

14. Hungary: The Impact of Gender Culture

Dániel Horn and Tamás Keller

INTRODUCTION

Although the post-Socialist Hungarian labor market is definitely gender segregated, it is no more so than the average OECD country. In fact, the relatively low general employment rate (58.2 per cent) is combined with average differences between the two sexes: Whereas men are more likely to be employed (64.3 per cent) than women (52.4 per cent), this difference is exactly at the OECD mean where it has remained stable from 2007 to 2013, and thereby also throughout the most recent economic crisis (OECD 2014a, p. 99). Differences between the genders are not very remarkable in many other aspects either: There are no notable differences in long-term unemployment rates, in job security, in health, in educational attainment, or in skills. The only dimension among the OECD's Better Life indices on which differences between the sexes in Hungary vary considerably from the OECD average is the division of work: Men in Hungary spend 127 minutes per day cooking, cleaning, or caring – somewhat less than the average for men in the OECD (141 minutes) and considerably less than Hungarian women who spend 268 minutes per day on domestic work. The other side of this coin is that men are still much more likely to work longer hours than women (OECD 2014b; see also Blaskó 2006, p. 37).

Whereas there are some institutional factors – high educational selectivity, high occupational specificity, generous maternity leave and childcare system – that could influence horizontal differences as well as vertical inequalities, we argue that the potential impact of these institutions is much smaller at labor market entry than it is later in life. Therefore, we assume that the observed differences are due mainly to the gender culture, and that this can exert a significant influence even directly at labor market entry.

Phelps (1972) argues that employers might regard gender as a proxy for what is usually missing information about employees in order to reduce uncertainty in their hiring decisions. Because our empirical analysis uses data

on young adults right after graduation, employers might assume that their female employees are at a stage just before motherhood. As a result, they are willing to pay only a lower wage because of the potential loss of productivity during maternity leave. In Hungary, employers are obliged to subsidize their women employees during maternity leave. Moreover, due to the highly gender-biased division of household work and childcare, employers rightly assume that it is the women who will be on leave much longer and who, even after their return, will be more likely to be less devoted to the workplace. This also explains why we observe a negative wage gap only among the vocationally educated. Specific skills are likely to deteriorate much more quickly than general skills. Hence, employers might fear a forgone investment in their on-the-job training. Recently, the OECD published statistics on the gender pay gap in developed countries (OECD 2013). It is remarkable that among the 29 countries compared to Austria, Finland, Germany, and Switzerland were those with the highest gender pay gap in 2010. All these countries (with the exception of Finland) have dual educational systems. There might be some connection between this fact and our finding. Hence, the guiding line in our analysis is that the gender wage gap could be interpreted as reflecting a fear of deterioration in (specific) skills among labor market entrants, and especially among the vocationally educated.

Differences between genders in the Hungarian labor market have been widely documented (Jolliffe and Campos, 2005; Lovász 2010, 2013). Previous research has pinpointed the major decline in vertical inequality – measured as wage or earnings gap – during the post-Socialist transition (Kertesi and Köllő 1998; Galasi 2000), but has also shown that this has remained relatively stable and continues to be large since the millennium (Lovász 2010). The size of the documented drop in the wage gap is around 10 percentage points and is assumed to be due to the increased value of intellectual work, which is performed by a relatively larger share of women than men; to the falling wages of men in low-skilled occupations (Kertesi and Köllő, 1998); and to the increasing level of education of women relative to that of men, which also pushes low-skilled women out of the labor market (Frey 1998).¹ However, the unexplained wage gap between the genders was still substantial between 2002 and 2008. Lovász (2013) estimated it to be around 13–14 per cent in the private sector and 8 per cent in the public sector during this period, and this drops only marginally by around 1.5 percentage points after accounting for horizontal differences. In other words, even today, there still seems to be a substantial unexplained wage gap between women and men in the total population of Hungary.

In this chapter, we try to complement this line of research and focus on the initial rather than the final vertical inequalities and horizontal differences

between genders at labor market entrance. It is interesting to see whether the gender wage gap increases or decreases over the life course, and how far vertical inequalities can be explained by horizontal differences right at labor market entrance.

