

Graduates in the Labour Market: Does Socioeconomic Background have an Impact? The case of Hungary

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Abstract

In this paper the status attainment process of young Hungarian graduates is investigated – with a special attention to the impact of social origin, defined as the education and occupation of the parents. In the sociological literature it is generally assumed that reproduction of social advantages is predominantly taking place within the educational system and little attention is paid to the possible *direct* effects of the family background. Scholars of economics on the other hand find in wage-regressions rather consistently significant, positive parameters being associated with the parental background. Our own estimates show that graduates from high status families can enjoy substantial advantages in the labour market, even when type of education, field of study and also a range of labour market experience factors are held constant. The greatest wage-premium for coming from a “good” family is measured for men, 4-5 years after graduation. In this group, those with a father from the highest quartile of the occupational prestige scale earn around 12 percent more than others. We find that women’s wage is also positively affected by social background at the start of their working career but not later. Similarly, men’s social prestige only begins to be affected by social origin a few years after graduation, while in the case of women this affect is only marked when they first start working. Furthermore, women from “better” families face a lower risk of getting unemployed.

We argue that the substantial growth in the number of graduates together with the increasing variety of jobs taken by them contribute to the social selection process moving further up from the educational ladder to the labour market. Possible mechanisms driving the direct inheritance of social advantages are described, but further research is needed to explore them in detail.

Keywords: higher education; social mobility, intergenerational mobility, school-expansion; graduates; graduate labour market; Hungary; post-socialist country

Introduction and theoretical background

Intergenerational transmission of social and economic advantages has for long been in the focus of different disciplines in the social sciences. In particular, scholars in sociology and in economics have widely researched the persistence of social and economic inequalities and the ways advantages are inherited from generation to generation. Although taking off from different theoretical and methodological standpoints, the overlap in the focus of the two disciplines is noteworthy. (Morgan 2006) Growing inequalities in the labour market as well as a non-increasing trend of social mobility in industrialised societies are making the issue of social inheritance particularly timely. Scholars in both fields are actively calling for more attention and new insights into the problem (see e.g. Bowles and Gintis 2002; Goldthorpe and Jackson 2006).

Social mobility is one of the central theme of sociology with a research tradition of at least eighty years. Over this time, methodology and also the theoretical approach have changed substantially and a move from the simple measure of the “size” of mobility to the investigation of mechanisms driving social inheritance has taken place. To the fundamental question of “mobility between what?” sociologists tend to give varying answers – not independently from the specific method applied in their analysis. However, there is a common tendency in defining social origin as well as social destination in a complex way, using multidimensional measures of social position, whereby categories or indexes applied capture various aspects of social and economic status. Typical solutions are social class (in categorical analyses) and scales of social prestige or combined measures of the socio-economic status, turning dimensions of schooling, income and occupation into a continuous representation of the social hierarchy.

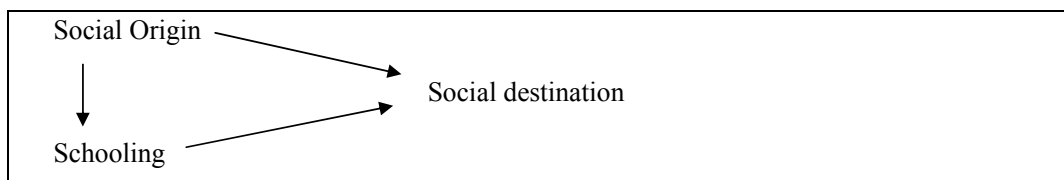
In economics the role of parental inheritance appears in two (overlapping) waves of research. Firstly, the problem of income-mobility that is the inheritance of economic success is investigated directly on its own right. Secondly, the issue of parental inheritance comes into the picture when returns to schooling are investigated. The original motivation here is to produce a consistent estimate of the impact of schooling in wage-regressions by including important intervening factors, such as income or education of the parents. Both directions of study can be traced back to human capital theory as organized into a most coherent structure by G. Becker (1964). By looking at acquisition and development of skills as investments into human capital, economists are studying determinants of wages – considered as a return for previous investments. One can find the idea in Becker’s works that various factors of the

parental background, such as income, preferences, contacts, schooling, reputation, cultural circumstances of the parents etc. influence investments into children. As already implied, economists rather uniformly consider earnings or wages as the only indicator of (economic) success achieved.

Direct vs. indirect effects of the social origin

To investigate the underlying mechanisms behind the pure correlation of social origin and social destination, attempts were made to decompose the relationship into its components. The idea of differentiating between *indirect* and *direct* effects of the origin appears both in sociology and economics. (Treiman 1970; Blau and Duncan 1967; Bowles and Gintis 2002) Firstly, parents' social standing has a major impact on educational attainment and influences the offsprings' later opportunities in life via the educational channel. Children from families of a higher social standing get more and better education and *therefore* they get better jobs, more salary and more social prestige. This is called the *indirect effect* on the social background. At the same time, the impact of social origin may operate independently from schooling and result in significant differences in the social destination of individuals with similar educational attainment but different social backgrounds. This is the *direct effect* of social origin. A simple representation of this distinction is shown in Figure 1. Notions of "Social origin" and "Social destination" can be replaced by "Parental income" and "Income" – or indeed, by any other appropriate indicators.

Figure 1. The Process of Status Attainment.



In the followings, we shall look at the notion of direct parental effect – at it appears in the sociological and in the economic literature.

Direct effects: sociological approach

In sociology, indirect effects of the origin so far received far more attention than did the indirect effects. Interestingly, such a research agenda is in line with functionalist- and well as

with conflict-theory – the two major contradicting theoretical tradition in the social sciences. *Functionalist theory* suggests that in modern industrialised societies any forms of social inheritance – direct as well as indirect ones – are diminishing. (Blau-Duncan 1967; Treiman 1970) This way social position is getting a function of educational attainment to an increasing degree and will not any more be influenced by the social background.

Although predicting the disappearance of *any* form of social inheritance, *modernization theory* (a set of hypotheses on functionalist ground as introduced by Treiman 1970) argues that direct effects are the first ones to diminish. This happens for several reasons. Firstly, as the proportion of social classes defined by their properties declines, direct intergenerational transmission of property is losing its role in shaping opportunities in life. At the same time, with “buerotocracy” gaining place, formal educational attainment is getting a prerequisite in attaining social positions of great functional importance and it is not any more possible to directly take over the (prestigious) occupation of the father. Finally the theory adds that with the radical increase in the number of occupations (high level of functional specialisation) the statistical probability of a child choosing a similar occupation as the father is also on a decrease. Building extensively on functionalist sociology, these ideas were further elaborated around the notion of *meritocracy*.

