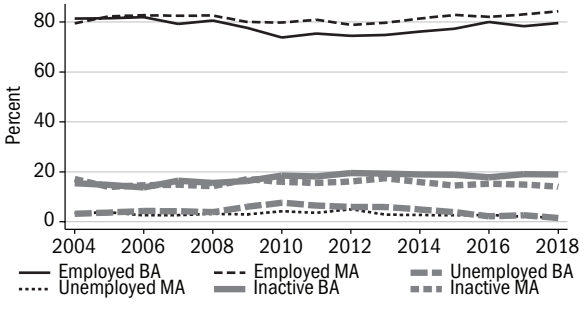
7.3 THE LABOUR MARKET SITUATION OF YOUNG GRADUATES, OVERQUALIFICATION AND THE VALUE OF HIGHER EDUCATION DEGREES

JÚLIA VARGA

This Chapter overviews how the labour market situation of young graduates (aged 35 at most) has been changing recently. The expansion of higher education, which was typical of the 1990s and the early 2000s, came to a halt after 2012. From 2012 onwards, fewer students entered higher education than earlier[1] and from 2015 the share of graduates has been decreasing in the young population.[2] Nevertheless, their share in the total adult population aged 25–64 continued to grow until 2018[3] because the more populous working-age generations had a lower share of graduates. Despite the increase in the number and proportion of higher education graduates, young graduates continued to be very successful in the labour market overall.

Figure 7.3.1 shows how the proportion of young graduates from bachelor's (BA) and master's (MA) programmes have changed in the three labour market status groups (employees, unemployed and inactive). More than 80 per cent of MA degree holders were employed over the entire period. BA degree holders were employed at the start of the period in the same proportion as MA degree holders, then (probably as a result of the economic crisis) their employment rate decreased between 2006 and 2010 by 7 percentage points but this indicator started to increase again after 2010 and by 2016 it had reached 80 per cent. The share of the unemployed grew temporarily around the economic crisis but since then has steadily diminished to a very low level of about 1–2 per cent. Changes in the distribution of young graduates by labour market status indicate that their chances of employment did not deteriorate but even improved after the effects of the crisis had worn off.

Figure 7.3.1: The distribution of young (younger than 36) graduates by labour market status and the level of qualification (MA/BA), 2004–2018 (percentage)



Source: Calculated from the Labour Force Survey of the *Central Statistical Office*.

1 The indicators of school education, Indicator D1.10. (*Varga,* ed., 2018).

2 See: Eurostat.

3 See: Eurostat.

Another key indicator of labour market success is wage return. Young graduates realized very high wage returns on average. The average wage return of BA/college degree holders younger than 36, *compared with those with a lower-secondary qualification* was 130–140 per cent at the beginning of the period.[4] It decreased between 2010 and 2012 then started to increase and returned to the earlier high level, suggesting that the temporary decline was probably due to the economic crisis. The average wage return of MA degree holders only slightly changed between 2003 and 2016: it ranged between 200–220 per cent.[5]

The average change in the wage return is driven by various trends: it may be a result of returns at all points of the wage distribution changing similarly or also because primarily the well-paid and badly paid graduates experience changes in their wage returns.

Figure 7.3.2 presents changes, over time, in the wage returns (the estimated parameters of the quantile regressions)[6] of young BA and MA degree holders *compared with those with an upper-secondary qualification* (*Matura*). Quantile regressions were run for various points of the wage distribution for each year between 2006 and 2016. Wage returns were estimated for each point of the wage distribution by quantile regression method.[7] The Figure shows changes in the wage returns estimated at the 10th, 25th, 50th, 75th and the 90th percentiles between 2006 and 2016.

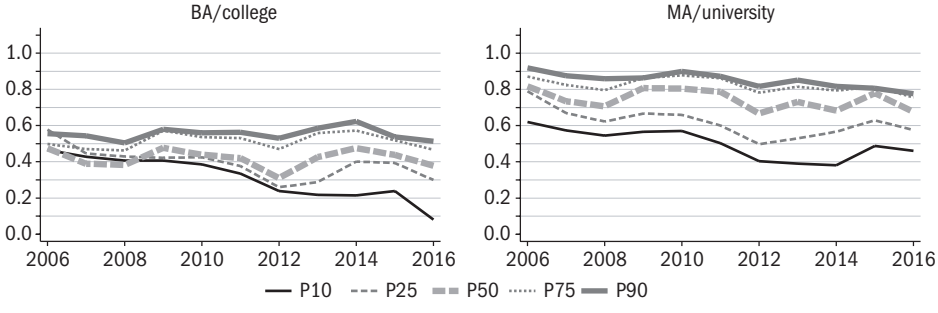
4 The indicators of school education, Indicator D2.2., D2.8. (*Varga,* ed., 2018).