It is clear that the first labor market entrance is the time when family duties are still not as substantial as later, and also different trends between the genders in gaining experience (e.g., men work more per year and thus gain more experience) matter much less. Thus, we expect the gender gap to be smaller at this point. Moreover, although the literature would predict the Hungarian gender wage gap to be larger because of early selection within the education system, its high occupational specificity, the generously long maternity leave, and the far from universal early childcare (Bukodi and Robert 2008), we assume that these institutional effects will be fairly small at labor market entry for two distinct reasons: First, the welfare state and family policies probably matter more at a later stage when family formation is more widespread. Second, because we shall be looking at gender differences within educational groups and within broader occupational categories in order to estimate the real vertical inequalities between genders,² the institutional arrangements should have minor consequences within these groups.

Furthermore, Hungary is characterized by a traditional male-breadwinner gender culture. Approximately one-fifth of women do not return to work after parental leave (Riedmann et al. 2005), and Hungary is the European country in which citizens agreed most strongly with the statement 'men should have more rights to a job than women when jobs are scarce' (Tóth and Dupcsik 2008). Compared to other European countries, females in Hungary become mothers relatively early (Testa 2006); and in a survey of citizens of 24 European countries, it was Hungarians who most frequently regarded the value of family as the most important (Takács 2008, p. 54). Although family formation is still ongoing at this stage, these imbedded cultural traits should already have a strong effect on gender differences.

We look at the horizontal differences (occupational segregation) and vertical inequalities (wage gap) between sexes at the school-to-work transition in Hungary today. We use two separate datasets to cover the subject comprehensively. The Labor Force Survey (LFS) 2009 ad hoc module allows a comparison of the horizontal differences between two young cohorts with finished educational pathways, and it also provides data that allows for a cross-country comparison. The main weaknesses of the LFS are that it does not provide information on earnings or wages and that there is very little background information on the respondents. The other dataset, the Hungarian Life Course Survey (HLCS), makes up for these absences, but at a cost. The HLCS is an excellent individual level panel dataset for analyzing vertical

inequalities, because it provides data on hourly wages and also very detailed information on the respondents including occupational data, educational pathways, and a standardized measure of both a cognitive and a noncognitive set of skills. However, because the HLCS is a relatively new dataset that has now followed one 18-year-old cohort for six years, only those within the non-college-bound segment can be analyzed, because the others are still in education.

Nevertheless, the results from these two datasets can highlight some important characteristics in the gender dimension of the Hungarian school-to-work transition. The results of this analytical exercise underline the already documented gender differences. We show that a substantial gender gap is already observable at labor market entrance even after accounting for the level of education, cognitive and noncognitive skills, the chosen occupation (horizontal differences), or the potential selectivity bias. Although differences are smaller than those documented by Lovász (2013) for the total population – around 7–8 per cent – we also show that this inequality is due solely to the wage differences between women and men with vocational education among whom the wage inequality is similar to what is expected for the whole population at around 15 percentage points. This also means that there are no wage inequalities between people of lower (primary or below) or of higher (secondary or above) education at around age 20.

This observation is self-evident, on the one hand, but surprising on the other. The fact that we do not observe vertical inequalities within the low and the high educated is due to the nature of our data: Only those with vocational secondary level education have already entered the labor market, and they are therefore the only group in which we can report reliable estimates of vertical inequalities. On the other hand, the documented level of vertical inequality within the vocationally educated is not lower than that documented for the whole population, although we had expected it to be much lower.

Whereas we are unable to name the reasons for this finding at this stage, as outlined above, we assume that the highly gendered culture of the Hungarian society is a much likelier candidate to be the cause of the observed gender wage gap than institutional factors.

In the following section, we discuss the details, advantages, and drawbacks of the two datasets. In the third part, we offer a set of descriptive statistics that could help the reader to place Hungary in the broader European context, because these are directly comparable with some of the statistics provided in the other chapters of this volume. This is the part in which we discuss the apparent level of occupational gender differences (horizontal differences). The third part of the chapter analyses the wage gap (vertical inequalities) and the connection between horizontal differences and vertical inequalities. It tries

to show that no matter how many observable characteristics we can control for or how much selectivity bias we correct, the gender wage gap remains substantial. The last section concludes.

THE DATASETS

Labor Force Survey

The European Union Labor Force Survey (EU LFS) is a large household sample survey providing quarterly results on the labor participation of people aged 15 and over as well as on persons outside the labor force. Besides the main questionnaire, the EU LFS contains a different ad hoc module every year. In 2009, this was ‘Entry of young people into the labor market.’ This dataset contains information on the first job of the respondent (duration, type of contract, occupation, etc.) as well as the time gap between leaving education (the highest level at that time) and the first job. The dataset allows for a limited cross-cohort comparison – people aged either 30–34 or 25–29 years in 2009 – but does not contain any information on vertical inequalities (e.g., wage or prestige scales). Hence, we shall use this dataset mainly to offer indicators that are comparable with the other chapters, but we shall rely on the Hungarian Life Course survey for the substantial analysis. Important additional benefits of using the LFS data are that it covers the full labor market entry cohort with finished educational pathways; and, as such, it offers a more reliable description of horizontal gender differences. Moreover, by comparing cohorts within the LFS, we can get a glimpse of the trends in horizontal differences in Hungary.