The Increased Merit Selection Hypothesis (Jonsson 1992) states that in modern societies *merit* – a function of ability and effort but not social background – becomes the major determinant of access to education as well as to the positions in the labour market and the social structure as a whole. Because it is assumed that educational institutions discover and also develop merit, education is expected to increasingly serve as a key determinant of social position. This is – so the argument goes – also in the interest of the employers who can use formal qualification as the definite selection criteria. In an economy of constant technological improvement and fierce competition on the market, employers have no other option than selecting people with the highest level of merit to achieve the highest level of efficiency and this way schooling becomes the single most important source of information to them.

Denying the increasing dominance of achievement as opposed to social origin, researchers on a conflict theory standpoint argue that in modern societies, educational system is functioning as a channel mediating social inequalities from one generation to another (e.g, Bourdieu and Passeron 1977). By rewarding cultural assets acquired in the higher strata of the society, the education system provides children with better social origin with better schooling. And since appropriate educational attainment remains the single most important precondition

of entering the various occupational positions, social advantage appears as educational advantage or even as merit when it comes to entering the labour market. Building strongly on this theoretical framework, social inequalities within the educational system remain a widely researched area in educational sociology as well as in social mobility research.

With both functionalist and conflict theory arguing that education is becoming the major determinant of social success and empirical evidence seems to support this hypothesis, the idea of the direct transmission of social status has received relatively little attention. Remarkable exceptions are studies by Goldthorpe and Breen, systematically challenging the propositions of functionalist theory as well as the basic ideas of meritocracy (e.g. Goldthorpe 1985, Breen-Goldthorpe 1999; 2001; Goldthorpe-Jackson 2006). They also present their own empirical results suggesting that the importance of direct parental effects is not at all declining – at least not in the contemporary Britain.

Looking at the status attainment process of the 1958 cohort of the *National Child Development Study (NCDS)*, Breen and Goldthorpe (1999) find that parents' social class remains to have a significant effect on the social class of the respondents even when education, abilities and also effort – all the possible constituents of *merit* – are controlled for. In another study (2001) they compare the 1958 cohort from NCDS and the 1970 cohort from the *British Cohort Study*. Association between class origin and class destination here is found to be largely the same in the two cohorts, with education having a remarkably smaller influence on individuals' relative mobility chances in the younger one. This means that by the 1990's, more room was left for the direct channels of social inheritance than a decade earlier. In an earlier study Breen (1998) is looking at second-level school leavers from the Republic of Ireland. Decomposing the total impact of social origin into its direct and indirect components, he finds that social origin's influence on the odds of avoiding unemployment is only partially mediated through education.

A recent paper by Evans and his colleagues (Evans et al 2005) suggests that direct effects of social origin also exist outside Anglo-Saxon societies. Comparing the process of status attainment in 31 countries all over the world they find that in 20 of these countries parental background plays a role in shaping occupational status even when respondents' education is controlled for. Parental background in this case is measured by parents' education, father's occupation and the number of books in the parental home. Interestingly, Evans and his colleagues find that the direct effect of scholarly culture (as measured by the number of books) tends to be stronger in post-communist countries (including Hungary) than elsewhere.

Direct effects: the approach of economics

As mentioned earlier, economists usually approach the question of intergenerational inheritance either from the “income-mobility” or from the “returns to schooling” field of study. Since the earlier tradition typically investigates the total impact of father’s income on the income of the sons / daughters, and does not allow for a decomposition of direct and indirect mechanisms, now we turn our attention to the “returns to schooling tradition”. Here the empirical works typically follow the Mincerian tradition (1974), whereby personal distribution of earnings is estimated by indicators for the two major type of investments. The human capital earnings function looks as follows.

$$(1) \log y = a + bS + cX + dX^2 + e,$$

The log of individual earnings (y) in a given time period is decomposed into an additive function of a linear education term (S : years of completed education) and a quadratic experience term (X : number of years worked since completing schooling). The early, or “classical” forms of wage-equation do not include any measure for parental background and are primarily concerned about returns to education (and on the job training) themselves. This line of research however showed the necessity for considering the role of parental background in the process for two reasons.

Firstly, a systematic finding of the relating works is that these observed factors do a relatively poor job in explaining the variance of earnings – generally account only for about 25-35% of the total variance (Card 1998). A great proportion of wage-variation between individuals with similar education and other measurable factors (typically age, gender, on the job training) remains unexplained (Rosen 1977). Such observations then called attention to the possible role of parental background in contributing to wage-differences between the similarly educated.

Secondly, it has been shown that when important determinants of wages are excluded from wage-equations, parameters for schooling are likely to be biased. Depending on the nature of the interrelationship between unobserved variables and schooling, omitted variables might lead to either under- or overestimation of these measures. (see Card 1998 for a comprehensive discussion, and Galasi 2003 for a Hungarian application). Among the (often) unobserved variables *school quality*, as well as *ability* are considered to be of major importance – both heavily interrelated with parental background.

While the idea of ability is a rather complex one, the interrelationship between parental background and *school quality* is straightforward. In wage-equations, education is typically measured by years of schooling. This however, does not seem to sufficiently capture variances of in-school investment into human capital and it is assumed that quality of school attainment varies greatly among individuals even in the same cohort and significantly contribute to wage-differences. Related research suggests that school-quality is highly correlated with neighbourhood as well as family background indicators – the mechanism being that parental effort and financial constraints of the family determine school-selection. Consequently, family background measures are often applied and interpreted as proxies for school quality (eg. Grubb 1993)

An even more influential suggestion is that beside quality of schooling, *ability* is correlated with family characteristics and is affecting wages significantly. Although ability is correlated with schooling, schooling accounts only for a small proportion of variance in ability when measured with IQ tests – but related to the social background. In the human capital framework, this can be interpreted as follows. Home-investment does not only develop ability by promoting schooling but also by other – often but not exclusively early – ways of home-development. (Leibowitz 1974)

For a long time, by ability economists typically meant cognitive skills only. More recently they also start investigating the importance of non-cognitive factors in shaping economical success. Among others, motivation, persistence, self-esteem or time preference has been showed to play some role in the “background-schooling-attainment” process. Whether they are found to effect wages irrespectively from education, and if they prove to be linked to family background depends on the factors taken into consideration and also the measures applied. (Eg. Bowles et. al. 2001, Heckman and Rubinstein 2001).