5 The indicators of school education, Indicator D2.8., Table D2.8.2. (*Varga,* ed., 2018).

6 Quantile regression estimates were based on a subsample of the Wage Survey containing those with at least an upper-secondary qualification (Matura). The dependent variable was the logarithm of earnings, while the explanatory variables were qualification categories as well as potential labour market experience and its square and a binary variable for gender.

7 See for example *Chamberlain* (1994), *Martins–Pereira* (2004).

Figure 7.3.2: Wage return to BA/college and MA/university degrees compared with a Matura, by quantiles, 2006–2016



Source: Calculated from data from the Wage Survey.

Differences within the educational attainment groups increased between 2008 and 2012 and returns in the various percentiles diverged during this period. The return realized by the best-paid graduates belonging to the 90th and 75th percentile did not change; however, it declined at other points of the distribution: the decrease was increasingly conspicuous towards the bottom. The previously lagging percentiles started to catch up with returns measured at the top of the distribution after 2012, except for the lowest, the 10th percentile. The wage return of the bottom ten percentage diminished steadily

and to a large extent after 2012: from about 50 per cent in 2006 to below 10 per cent in 2016. The wage return of MA degree holders slightly dropped as a result of the crisis at the bottom of the distribution, at the 10th and 25th percentile, although it started to improve again at the 25th percentile after 2012 and at the 10th percentile after 2014.

The wage return of youth with either a BA or MA qualification at the top of the distribution, belonging to the 75th and 90th percentile, was high throughout the period, whereas the return of those belonging to the 50th and 25th percentile temporarily declined for a few years, probably as a result of the crisis, then started to grow again and returned to earlier levels. The bottom ten per cent of BA degree holders, however, permanently fell behind the other groups. This may be due to skills, differences in the quality of higher education institutions and departments or mismatch problems. It is possible that some young graduates can only find a job which does not require a higher education qualification.

However, it is not easy to determine which jobs are for higher education graduates. There are three methods in use. The first create categories based on the subjective judgement of graduates, relying on interviews. Since there is no long time series of this available, we did not apply this method.

The second method classifies occupations into categories of graduate and other occupations according to their task content. Occupational classification systems, such as the international ISCO system[8] or the Hungarian Standard Classification of Occupations (HSCO), are also based on this; they consider the content of the actual activity undertaken in an occupation and the key criterion for grouping is the level of expertise, knowledge and skills necessary to follow an occupation.

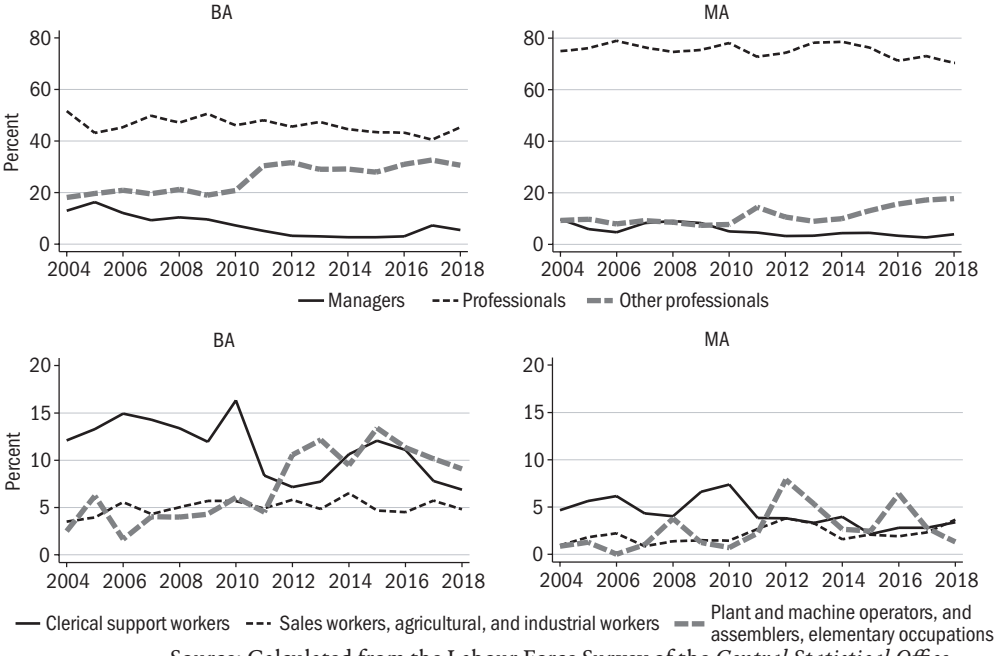
Figure 7.3.3 shows how the proportion of young graduates changed in the groups formed using HSCO categories.[9] Those working in the groups of trade, agriculture, industry, semi-skilled and unskilled work of the Figure are very likely to work in occupations not requiring a degree. Those belonging to the first three groups (managers; professionals; other professionals) obviously work in occupations requiring a higher education degree. It is difficult to judge what qualification the group "office and management (customer services)" requires since it contains heterogeneous occupations in terms of qualification requirements and therefore they are possible to hold with various qualifications.