Hungarian Life Course Survey

The Hungarian Life Course Survey (HLCS) is an individual panel survey conducted annually. The original sample of 10,022 respondents was chosen in 2006 from the population of 108,932 8th-grade students with valid test scores from the National Assessment of Basic Competencies (NABC). The NABC measures the literacy and numeracy of all 6th-, 8th-, and 10th-grade students every year starting in 2006 (OECD 2010). The first HLCS survey wave was completed during the winter of the 2006/7 school year, and subsequent waves have been fielded on a yearly basis. Currently, six waves are available with fairly high response rates. The annual sample attrition rate, on average, is only around 5 per cent.

HLCS provides information on the date of first labor market entry, the current working status, and the last occupation (ISCO 88 and wage). However, it provides no information on the date of finishing education or the exact working history (i.e., when a particular job terminated). Hence, we consider students to have entered the labor market when they report that they are working at the time of the survey. The first significant job is identified with the last/current observed occupation. This is also a simplification, because people could have had several jobs between entering the labor market and their last observed job. The bias, however, should be not large, because the observed time period is relatively short: Respondents are around the age of 20. Note that all individuals who have ever entered the labor force are in the sample regardless of their current working state.

The HLCS database also contains detailed information on educational achievement (standardized literacy and numeracy scores in 8th grade from the NABC data as well as the annual class marks awarded by their teachers), ethnicity, school trajectory, family background (including parental education and employment), and a set of noncognitive skills. These variables are essential controls if we are to estimate the true vertical inequalities.

HORIZONTAL DIFFERENCES

In the descriptive analyses below, we use data for all the three cohorts available in the two datasets. The cohort born between 1975 and 1979 (aged 30–34 in 2009) and the cohort born between 1980 and 1984 (aged 25–29 in 2009) are from the EU LFS, whereas the cohort born around 1992 (aged 20 in 2012) is from the HLCS dataset. Although the two datasets are not perfectly comparable, short-term trends in horizontal gender segregation in Hungary might still be observable.

As in almost all developed countries, the level of education of Hungarian women has already surpassed that of men. Table 14.1 below shows that women entering the labor market are around 6 percentage points more likely to gain a postsecondary/tertiary degree in the oldest cohort, and that this gap goes up to 9 percentage points in the middle cohort. Although many members of the youngest cohort (ca. age 20) have not yet finished education, women still have more than 3 percentage points higher finished postsecondary education than men. Also, women in the two older cohorts are 10 percentage points more likely to have a finished secondary degree (*érettség*) that qualifies them to continue studies on the postsecondary/tertiary level. It is the quasi dead-end vocational training track that educates more men: For all cohorts, men are about 16–17 percentage points more likely to attain a vocational degree.

Table 14.1 Educational pathways of labor market entrants by gender over birth cohorts (column percentages)

	Cohort 1975-1979 (LFS)			Cohort 1980-1984 (LFS)			Cohort 1990-1992 (HLCS)		
	male	female	diff.	male	female	diff.	male	female	diff.
Primary or below	16.1	15.7	0.4	16.1	13.8	2.3	23.4	16.5	6.9
Vocational training	51.6	34.6	17.0	44.1	26.9	17.2	38.7	22.6	16.1
Secondary level	22.0	32.8	-10.8	31.3	41.2	-9.9	30.1	49.9	-19.8
Post-secondary/tertiary	10.3	16.9	-6.6	8.5	18.1	-9.6	7.8	11.0	-3.2
Total (%)	100.0	100.0		100.0	100.0		100.0	100.0	
Total (N)	1,162	1,056		852	752		1,603*	857	

Source: Own calculations based on LFS and HLCS

Notes: + LFS – Labor Force Survey data, members of cohort 1975-1979 are around 30-34 years old at the time of the survey, while members of cohort 1980-1984 are around 25-29 years old.

++ HLCS - Hungarian Life Course Survey, respondents are around 20 years old.

* Since males are more likely to enter the labor market at an earlier stage than women, at age 20 there are almost twice as many of them in our sample.

