector in comparison to the private sector, although the difference is not too big.

Table B2.1.3: Odds of management occupations, probit estimations, 2002–2008

	Private sector		Public sector	
Estimated coefficient				
Women	–0.438	(0.011)	–0.080	(0.018)
Vocational school	0.426	(0.032)	0.447	(0.077)
Secondary education	1.295	(0.030)	0.960	(0.067)
Degree	2.143	(0.031)	1.929	(0.065)
Experience	0.025	(0.000)	0.028	(0.001)
Marginal effect				
Women	–0.021	(0.000)	–0.003	(0.001)
Vocational school	0.020	(0.001)	0.016	(0.003)
Secondary education	0.061	(0.001)	0.035	(0.003)
Degree	0.100	(0.001)	0.071	(0.002)
Experience	0.001	(0.000)	0.003	(0.000)
Observations	1,098,965		370,002	
Pseudo R^2	0.3006		0.1984	

Note: Standard errors in brackets. Probit estimations, the dependent variable is probability of getting to a management position. The control variables are: employee characteristics (education, work experience and its square), institutional characteristics (size and region), and the ratio of female employees in the organisation. Experience is potential work experience; it is obtained by subtracting the sum of years spent in education and the compulsory school age from the employee's age. Public sector refers to public service employees. For the estimations individual and institutional weightings were used.
Source: *Wage Tariff Survey*.

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