In wage-regressions, when a proxy for parental environment is included, parental background is rather systematically found to be positively correlated with income, when education – but not ability – is controlled for. (e.g. Grubb 1993; Ashenfelter and Zimmerman 1997ⁱ). When, however, ability or even measures of school quality are added to the models, findings are less conclusive. Several such studies found that the existence of a statistically significant, positive direct parental effect varies by gender and/or cohorts studied. (Altonji and Dunn 1995ⁱⁱ; Leibowitz 1974) In other studies, however, inclusion of ability-indexes and/or school-quality measures seems to entirely wipe out the parental effect (e.g. Taber 2001).

Possible mechanisms driving the direct effect of social origin

We have seen that in economic studies, cognitive ability as well as school quality has been found to be responsible for some of the direct parental effect on income, irrespective from level of schooling. Furthermore in many cases, parental impact on income remains significant even with indicators for these two components controlled for. From this it follows that cognitive development and a more careful choice of school only represent a part of the additional advantages higher status children can enjoy even after leaving the educational system. To get further insight into the “black box” of direct parental effect on labour market success, in more recent works a range of other possible intervening factors between the income level of the parents and their children, under the heading “non-cognitive skills” were discussed and also analysed (eg. Heckmann and Rubinstein 2001; Bowles and others 2001; Heckmann and others 2006). In the followings however we turn to the sociological theory to make a brief account of the possible intervening mechanisms. We are doing so because we find that in sociology there is a longer and better established tradition of accounting for cultural mechanisms and especially the ideas of non-cognitive skills and social network are better underpinned here. In the forthcoming overview we shall borrow Pierre Bourdieu’s notions of *cultural, social and material* forms of capital and apply them to the labour market (Bourdieu and Passeron 1977; Bourdieu 1973).¹

Both cognitive ability and non-cognitive skills can be described as part of the set of *cultural assets* as inherited from the parents. While returns on a (significant) portion of these assets appear as educational attainment, some part of the IQ, and also of a range of social skills, attitudes, aspects of behaviour etc. can shape opportunities in the labour market independently from the schooling level achieved. In his argument Goldthorpe (1985) is also pointing at cultural factors operating outside the educational system. He assumes that employers apply various selection criteria rather than formal qualification only, depending on the nature of the job as well as the specific economic circumstances. Beside “merit”, as defined by educational level, various other criteria, such as attitudes, social skills, manners, mode of speech, lifestyle etc. can become decisive. These competencies in turn are to a large

¹ Originally, these notions were applied (among others) to explain the advantages higher status pupils enjoy in school.

extent determined by the social background and can not be acquired in the formal education (Bourdieu and Passeron 1977) At least in some of Goldthorpe's analyses (eg. Breen and Goldthorpe 1999) ability is controlled for and is found to be a mediator of the social background effect. Here the unmeasured non-cognitive elements of the cultural inheritance are in fact coming as additive factors to the cognitive ones. Following a different line of argument, Evans et al. (2005) are also emphasising cultural factors mediating between social origin and social destination. With cultural factors playing a role in the selection in the labour market, we can understand how direct effect of parental background can remain effective – mediated via cultural resources rather than via inheritance of material assets as it was the case in the past. (For similar arguments see eg. Breen and Goldthorpe 2001, Lam and Shoemi 1993; Evans et.al. 2005; Breen 1998; Brown and Scase 1994. Jackson et.al. 2005)

Beside cultural competencies, *social* or *network resources* are also likely to promote those with a “good” social background even if their educational attainment is similar to others’. Potential employees from higher status families can benefit either directly from the social network of their parents or from networking skills attained at home. (eg. Lam-Shoemi 1993; Breen 2001) In social network literature it is well-established that those with higher social status have better access to other high-status people in the society. (see homophily principle, Lin,N. 1990) This way higher status mediators to the potential employers and also more insight information on job-openings become available. A higher status mediator between the employer and the employee in turn has proved to secure better jobs (eg. Flap-De Graaf 1986, Rosenbaum et.al. |1990|).

Comment: Mint egy lower status mediator?

Finally, material advantages can also directly promote success in the labour market. Hauser and Daymont (1977) for example list three distinct ways, how better financial situation in the parental home might influence economic success (income) positively. Firstly they argue that better financial standing might lead to better options by allowing time to search or wait for a good job. Secondly, they suggest that higher income leads to higher income-expectations. And thirdly they also mention the “classical” way of material inheritance of wealth.²

² They also include the suggestion that those from a better-off family can obtain better information about monetary rewards and other aspects of occupation and this way get better jobs themselves. This mechanism however we count to the social-capital effect.

The case of graduates

In our argument so far we have not distinguished between different groups or strata of the society. Now we shall argue that the case of graduates requires special attention when the problems of status-attainment are in focus. Firstly, we provide a brief overview on the contemporary graduate labour market today and then we turn to explaining why characteristics of this market are likely to promote direct social inheritance. Possible mechanisms driving the direct effect of social origin will also be discussed.

It is common knowledge that the number and proportion of graduates has gone through a radical increase in the past decades in most European (and also other) countries (e.g. Shavit-Blossfeld 1993). In some countries the increase in the number of graduates has led to an excess supply with a raising level of unemployment and a decrease in the premia for the diploma. But even when this did not happen, it was noted that the number of occupations that had traditionally required a higher education degree did not increase together with the number of potential applicants. (Teichler 2000) Instead, in a number of cases upgrading of occupations previously filled in by non-graduates has taken place (Mason 1996) whereas in other cases, graduates are taking jobs to which strictly speaking no higher education would be necessary. This leads to a radical increase in the heterogeneity of labour market positions filled in by graduates, where making a “classical” or even a high-flyer graduate career is just as possible as well as doing lower level jobs or getting unemployed. With the growing variety of positions taken by graduates, heterogeneity of available earnings is also on an increase.