Table 14.2 Type of first significant job based on Blossfeld classification and the Duncan dissimilarity indices by birth cohort

	Cohort 1975-79 (LFS)			Cohort 1980-84 (LFS)			Cohort 1990-92 (HLCS)		
	male	female	all	male	female	all	male	female	all
Production	75.0	33.1	55.1	68.4	28.7	49.8	54.1	24.8	42.8
Services	13.7	28.9	20.9	16.8	27.4	21.8	33.1	41.4	36.3
Administration	11.3	37.9	24.0	14.8	43.9	28.4	12.8	33.7	20.9
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total (N)	1,162	1,056	2,218	852	752	1,604	1,597	858	2,455
<i>Duncan index</i>									
ISCO (2 digit level)		0,57			0,48			0,37	
Blossfeld's classification		0,42			0,40			0,28	
<i>IP index</i>									
ISCO (2 digit level)		0,24			0,24			0,20	

Source: Own calculations based on LFS and HLCS

Notes: + LFS – Labor Force Survey data, members of cohort 1975-1979 are around 30-34 years old at the time of the survey, while members of cohort 1980-1984 are around 25-29 years old. Number of ISCO categories (2 digit level): 24 for cohort 1975-79 and 1980-84, 26 for cohort 1990-92.
 ++ HLCS - Hungarian Life Course Survey, respondents are around 20 years old.

Although these figures are not very surprising, they underline our suspicion that men probably gain more work experience during their lifetime, because, on average, they enter the labor market earlier. From this follows that vertical gender inequalities are probably higher later in the life course than at labor market entrance.

Besides the different educational pathways, horizontal gender differences could also account for the apparent gender wage gap. Men in general are much more likely to have a job in the production sector, whereas women typically opt for either administrative or service jobs (see Table 14.2). The share of men in production is above 75 per cent in the oldest cohort, and it gradually goes down to 68 per cent in the middle and to 54 per cent in the youngest cohort. Parallel to this, a substantial increase has occurred in the percentage of men in services but not in administration. The share of women in these three sectors seems to be relatively stable, at least compared to men, although their share in production is also dropping, but only by around 5–8 per cent. Their share in the other two sectors fluctuates at around 30–40 per cent depending on the cohort (and the dataset). Nevertheless, production seems to be losing ground in the whole population, whereas the other two sectors are expanding. This would suggest a decrease in horizontal gender differences. This tendency is also suggested by the Duncan dissimilarity index (Duncan and Duncan 1955) in Table 14.4 below. Depending on which occupational categories are utilized (either the ISCO88 2 digit codes or the detailed 12-category Blossfeld classification, BLK: Blossfeld 1987), around either 57 per cent or 42 per cent of men and women in the oldest cohort would have had to change occupations to achieve an equal distribution of sexes. In the youngest cohort, these percentages drop to 37 per cent or 28 per cent respectively.

VERTICAL INEQUALITIES

The most important difference between men and women, as highlighted above, is that men pursue more vocationally oriented education and are also more likely to work in production than women (note that education and the field of first occupation are strongly related: Nearly 60 per cent of those with vocational training are working in production compared to around 30 per cent of those with a higher ranking educational qualification). That is, men usually are vocationally qualified and are working in production, whereas women usually have chosen more academically oriented secondary schools and are thus more likely to work in administration. Note that whereas the number of years spent at school is almost equal among those with vocational training and those choosing a secondary school track, the quality of the two degrees differs

greatly (Hermann 2013). First of all, secondary schools offer the possibility to go on to tertiary education, whereas this option is not available for those with vocational training alone. Moreover, students with a higher status as well as those with higher skills are more likely to attend secondary school tracks, and these schools are of higher academic quality, and this also offers higher chances of successful tertiary education applications.

In a multivariate analysis below, we look at the logarithm of hourly wage. The uncontrolled gender gap amounts to about 126 Hungarian Forints (HUF) per hour with men earning about 2,006 HUF and women earning an average of about 1,880 HUF. In other words, women earn about 94 per cent of men's earnings. Table 14.3 presents the results of an OLS regression in which (log) hourly wage is explained by gender, education, and the field of first job (as a proxy for the type of job). Women in general earn around 6.5 per cent less than males. Because women are, on average, higher educated, controlling for the level of education increases this difference to 8 per cent, and this remains stable at around 7–8 per cent when the type of employment sector and its interaction with the level of education is controlled for (see the average marginal effects in the last row of the table).