Changes in the proportions of workers within the occupational groups do not indicate that MA degree holders cannot find a job in occupations requiring a higher education qualification. Among BA degree holders, however, the share of those working in semi-skilled or unskilled jobs increased to 10 per cent after 2011, which suggests that 10–15 per cent of these young graduates do not find a job suitable to their qualifications.

8 See: ILO.

9 Occupations were classified into six groups on the basis of the main categories of the Hungarian Standard Classification of Occupations (HSCO): 1) occupations in HSCO category 1 containing managers, senior officials of public administration and interest organisations, legislators; 2) HSCO category 2: professionals – occupations requiring the autonomous use of higher education qualifications; 3) HSCO category 3: occupations with other higher education or upper-secondary qualifications, 4) HSCO category 4: office and management (customer service) occupations; 5) HSCO categories 5, 6 and 7: occupations mostly with upper-secondary qualifications – commercial, services, agricultural, forestry, industry and construction industry; 6) HSCO categories 7 and 8: semi-skilled and unskilled occupations.

Figure 7.3.3: The proportions of those employed in occupational groups among young graduates, by qualification level, 2004–2018 (percentage)



Source: Calculated from the Labour Force Survey of the *Central Statistical Office*.

It is often misleading to examine changes in the proportions of employees in graduate and "non-graduate" jobs based on occupational classification systems, on the one hand, because there may be diverse requirements even within occupations, and on the other hand because they are rarely updated, as that is an extremely time-consuming process. At the same time, the task content of occupations changes constantly, for example as a result of technological changes or changes in the labour supply, therefore the "required" qualification level also changes regularly.

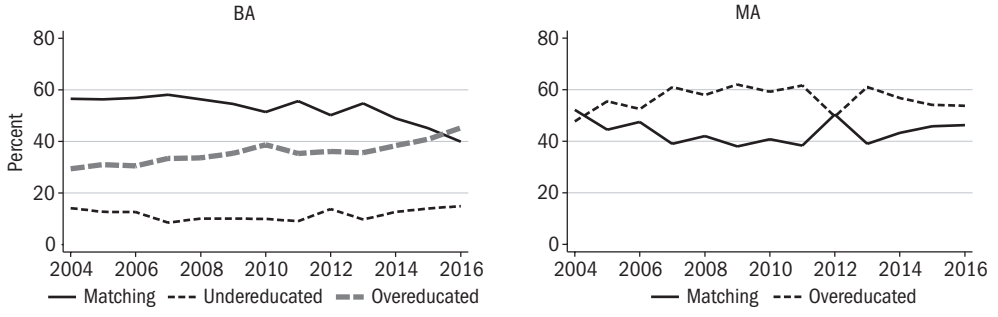
The third method used for defining the qualification level required for an occupation addresses the above problem by assessing the qualification distribution of actual jobholders in occupation and its certain value or its mean (*Verdugo–Verdugo,* 1988) or mode (*Duncan–Hoffman,* 1981, *Mendes de Oliveira et al,* 2000, *Galasi*, 2004, 2008) is regarded as the qualification necessary for the occupation. Nevertheless, the fit measured by this method may also be distorted because the actual occupation–qualification matches observed are partly due to supply and demand and do not only reflect qualification requirements and changes thereof.

Based on calculations relying on actual occupation–qualification matches,[10] *Figure 7.3.4* presents changes in the proportions of well-matched, underqualified and, in the case of BA/college degree holders, overqualified graduates of

10 The estimates regarded modal educational attainment as required qualification. Required qualification was defined by differentiating between BA/college and MA/university degrees for four-digit occupational groups for each year. In the case of multimodal distributions the higher qualification was regarded as required qualification. We assessed whether young people with a higher education degree have the required, higher or lower qualification and based on this we determined if someone has adequate qualification (works in a well-matched occupation), is overqualified or underqualified. (MA graduates cannot be regarded as underqualified, since this is the highest qualification category.)

the two qualification levels. The required qualification level is re-defined for each year, which makes it possible to take into account potential changes in qualification requirements.

Figure 7.3.4: The proportion of well-matched, overqualified and underqualified graduates, by qualification level, 2004–2016 (percentage)



Source: Calculated from data from the Wage Survey.