In Hungary, radical expansion of higher education was delayed by the socialist regime and only started after 1989-1990ⁱⁱⁱ. After being far below the usual European level for decades, the graduate share more than doubled between 1990 and 2000^{iv}. Rapidly increasing labour-supply was, however, met by an increasing demand for educated employees in the 1990's and returns to education in graduate jobs continued to grow until 1998 with graduate unemployment rates remaining far below the overall national average. (Galasi 2004a) Statistics from more recent years show the privileges associated with a higher education degree to decrease somewhat.^v Between 1998 and 2002, the wage premium for a higher education degree decreased from 73 to 62 percent. By 2004, young graduates became significantly more likely to start their careers in previously non-graduate occupations (administrative and clerical jobs, intermediate sales and personal services, agriculture and forestry occupations) than they had been before (Galasi 2004b.)

With the supply of graduates in the labour market, together with the increasing variety of graduate careers, the question arises how, and by what criteria, graduates will be located – or locate themselves – among the various labour market outcomes? Can educational attainment remain an effective signal for the employer or will other criteria gain room in the selection process? Evidence appears that when there is an extensive supply of applicants with a similar type of education, employers are more likely to apply selection criteria other than the level of educational itself. A range of personality factors are starting to play a role in the selection process and also personal contacts are more intensively mobilised. In the followings, we will argue that these trends are likely to privilege graduates who come from well-educated and high prestige families.

Research evidence of various kinds suggest that *cultural resources* - cognitive as well as non-cognitive skills – are playing an extensive role in the graduate labour market today. Making a series of interviews with graduates' employers in Great Britain, Brown and Scase (1994), for example, found that in job interviews questions relating to the applicant's hobby, greatest achievement in life, sports activities or travel experiences are becoming increasingly important. The ultimate function of such questions is to select people with outstanding generic skills – among which communication and interpersonal skills are of major importance – to well paid and high status positions. Prospective managers for example are especially expected to be flexible, innovative, and reliable. It is therefore not a set of skills and technical knowledge but the whole person, or a “personality package” that the company would buy. It is cultural competencies and values traditionally central in middle-class families, the set of cultural capital inherited only by the offspring of the high status parents that can effectively drive the labour market selection among those holding a degree. This tendency is then also strengthened by the “natural” inclination among the members of the management to accept only new colleagues who will “socially fit” among them, who will be alike them – share their interests, have similar manners etc.

In another study Jackson and his co-authors (Jackson et.al. 2005) are looking at job advertisements in British local and national newspapers. They also suggest that beside formal education, a range of “soft” factors, such as effort, cognitive abilities, social skills and personal characteristics play an important role in recruiting people – especially to managerial jobs at various levels but also jobs in the sales and personal services. References to the preferred personality factors often appear next to a very general requirement of holding a higher education degree – without any specification of the type of the degree. Also on the

NCDS data Jackson (2006) demonstrates that personality traits measured in the childhood have an impact on class attainment. Beyond the British context, an international graduate survey administered in 1999 suggests that similar findings can, in large, be generalised to other countries. In 5 out of 11 countries “personality” was chosen by graduates as the most important factor in getting their first job after graduation and was rated highly in other countries, too. Proportion of those considering personality a very important or an important factor ranged between 57% to 84%. (Blaskó 2002)

Besides cultural factors, *social (or network)* capital is again likely to improve the labour market prospects of graduates with a good social background. Since employers claim that well-paid positions are especially efficient to fill in via employer referral (e.g. Kugler, 1997), it is not surprising that social networks are widely used in the graduate labour market. Furthermore, in a situation of intense supply in the labour market, it is getting increasingly efficient for the employers to reduce searching costs by applying personal contacts or employee referrals (Rosenbaum et al 1990) thus making social (or network) capital even more valuable. Empirical evidences do support the idea that personal contacts play an important role in finding a (good) job in the graduate labour market. In the 1999 European graduate survey cited above, 15% to 54% of the graduates in the participating countries claimed that they had found their first job via personal network³. (Brennan et al 2001) In a recent employer survey in Hungary, informal routes – i.e. utilising personal or costumer contacts – were mentioned among the most important searching methods by graduate employers in all investigated sectors. (Diploma 2006) In such an environment, potential employees from higher status families can benefit either directly from the social network of their parents or from networking skills attained at home. (e.g. Lam-Shoemi 1993;)

Lastly, *financial resources* are likely to promote graduates’ success in the labour market as much as they promote the success of other groups of employers and strengthen the link between social origin and destination in similar ways. Hauser and Daymont (1977) argue that better financial standing might lead to better options by allowing time to search or wait for a good job. They also suggest that higher income in the childhood family leads to higher income expectations and mention the “classical” way of material inheritance of wealth.

³ Only personal contact other than teaching staff at the university or contacts established while working during the course of study included in this data.

Hungarian examples come from our sporadic graduate interviews. In these interviews we found that parental support allowed a break for extra-curricular activities, (such as a long journey abroad) which in turn helped the graduate to further improve skills and knowledge highly valued by the employers. In some professions (e.g. lawyers, medical doctors), graduates spend several years on badly paid or even fee-paying training programmes after finishing university. Finally, starting up one's own business with the financial help of the parents is also a choice.

Empirical findings from research focusing on the status attainment of graduates are not fully conclusive in determining the relationship between origin and destination. An early study in the field (Hout 1988) shows that among the highly selected group of American university graduates, all the interaction between social origin and destination disappears. On the other hand, several more recent studies in Great Britain have found at least some additional premia for the diploma of graduates from better-off families (see e.g. Smith et al 2000; Naylor et al 2002; Blaskó et al 2002). In Hungary, no focused research of this kind has so far been carried out. General social mobility studies, however, show an increasing level of social reproduction in the higher strata of the society – especially among young generations. In 2000 for example 41 percent of all male managers, professionals and higher level administrators had a father from a similar occupation. The respective figure was only 28% in 1992, and 22% in 1983. A similar although less sharp tendency can be witnessed for women with an increase from 22 to 28% between 1983 and 1992 and to 30% by 2000. (Bukodi 2002. For similar findings see also Róbert and Bukodi 2004) No information however is available on the share of direct and indirect factors determining these tendencies.