A closer look at the point estimates in Table 14.3 draws a more interesting picture that can also be seen in Figure 14.1. Although the differences between similarly educated men and women who are employed in similar occupations is significant at around 7–8 per cent, there is a large variance in vertical gender difference across levels of education and across occupations. Evidently, women suffer the largest disadvantage when they have a vocational training degree. However, women have similar wages to men when they have a secondary or higher degree, or a primary or lower degree. In other words, the raw negative wage difference between men and women at around age 20 seems to stem solely from the large wage difference between vocationally educated men and women.³

Naturally one can argue that men and women may differ on some unobserved characteristics such as productivity, motivation, self-esteem, or other noncognitive skills that are valued by the labor market but very hard to measure. Admitting that we cannot come close to including all unobserved variables in the models, we try to include some usually not available proxies for personality traits such as standardized test scores and some noncognitive traits. In Table 14.4, we attempt to 'explain away' the gender difference observed at labor market entry. The first model in Table 14.4 is almost the same as in Table 14.3. The only difference is that it is restricted to those for whom all control variables were available. Evidently, the wage gap for this sample is marginally (0.7 per cent) lower. Model 2 in Table 14.4 controls for children, year of birth, type of settlement (capital, city, town, village),

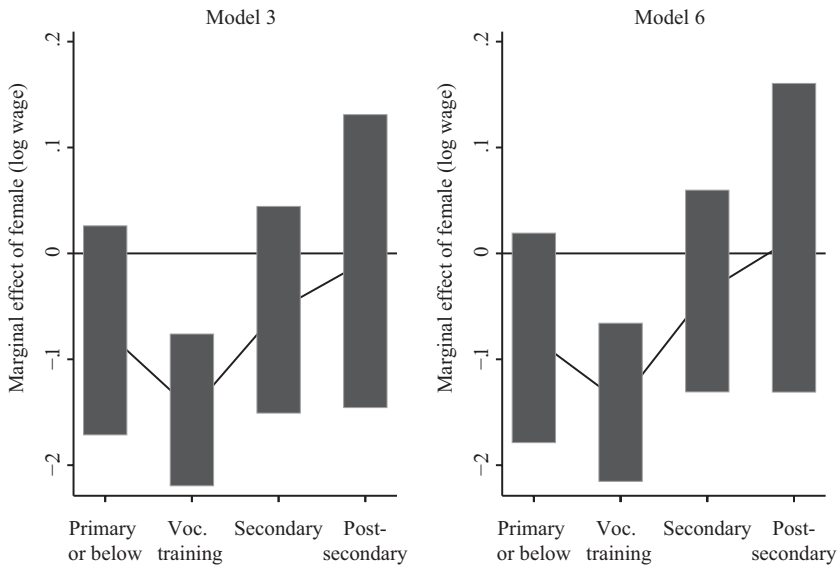
Table 14.3 Linear regression of log hourly net wage

Model	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.07* (0.03)	-0.08** (0.03)	-0.15** (0.04)	-0.07** (0.03)	-0.07+ (0.04)	-0.14** (0.05)
Primary or below		-0.11** (0.03)	-0.14** (0.03)	-0.11** (0.03)	-0.11** (0.03)	-0.14** (0.03)
<i>Vocational training</i>						
Secondary level		0.03 (0.03)	-0.00 (0.04)	0.04 (0.03)	0.04 (0.03)	0.00 (0.04)
Postsecondary		0.05 (0.04)	-0.01 (0.05)	0.05 (0.04)	0.05 (0.04)	-0.01 (0.05)
Female × Primary or below			0.09 (0.06)			0.09 (0.06)
<i>Female × Vocational training</i>						
Female × Secondary level			0.10 (0.06)			0.10+ (0.06)
Female × Postsecondary			0.15+ (0.08)			0.16* (0.08)
<i>Production</i>						
Service				-0.03 (0.03)	-0.04 (0.03)	-0.03 (0.03)
Administration				-0.047 (0.04)	-0.02 (0.05)	-0.02 (0.05)
<i>Female × Production</i>						
Female × Service					0.03 (0.06)	0.02 (0.06)
Female × Administration					-0.04 (0.08)	-0.05 (0.08)
Constant	7.60** (0.02)	7.62** (0.02)	7.64** (0.02)	7.63** (0.02)	7.63** (0.02)	7.65** (0.02)
Observations	2,297	2,297	2,297	2,297	2,297	2,297
R ²	0.00	0.02	0.02	0.02	0.02	0.02
Female/Male ratio (%)	93.71%	92.22%	91.85%	93.24%	93.15%	92.77%
Male-Female difference in HUF	126.26	158.45	169.13	139.20	141.12	151.48

Source: Own calculations from Hungarian Life Course Survey (HLCS)

Notes: Robust standard errors in parentheses.