The proportion of those in a well-matched job dropped slightly first between 2007 and 2010 among BA degree holders, then declined more rapidly between 2013 and 2016, while the proportion of the overqualified increased. In 2016, about 40 per cent of BA degree holders aged younger than 36 were working in a well-matched job, 42 per cent of them were overqualified in their job and 18 per cent of them were underqualified. At the beginning of the period, 57 per cent of young MA graduates were working in a well-matched job, while 43 per cent of them were overqualified. By the end of the period, these proportions were roughly the opposite: in 2016, 54 per cent of the graduates were overqualified and 46 per cent of them were working in a well-matched job, which may indicate that during the transition from education to work, an increasing share of young graduates starts their career in a job requiring a lower level qualification.

Overqualification, underqualification and working in a well-matched job may have an impact on the wage return of young graduates. Relying on Hungarian data, *Galasi* (2004, 2008) assessed the influence of over- and underqualification on wage return. His analysis included all qualification levels and covered the entire working-age population. In the following we present changes in the impact of overqualification, underqualification and adequate qualification level on wage returns,[11] using the model of *Duncan–Hoffman* (1981).[12] Similarly to findings of other studies using this method [see the summary of *Leuven et al* (2011)], the results show that the return on "required" and "surplus" years in higher education is positive, while the return on "missing" years is negative. The return on required years is higher than that of surplus years. The

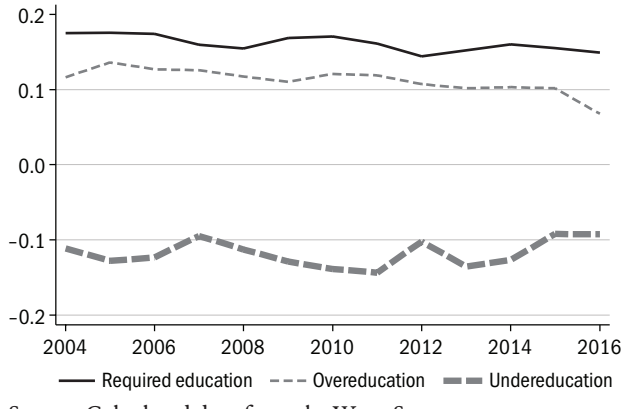
11 The results are not to be compared directly with the results of *Galasi* (2004, 2008), on the one hand because our sample only includes young people below 36 with at least an upper-secondary qualification (Matura) and Galasi carried out the estimation for the entire adult population and all qualification categories, and on the hand because those studies also contained variables for the interaction between labour market experience and overqualification, underqualification and well-matched qualification. As our sample only includes those aged below 36 and we have no information on how many years of labour market experience these individuals have spent as overqualified, underqualified or well-matched employees, our study does not use such interaction variables.

12 Based on *Duncan–Hoffman* (1981), we investigated the effects of overqualification and underqualification using Mincer earnings functions by breaking down the number of years in education (S) into three elements: number of required years (R), overqualification years (O) and underqualification years (U) ($S = R + O - U$). We estimated the following extended Mincer earnings function: $\log(W_i) = \beta_0 + \beta_1 R_i + \beta_2 O_i + \beta_3 U_i + \beta_4 EXP_i + \beta_5 EXP_i^2 + \beta_6 GEN_i + \mu_i$, where W_i is earnings, EXP is potential labour market experience and GEN is binary variable for gender. The Figures show coefficients β_1, β_1 and β_2 obtained from the cross-sectional regressions estimated for each year.

wage return on required higher education years was excessively high, 15–17 per cent, over the entire period. Each surplus year in addition to the required qualification yielded 10–12 per cent, that is less than the required years but still a substantial positive return. The return on the surplus years started to decrease after 2012 and had declined to 7 per cent by 2016. Those who were underqualified for their jobs (in this case BA graduates who undertook tasks typically performed by MA graduates), realized 10–12 per cent lower wage returns with each missing higher education year.

However, this model does not take into account the varying skills and competences of young graduates. Firstly, it is not accidental as to which young graduate has a BA or MA level qualification: it may be related to their unobserved skills, which may also change over time due to changes in the proportions of applicants and entrants to higher education. Secondly, they do not randomly take well-matched or mismatched jobs: this may also be related to unobserved skills. Thus the estimated return on overqualification and underqualification may be associated with other unobserved characteristics of the human capital stock of young graduates.

Figure 7.3.5: Wage return on required, surplus and missing years, 2004–2016



Source: Calculated data from the Wage Survey.

As presented in Subchapter 8.1 on youth employment mobility, the over- or underqualification of young graduates may be temporary. It may be reasonable for the talented and highly qualified to start working in jobs inferior to their skills if it is compensated by faster promotion prospects (*Sicherman–Galor*, 1990). Subchapter 8.1 presents how the frequency of occupational change among young graduates increased after 2010 and that in the case of occupational change, they are less likely to move downwards or switch to another occupation of the same level than members of other qualification groups. It

warrants further analysis of why young graduates are more likely to choose this way of entering the labour market.

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