Data, Design and Variables

In the followings we will at first introduce our dataset, then describe the indicators applied in the analyses. We will look at the social and economic success of young Hungarian graduates at two early stages of their career and relate their position to their social origin – keeping a set of educational and labour market characteristics constant. This way, we hope to tell whether status reproduction in Hungary is taking place in the education system only, or there are other mechanisms that influence this process. When choosing our measures of “success” we will build on the sociological as well as the economic tradition and introduce parallel models with a social prestige scale as dependent variable in one and monthly net

earnings in the other set of our models. To them we will add a third set of (logistic) models estimating the odds of being unemployed for any short period of time in the first four years after graduation.

This way, we will build a total of $2 \times 2 \times 2 = 8$ linear models and 2 logistic regression models. First, a set of linear models with a measure of social prestige as dependent variable and another one with monthly net earning as dependent variable will be estimated. Both sets will be produced for both waves of the survey, as well as for men and women separately. Then two logistic regression models will be added with the binary outcome, whether the respondent spent any time unemployed between September 1999 and January 2004. Here again, separate models for men and women will be estimated.

In the end of this section, the issue of selectivity in these data will also be considered.

Data^{vi}

For the purposes of this analysis, we used a panel dataset on Hungarian graduates' educational and labour market experiences. The first wave of the survey was administered to the cohort graduating from full-time tertiary education in 1999 one year after their graduation, in September 2000. The second wave was completed in February 2004. In the first wave questionnaires were sent out by post to every member of the target population, whereas in the second one, respondents providing a phone number were contacted over the phone. In 2000, 22% of the questionnaires were returned, resulting in a total sample of 5808. Out of this population, 2242 respondents were successfully interviewed in the second wave, and non-response to key questions in the survey reduced the sample somewhat further. Clearly, the sample is plagued with the problem of non-response, to which we shall return later.

Because information on parental education and occupation is only available for those who participated in the second survey, we use this smaller subsample throughout our analyses. For the purpose of our final models, we selected only those who said their main activity was work at the time of the survey. In 2000 1680, while in 2004 1791 graduates with valid information on gender were working. Given the non-responses to questions relating to wage and occupation, and the restricted availability of information on institutional quality, this number was further reduced in the various models. (See Tables 1 and 2)

Economic and social destinations⁴

Economic and social destination will first be measured by the (natural logarithm of) *net monthly wage* and by (natural logarithm of) *occupational prestige scores* (SIOPS) of the respondent, respectively. This way we aim at differentiating between two somewhat different rewards in the labour market: financial credits on the one hand and social credentials on the other. Wage is the classical measure of labour market potential in the related economic literature but it is rarely included in social mobility analyses. Having concerns about the reliability of our data on working time, we decided to include net monthly wages in September 2000 and February 2004 in our estimations.

Standard Occupational Prestige Score (SIOPS) was originally designed by D.Treiman (1977) and is a commonly used indicator of social position in social mobility studies. In our models, the updated 1996 version of the scale was used. (Ganzeboom and Treiman 1996). SIOPS is based on a ranking of occupations taken from ISCO (International Standard Classification of Occupations) according to their subjectively perceived prestige and highly standardized across countries. Theory suggests that social prestige of occupations reflects differentials in control over scarce but desirable resources, including knowledge, skills, property, and also power and privileges. This way, social prestige is expected to reflect a wide range of differentials linked to occupations and is widely used as a complex indicator of social status. International comparisons suggest a surprisingly high level of correlation between SIOPS in different countries (eg. Treiman 1977). To make interpretation easier and parameters comparable, we use the natural logarithm of SIOPS as the outcome variable.

A third possible measure of labour market success is the occurrence of unemployment. Despite the generally low level of graduate unemployment in Hungary, we found that nearly 18% of this new, young cohort of graduates experienced unemployment between September 1999 and January 2004 with the median of number of months spent without work being 6. Experience of unemployment was measured by a binary variable indicating if respondent had any experience of unemployment after graduation.

⁴ For Means and Distributions of the key indicators see Appendix I.

Independent variables

The family background of respondents was proxied by four variables: the highest level of education of the mother (1) and the father (2) and the occupational prestige (SIOPS) of the mother (3) and the father (4). All the information relates to the time when respondent was 14.

We reduce parents' education indicators to two dummies which differentiate between mothers with or without a higher education degree, and fathers with or without a degree. About 27% of our graduates reported a mother, and 34% a father, with a higher education degree. Although in this study we do not aim at uncovering the mechanisms underlying the transmission of family background, the relevant literature gives guidance about the possibilities. Generally, education of parents is assumed to affect human (or cultural) resources by influencing quality and quantity of time spent with the children. (Leibowitz 1974, Bourdieu 1973) Stock of cultural assets (books, musical instruments etc.), reading habits and frequency of cultural activities such as visits to museums, theatres etc. in the parental family have also been shown to relate to parents' education and influence educational and occupational outcomes of the offspring (e.g. Róbert 1991, Blaskó 2003; Evans et al 2005). Parents' education will therefore be considered as a primary proxy for the cultural resources other than education provided to the child.

Parents' and especially fathers' occupation is more closely linked to the financial circumstances of the family. Still, SIOPS of the parents in our study does not merely serve as a proxy for income and wealth but also as a proxy of labour market potentials in a more general sense. By representing social prestige as well as availability of various social resources, we expect parents' occupation to be linked to network resources as well. As indicators for the parents' occupational prestige, two dummies constructed from SIOPS were applied. These dummies differentiate between mothers (and fathers) inside and outside the upper quartile of the range of mothers' (and fathers') SIOPS in our sample.

Even though we are working with a roughly homogeneous sample in terms of level of education here, further distinctions by *type of study* were introduced into the models. Earlier analyses in Hungary have shown that university diplomas produce higher wages than college degrees (eg. Galasi 2003). In our models a dummy for education is included (UNIV), to capture the premia for a university degree (=1) as compared to a college degree (=0). The proportion of university graduates in this sample is 36%. Furthermore, it is also expected that degrees from different fields of studies have different values in the labour market depending

on the demand-supply relation in the related occupations. To control for this, a series of field-of-study dummies were added to the model. (Reference category being Arts and Humanities).

As a proxy for *institutional heterogeneity*, we used a ratio of the total number of applicants and the number of successful applicants in the higher education institution of the graduate for the particular field of study she or he studied (APPRATIO). The higher this ratio, the greater the competition for the places at a given field of study in the university (or college). The greater this competition, the higher the higher is considered to be the quality of the higher education institution attended. We use this ratio as a proxy for institutional heterogeneity in the higher education system and assume that information on attractiveness of a certain type of diploma is applied as screening device by the employers in the situation of increasing labour-supply.