** p<0.01, * p<0.05, + p<0.1. HUF= Hungarian Forints



Source: Own calculations from Hungarian Life Course Survey (HLCS)

Note: 95% confidence intervals depicted.

Figure 14.1 Vertical inequalities within education groups

region in Hungary, special education needs, and Romani ethnicity. Including these basic variables does not change the estimated wage gap at all. Model 3 includes the school attainment by gender. As above, vocationally trained men earn over 15 per cent more than their female peers, but no wage gap is present at either lower or higher levels. Cognitive skills measured in Grade 8 are included in Model 4. This decreases the wage gap just like the inclusion of horizontal inequality. These effects, however, are only marginal; at best, their effect is no more than 1 percentage point each. Men and women may have different noncognitive skills that might be indicative of their chances of further success (Jacob 2002). Therefore, we include psychological variables in Model 7 to see how far the different sets of noncognitive skills explain labor market entry for the two sexes. The locus of control scale measures the control individuals assume that they have over their lives (Rotter 1966). Self-esteem stands for the overall evaluation of one's worth or value (Rosenberg 1965). Social competence scores provide information on whether students feel that they are important members of their school class (Harter 1982). Moreover, a depression scale was constructed from questions about anxiety and suicidal

Table 14.4 Additional explanatory mechanisms in log hourly net wages – OLS results

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female	-0.06*	-0.06*	-0.18**	-0.17**	-0.16**	-0.16**	-0.14**
	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Primary or below			-0.13**	-0.13**	-0.13**	-0.14**	-0.14**
			(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Secondary			0.01	-0.01	-0.00	-0.00	-0.00
			(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Postsecondary			-0.03	-0.06	-0.05	-0.04	-0.05
			(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Female × Primary or below			0.15*	0.15*	0.15*	0.15*	0.14*
			(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Female × Secondary			0.12+	0.12+	0.12+	0.11+	0.11+
			(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Female × Postsecondary			0.22**	0.23**	0.23**	0.23**	0.23**
			(0.08)	(0.08)	(0.08)	(0.09)	(0.09)
Reading (std.), 8th grade				-0.02	-0.02	-0.02	-0.02
				(0.03)	(0.03)	(0.03)	(0.03)
Math (std.), 8th grade				0.05*	0.05*	0.05+	0.05+
				(0.03)	(0.03)	(0.03)	(0.03)
Service					-0.02	-0.02	-0.02
					(0.03)	(0.03)	(0.03)
Administration					-0.04	-0.04	-0.05
					(0.04)	(0.04)	(0.04)
First entry to labour market (month)						-0.00	-0.00
						(0.00)	(0.00)
Locus of control							0.02
							(0.05)
Self-esteem							0.03
							(0.04)
Social competence							0.03
							(0.03)
Depression scale							-0.04
							(0.06)
Constant	7.63**	58.15+	83.81*	93.93**	94.17**	87.14*	90.34*
	(0.01)	(34.36)	(35.21)	(35.91)	(35.94)	(36.45)	(36.80)
Observations	1,834	1,834	1,834	1,834	1,834	1,834	1,822
R2	0.00	0.02	0.03	0.03	0.03	0.04	0.04
Additional controls	No	Yes	Yes	Yes	Yes	Yes	Yes
Female ME	-0.06	-0.06	-0.08	-0.07	-0.06	-0.06	-0.05

Source: Own calculations from HLCS

Notes: Robust standard errors in parentheses, ** p<0.01, * p<0.05, + p<0.1. Additional controls (not shown): has children in family, year of birth, type of settlement, region in Hungary, special education needs, Romani. ME = Marginal effect, at the mean. std. = standardized.

thoughts. Evidently, these characteristics, which turned out to be significant predictors in previous analyses (Dunifon and Duncan 1998; Murnane et al. 2001; Groves 2005), do not affect wage differences at this early phase in adult life. The slight decrease from 6 per cent to 5 per cent in the average marginal effect (last row in the table) is somewhat smaller than the 7–8 per cent estimated in Table 14.3, but the difference is not very large (especially when we add the 0.7 per cent due to the limited sample selection). Therefore, we conclude that the 7–8 per cent wage difference we observe in the base model is not due mainly to these observed characteristics between men and women, but to some other unobserved characteristic (e.g., motivation or time preference) or to sheer discrimination at the workplace, which might easily be fostered by the gendered culture of Hungarian society.