In the majority of cases, higher education study in Hungary was financed by the state in Hungary, i.e. no tuition fee was paid by the students in the nineties. The minority (15%) who for any reason was not studying at a fully state-financed place, was marked (SELFFIN=1) on an additional controlling variable.

In-school labour-market experience (WORKEXP) indicates whether respondent had worked regularly while in tertiary education (=1) or not (=0). In this sample 26% reported about regular work while at university. Such an experience might in theory either increase wages (and prestige of the job) by improving human capital or decrease them by taking away time from academic activities.

Studying wage determination in Hungary, Kertesi and Köllő (????) show that a wage-curve relationship does exist in Hungary. On the basis of this finding, differences between the regional labour markets are controlled for by including micro-regional unemployment rates. (UNEMPR00 for 2000 and UNEMPR02 for 2004) Furthermore, a dummy variable for working in the capital of Hungary is added to control for the particular labour market circumstances in Budapest (WORKBP).

In the case of many students, studies do not stop after graduation from the first degree. To control for these in the 2004 models, we included indicators for types of formal education completed after graduation. These were measured by several dummy variables with the reference category being those not completing a certain type of further education. The possibilities are: second diploma from a university (FSUNIV -24%); second diploma from a college (FSCOL – 25%), PhD (FSPHD – 2%), other degree from tertiary education

(FSOTHHE – 5%) and any other type of further study (FSOTHER – 23%). (Lack of) labour market experience was proxied by a dummy variable for those who had spent any time unemployed between graduation in 1999 and January 2004 (UNEMPEXP – 18%) and another one for those who spent any time outside the labour market for any reason, other than studying or being unemployed (NOTEMP – 21%).

In the following section, problems of selectivity and endogeneity will be considered and – where possible – dealt with.

Selectivity and endogeneity in the data

The potentially most serious source of bias is the low rate of return in the first wave of this survey and the high attrition rate in the second one. It is estimated that in 1999 around 27 000 graduates left the higher educational system in Hungary. Return rate was 22% in the first wave, resulting a sample size of 5808. This number was then further reduced in the second wave, when only 2,242 respondents, the ones who willingly provided a phone-number in the first survey – still valid four years later – could be contacted. Although definitely low, such levels of response rate are not unusual in the practice of social surveys of this kind. In any case, we found that the size of the resulting sample was sufficient for performing the type of analyses presented here. However, since the distribution by the type of higher education institutions in the sample was different from that in the entire population, we applied analytical weights in this study. The aim of weighting was to reproduce in the sample the proportion of students' graduating from the various higher education institutions in 1999. This way, distribution by type of institution, region of higher education and also by field of study has been satisfyingly adjusted to the relevant distributions in the entire population.

Although we could not control for selectivity in the first wave, we examined the possibility that the more successful individuals – i.e. those with a more stable labour market position, better career-prospects and a higher wage – were more willing to provide their phone numbers for a second survey. If that is true, we are missing the contribution of those less successful, and hence can expect our key parameters of the social background variables to be underestimated in our models. Unfortunately, a fully satisfying control of the selection process is not possible on the basis of the data at hand, because our key measures of the individuals' social background were only included in the second survey, where the number of respondents had already been reduced. Our possibilities are therefore limited. In the

followings we shall compare the “responding” and the “non-responding” subgroups in our sample along the key schooling and labour market indicators. Then, we attempt to draw some conclusions regarding the possible biases necessarily remaining in our estimates.

Similarity of the “only first wave” and the “both waves” sub-samples could only be tested on the attributes included in the first survey. Distributions and means of the two sub-samples by gender, labour market position at the time of the first survey, field of study, type of higher education, occurrence of work while at higher education and satisfaction with work in 2000^{vii} suggest that selectivity is gender dependent. Firstly, men were somewhat more likely to respond to the second survey than women – with 48% of men and 45% of the women in the original sample appearing in the 2004 sample.^{viii} Characteristics of women who responded to the second survey does not significantly differ from those who participated in the second wave only (including labour market status in September 2000, field of study, type of higher education institution, work experience and also wages and social prestige in 2000). Among men however, those appearing in both samples show some distinct features. They were more likely to be in the labour force in September 2000 (either working or as unemployed) and less likely to be studying than the others. Besides, those who were studying, did so in a college rather than at a university. Agriculture students and those who did not work during their higher education studies were overrepresented in the second set. Even though men who responded to both surveys appeared to be earning less in 2000 than the others, further investigation revealed that this difference is largely attributable to college graduates being overrepresented in the second group.

To assess the joint effect of the key variables on response in the second wave, we estimated simple binary models with the variables mentioned above on the right-hand side. Results from probit estimation show that in the case of men, the type of institution has a significant effect on the participation in the second wave. University graduates are less likely to participate than college graduates. Interestingly, those who have been already working at the time of their tertiary studies were less likely to participate than others. Among women, social science graduates are more willing to participate than others – a sensible finding that is likely to reflect their interest in, and empathy for, social science research. Lastly, agriculture graduates seem to be slightly overrepresented in the “both waves” group.

In general, our estimations suggest no marked selectivity along the indicators applied in this study. Pseudo R2 hardly exceeds 1% in the model for men, and remains even lower in the

estimation for women. This suggests that selectivity on observables into the second survey is not particularly worrying in this data.

Another channel of selectivity is selection on the unobservable outcome “labour market success”. Within this category, there is the classic self selection into employment. Here, the argument goes the usual way: we might expect our estimated coefficients to be biased because of the systematic differences in wage offers and observed wages between those who work and those who choose not to. To correct for such an effect, however, we would need to find a suitable instrument correlates with participation and does not correlate with wage – a criteria that none of our variables in the dataset seems to meet. This way, we are left only to hope that biases due to selectivity are not too severe here. This hope is supported by a relatively low rate of unemployed and inactive in the sample (6,4% and 5,2% respectively in 2000 and 2,7 and 13,9 in 2004 – excluding full-time students).