CONCLUSION

In our analysis, we find that the Hungarian school-to-work transition is rather gender differentiated. We observe strong horizontal differences between the sexes, because women are increasingly more likely to attain higher educational levels than men, and they are also more likely to enter administrative and service sector jobs, whereas men are oriented more toward the production sector. We also observe vertical inequality in the form of a gender wage gap. Vocationally educated men earn about 15 per cent more than their female peers. Surprisingly, this gap remains stable even after taking occupation, family background, type of settlement, children, ethnicity, as well as both cognitive and noncognitive skills into account.

The large vertical inequality within the non-college-bound population is especially surprising, because we looked at a relatively young cohort (around age 20) right at their labor market entry, at the beginning of their adult life course, and, most importantly, before emerging family duties. For exactly this latter reason, we expected vertical inequalities to be small because, at this stage, the different labor market institutions (generous maternity leave and childcare system) have not had time to exert an impact. Also because the estimated 15 per cent net hourly wage difference is only for the non-college-bound, vocationally trained people, the results should not be due to high educational selectivity. Moreover, because we have estimated differences within occupational groups, the high occupational specificity of the Hungarian system should also not explain the gap. This leads us to conclude that it is not institutional factors but rather the gender culture or some form of discrimination (which could also stem from the gender culture) that leads

employers to pay 15 per cent less to similarly educated, similarly skilled, and also otherwise very similar women.

Employers might use gender as a proxy for missing information about expected productivity. Due to the highly gender biased division in household work and childcare, women are more likely to be absent from work longer than men, and even after their return, they are more likely to be less devoted to the workplace. Moreover, specific skills are likely to deteriorate much more quickly than general skills. Thus, employers might be apprehensive about investing in their on-the-job training. This could explain why we observe a strong negative wage gap especially among the vocationally educated.

ENDNOTES

1. See also the corresponding parts of the introductory chapter of this volume.
2. Note that whereas institutions might influence the individual occupational choice and thus contribute to gender differences, we are not sure whether policy should aim at decreasing these differences or we should treat them as natural.
3. Note that this result is likely to be biased due to two selection problems: (1) The probability of being in the wage sample is lower if we assume that high-skilled and high-status students are more likely to continue their education (and thus the original sample is right-censored). However, (2) the probability of being in the wage sample is higher for high-skilled and high-status students, assuming that they are less likely to be unemployed had they entered the labor market (left-censored sample). We separated the sample into two subsamples: a 'study versus employed' sample to look at the bias due to right censoring, and an 'employed versus unemployed' control for left censoring. After performing Heckman-style two-stage regressions (Heckman, 1979), we conclude that the results of the OLS are not biased due to the apparent sample selection problems. In other words, the wage gap estimates of 7–8 per cent are correct.

REFERENCES

- Blaskó, Z. (2006), 'Nők és férfiak – keresőmunka, házimunka. A "család" tematikájú ISSP 2002-es adatfelvétel elemzése' [Men and women – professional and household related work. The analysis of ISSP 2002 Family module], *Központi Statisztikai Hivatal Népeségtudományi Kutatóintézetének Kutatási Jelentései* 82., Budapest: KSH Népeségtudományi Kutató Intézet.
- Blossfeld, H.-P. (1987), 'Labor-market entry and the sexual segregation of careers in the Federal Republic of Germany', *American Journal of Sociology*, **93** (1), 89–118.
- Bukodi, Erzsébet and Peter Robert (2008), 'Hungary', in: Irena Kogan, Michael Gebel, and Clemens Noeke (eds.), *Europe Enlarged: A Handbook of Education, Labour and Welfare Regimes in Central and Eastern Europe*, Bristol: Policy