Economic literature on returns to education discusses it in much detail, how unobserved characteristics of the individuals (such as family background, school quality and ability) might lead to biases when return to schooling is estimated by OLS. The “direction” of this bias depends on the nature of the relationship between the variables omitted on the one hand and the level of schooling on the other (e.g. Galasi 2003). In parallel with the classic problem, it is the parameters of the family background measures that might suffer in our case, too because of the endogeneity of school quality and ability. This issue is partly handled by applying proxies in this analysis. To assess impact of school quality, we estimate the premium for university (as opposed to college) degree, and for certain fields of studies. Furthermore, the ratio of the total number of applicants to the successful applicants into a certain institution and field of study combination is applied as a proxy for institutional heterogeneity. It is assumed that in the environment of increasing labour supply, employers use information on institutional heterogeneity as an additional screening device.

In a model of schooling choice, we might think that family background, along with individual ability, is an important determinant of the type of higher education. Because of this, there is a correlation between individual ability and schooling choice, conditional on family background. To isolate the effect of family background on wages, we have to rid it from individual ability effects. This could be achieved by including a good proxy for ability in the regression (such as appropriate test scores), but such scores are unfortunately not available in this data^{ix}.

Models, Analyses and Findings

Table 1 displays the final linear regression models for men and women respectively. In both cases, four models are shown. Two have (log) wages and (log) SIOPS as outcome, two relate to 2000, and another two to 2004. Table 2, in turn, presents odds ratios and z values from the logistic regression models on the odds of unemployment.

Our estimations indicate that key factors associated with early success in the labour market are type of higher education institution (with university degrees providing better opportunities than college degrees) and field of study (with some outstanding areas such as Informatics, Engineering, Medicine, Business and Economics). Further advantages can be achieved through work experience. Besides, those who find jobs in Budapest also seem to be better off than others. We found that institutional heterogeneity – as measured by application ratio – only affects the social prestige of women five years after graduation. Consequently, institutional differences do not appear to serve as significant screening device in the graduate labour market.

To these main determinants of graduates' employment outcomes, also adds family background – although to a varying degree, and on different ways, in the various cases. Among men at a very early stage of their graduate career, neither social prestige of the job nor wage is influenced directly by parental background. Three and a half years later however, both start being affected by the social standing of the parents to a statistically significant degree (at 0.05 level). By this time, those with a father at the highest quartile of the social prestige scale earn 12% more than their counterparts, while men whose father also completed higher education enjoy 4% more social prestige than others. The likelihood of socially advantaged men to get unemployed during these early years is not significantly lower than the average.

Confirming our decision to estimate separate models for the two genders, parameters in the case of women show a different pattern. Remarkably, social background variables behave differently here – although they indicate important similarities, too. Most notably, “timing” of parental impact shows an opposite picture here, with the wage and social prestige of graduates being influenced by social origin in 2000 but not later. In 2000, advantages associated with a

good social background included a 9% wage premium (associated with a graduate father) and 4% higher social prestige (associated with a graduate mother). By 2004 however, all direct parental impact are diminishing. Instead, we found that graduate women with a high prestige father are 40% less likely to be unemployed during the first years of their careers than those from less advantageous social backgrounds. (Table 2)

Table 1. Coefficients from OLS estimations (t-values in parentheses) continued next

page

	Men				Women			
	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004
High prestige father	0.029	0.000	0.116	-0.013	-0.059	-0.003	-0.058	0.00
	(0.41)	(0.02)	(2.09)**	(0.79)	(1.46)	(0.17)	(1.51)	(0.05)
High prestige mother	-0.015	0.012	-0.013	0.017	0.016	-0.003	-0.016	0.00
	(0.19)	(0.48)	(0.20)	(0.86)	(0.39)	(0.14)	(0.39)	(0.38)
Father: higher education	-0.105	0.027	-0.061	0.039	0.093	0.019	0.057	-0.01
	(1.48)	(1.13)	(1.07)	(2.17)**	(2.26)**	(1.09)	(1.46)	(0.61)
Mother: higher education	-0.044	-0.033	-0.074	-0.027	-0.014	0.036	0.028	-0.00
	(0.59)	(1.35)	(1.14)	(1.37)	(0.32)	(1.92)*	(0.70)	(0.24)
Application ratio	0.010	-0.001	0.005	0.001	0.001	0.004	-0.002	0.00
	(0.69)	(0.22)	(0.41)	(0.18)	(0.15)	(1.41)	(0.26)	(2.58)
University	0.181	0.033	0.180	0.024	0.162	0.055	0.104	0.05
	(3.11)***	(1.66)*	(3.58)***	(1.51)	(4.79)***	(3.73)***	(3.09)***	(3.39)
Self financed studies	0.012	0.034	-0.046	0.027	-0.084	0.005	-0.061	0.01
	(0.16)	(1.39)	(0.73)	(1.33)	(2.26)**	(0.28)	(1.60)	(0.67)
Working in Budapest	0.105	0.048	0.101	0.013	0.130	-0.007	0.135	-0.01
	(1.88)*	(2.52)**	(2.14)**	(0.86)	(3.88)***	(0.47)	(4.22)***	(0.72)
Agricult	0.315	-0.073	0.197	-0.087	0.272	-0.138	0.310	-0.08
	(2.36)**	(1.65)*	(1.89)*	(2.70)***	(4.38)***	(5.14)***	(5.06)***	(2.96)
Foreign language	0.205	0.045	0.255	0.025	0.103	-0.065	-0.012	-0.05
	(0.98)	(0.68)	(1.29)	(0.39)	(1.78)*	(2.57)**	(0.21)	(2.00)
Teacher training	-0.069	0.026	0.138	0.036	-0.008	-0.017	0.002	-0.04
	(0.33)	(0.37)	(0.81)	(0.68)	(0.15)	(0.78)	(0.04)	(1.87)
Sports	-0.070	0.020	0.006	0.063	-0.304	-0.041	-0.019	-0.10
	(0.24)	(0.20)	(0.02)	(0.89)	(1.29)	(0.40)	(0.10)	(1.18)
Informatics	0.570	-0.001	0.262	-0.037	0.613	-0.000	0.347	-0.08
	(3.95)***	(0.03)	(2.22)**	(1.00)	(6.15)***	(0.01)	(3.54)***	(1.78)
Engineering	0.437	0.069	0.289	-0.015	0.318	0.002	0.156	-0.04
	(3.70)***	(1.79)	(2.98)***	(0.51)	(5.11)***	(0.06)	(2.50)**	(1.55)
Medicine	-0.059	0.204	0.324	0.209	0.016	0.075	0.063	0.16
	(0.39)	(3.99)***	(2.49)**	(5.13)***	(0.26)	(2.87)***	(1.05)	(5.89)
Law	0.303	0.079	0.255	0.135	0.067	-0.063	0.236	-0.09
	(1.90)*	(1.49)	(1.82)	(3.07)***	(0.90)	(1.97)**	(3.05)***	(2.75)
Economics / business studies	0.675	-0.037	0.388	-0.034	0.582	-0.067	0.505	-0.07
	(5.50)***	(0.91)	(3.84)***	(1.10)	(11.52)***	(3.09)***	(10.26)***	(3.09)
Social sciences	-0.120	-0.050	0.112	-0.055	0.135	-0.035	0.083	-0.07
	(0.45)	(0.56)	(0.47)	(0.71)	(1.64)	(0.99)	(0.97)	(1.76)
Natural sciences	0.028	0.024	-0.056	0.042	-0.027	0.023	0.146	0.02
	(0.19)	(0.46)	(0.49)	(1.16)	(0.40)	(0.77)	(2.43)**	(0.71)