- Press, pp. 183 – 211.
- Duncan, O.D. and B. Duncan (1955), 'A methodological analysis of segregation indexes', *American Sociological Review*, **20** (2), 210-217.
- Dunifon, R. and G.J. Duncan (1998), 'Long-run effects of motivation on labor-market Success', *Social Psychology Quarterly*, **61** (1), 33–48.
- Frey, M. (1998), A nők munkaerőpiaci helyzetének változása a rendszerváltás óta eltelt időszakban, Nők a munka világában, A nők munkavállalói jogai Magyarországon [The change in the position of women on the labor market after the transition], ILO, Közép- és Kelet-európai Szakcsoport.
- Galasi, P. (2000), Női-férfi kereseti különbségek Magyarországon 1986–1996. [Gender wage gap in Hungary between 1986-1996], Országos Munkaügyi Kutató és Módszertani Központ, Budapest.
- Harter, S. (1982). 'The Perceived Competence Scale for Children', *Child Development*, **53**, 87–97.
- Hermann, Z. (2013), 'Are you on the right track? The effect of educational tracks on student achievement in upper-secondary education in Hungary', *Budapest Working Papers*, 2013 (3), 1–57.
- Jacob, B.A. (2002), 'Where the boys aren't: Non-cognitive skills, returns to school and the gender gap in higher education', *Economics of Education Review*, **21** (6), 589–598.
- Jolliffe, D. and N.F. Campos (2005), 'Does market liberalisation reduce gender discrimination? Econometric evidence from Hungary, 1986–1998', *Labour Economics*, **12** (1), 1–22.
- Kertesi, G. and J. Köllő (1998), 'Regionális munkanélküliség és bérek az átmenet éveiben.' [Regional unemployment and wages during the transition], *Közgazdasági Szemle*, **45** (7–8.), 621–652.
- Lovász, A. (2010), 'The effect of competition on the gender wage gap in Hungary 1986–2003', *The Hungarian Labour market – Review and Analysis*, Budapest, Hungary: Institute of Economics, IE HAS, and National Employment Foundation, pp. 151–161.
- Lovász, A. (2013), 'Jobbak a nők esélyei a közszférában? A nők és férfiak bérei közötti különbség és a foglalkozási szegregáció vizsgálata a köz- és magánszférában', [Do women have better chances in the public sector? Gender wage-gap and occupational segregation in public and private sectors], *Közgazdasági Szemle*, **LX** (July–August), 814–836.
- Murnane, R.J., J.B. Willett, M.J. Braatz, and Y. Duhaldeborde (2001), 'Do different dimensions of male high school students' skills predict labor market success a decade later? Evidence from the NLSY', *Economics of Education Review*, **20** (4), 311–320.
- OECD (2010), OECD Review on Evaluation and Assessment Frameworks for Improving School Outcomes - Hungary Country Background Report. Paris,

- France: OECD.
- OECD. (2013). *OECD Factbook 2013*. OECD Publishing. doi:10.1787/factbook-2013-en
- OECD (2014a) *OECD Better Life Index*. Available from: <http://www.oecdbetterlifeindex.org/countries/hungary/>
- OECD (2014ba), *Society at a Glance 2014: OECD Social Indicators*. Society at a Glance, OECD Publishing.
- OECD (2014b), *OECD Better Life Index*. Available from: <http://www.oecdbetterlifeindex.org/countries/hungary/>
- Groves, M. O. (2005), 'How important is your personality? Labor market returns to personality for women in the US and UK', *Journal of Economic Psychology*, **26** (6), 827–841.
- Phelps, E. S. (1972). 'The Statistical Theory of Racism and Sexism', *The American Economic Review*, **62**(4), 659–661.
- Riedmann, A., H. Bielenski H, T. Szczurowska T, and A. Wagner (2005), *Working time and work–life balance in European companies. Establishment Survey on Working Time 2004–2005*. Dublin, Ireland: EUROFOUND, European Foundation for the Improvement of Living and Working Conditions.
- Rosenberg, Morris (1965), *Society and the Adolescent Self-Image*, Princeton, NJ: Princeton University Press.
- Rotter, J. (1966), 'Generalized expectancies for internal versus external control of reinforcements', *Psychological Monographs*, **80** (1), 1–28.
- Takács, J. (2008), "'Ha a mosogatógép nem lenne, már elváltunk volna...'" Férfiak és nők otthoni munkamegosztása európai összehasonlításban.' [If there were no washing machine we would be divorced – the gender division of household related work in Europe], *Esély*, (6), 51–73.
- Testa, M.R. (2006), *Childbearing Preferences and Family Issues in Europe. Special Eurobarometer 253 / Wave 65.1*. Brussels, Belgium: European Commission.
- Tóth, O. and C. Dupcsik (2008), 'Az emberekbe vetett bizalom és a családi, nemi szerepek konzervativizmusa [Trust in people and the conservatism of family and gender roles In]', in L. Füstös L, L. Guba L, and I. Szalma I (eds), *Társadalmi regiszter 2008/2: Mobilitás, szubjektív jólét, nemi szerepek*, Budapest: MTA Politikai Tudományok Intézete; MTA Szociológiai Kutatóintézet, pp. 63–78.