Table 1 cont. Coefficients from OLS estimations (t-values in parentheses)

	Men				Women			
	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004	Log earnings, 2000	Log SIOPS, 2000	Log earnings, 2004	Log SIOPS, 2004
Work experience	0.137	-0.018	0.000	0.021	0.116	-0.008	0.059	0.001
	(2.50)**	(0.94)	(0.00)	(1.38)	(3.59)***	(0.61)	(1.83)*	(0.35)
Regional unemployment ratio 2000	-0.445	-0.074			-1.341	0.234		
	(0.56)	(0.27)			(3.22)***	(1.28)		
Regional unemployment ratio 2002			-0.346	0.112			0.138	0.061
			(0.52)	(0.54)			(0.32)	(0.32)
Further study - University			-0.049	0.041			0.038	0.011
			(0.86)	(2.27)**			(1.13)	(0.96)
Further study - College			0.025	0.025			0.055	-0.001
			(0.45)	(1.41)			(1.45)	(0.15)
Further study - Phd			-0.071	0.027			-0.114	0.141
			(0.52)	(0.62)			(1.12)	(2.96)
Further study - Other higher education			-0.019	0.046			-0.086	-0.041
			(0.17)	(1.32)			(1.45)	(1.57)
Further study - Outside the higher education			-0.046	-0.036			-0.032	-0.001
			(0.96)	(2.38)**			(0.94)	(0.47)
Unemployment experience			-0.103	0.004			-0.126	-0.001
			(1.79)*	(0.19)			(3.33)***	(3.47)
Not employed for a while			0.087	-0.000			-0.055	-0.021
			(1.15)	(0.01)			(1.51)	(1.51)
Constant	10.587	3.975	11.372	3.950	10.580	3.973	11.261	4.001
	(70.80)***	(79.70)***	(90.97)***	(102.88)***	(178.78)***	(156.68)***	(188.23)***	(143)
Observations	410	410	436	474	702	712	621	
R-squared	0.23	0.17	0.18	0.24	0.40	0.14	0.32	0.24
Absolute value of t statistics in parentheses								
* significant at 10%; ** significant at 5%; *** significant at 1%								

Table 2 Logistic regression on risk of unemployment between graduation and January 2004. Odds ratios (Robust z statistics in parentheses)

	Men	Women
High prestige father	0.599 (1.50)	0.721 (1.24)
High prestige mother	0.743 (0.75)	0.598 (1.66)*
Father: higher education	0.803 (0.63)	1.082 (0.30)
Mother: higher education	1.234 (0.51)	1.450 (1.17)
Application ratio	0.898 (1.17)	0.994 (0.13)
University	0.779 (0.81)	0.742 (1.18)
Self financed studies	1.818 (1.80)*	0.949 (0.18)
Agriculture	0.948 (0.10)	1.498 (1.18)
Foreign language	0.252 (1.15)	0.479 (1.84)*
Teacher training	1.677 (0.72)	0.655 (1.29)
Sports	0.477 (0.65)	1.494 (0.34)
Informatics	0.143 (2.73)***	0.906 (0.12)
Engineering	0.361 (1.98)**	0.345 (2.19)**
Medicine	0.101 (2.12)**	0.044 (3.03)***
Law	0.231 (2.40)**	0.428 (1.57)
Economics / business studies	0.590 (0.59)	0.563 (1.67)*
Natural Sciences	1.018 (0.03)	0.397 (2.03)**
Work experience	0.356 (2.87)***	0.640 (1.71)*
Regional unemployment ratio 2002	6.934 (0.50)	3.379 (0.46)
Further study - University	0.668 (1.23)	0.960 (0.16)
Further study - College	0.442 (2.29)**	1.310 (1.05)
Further study - Phd	0.234 (1.42)	0.616 (0.51)

Further study - Other higher education	0.606 (0.62)	1.040 (0.08)
Further study - Not in higher education	0.919 (0.30)	1.832 (2.77)***
Not employed for a while	0.557 (0.83)	0.701 (1.59)

Observations 519 892

Robust z statistics in parentheses

* significant at 10%; ** significant at 5%; *** significant at 1%

Discussion

In this analysis, we focused on the early stages of graduate career. Graduates' jobs 15-16 months after graduation (September 2000) tend to be their first jobs after completing their degrees (76% of the cases in this sample). Even the 2004 data provides us with a rather early view on the course of their life. Whether the parental impact found at this time might be smaller or greater than what we would measure at later time points in the career it is difficult to tell. A related question is how the different findings of the 2000 and 2004 models can be interpreted.

Social mobility studies usually assume that earlier jobs are more strongly influenced by parental background than later jobs. This is not necessarily true for the very first jobs though. It is expected that in the early phases of their career, people take jobs on more arbitrary ways with the job-person match usually improving during the process of intragenerational mobility. (Mayer – Carroll 1987) These tendencies are likely to strengthen due to recent changes of the school-to-work transition process. Nowadays school leaving is followed by a longer searching phase often characterised by a series of unstable jobs with fixed-term contracts (Müller - Gangl 2003). This way, early snapshots of the career provide a somewhat arbitrary picture which is not yet "mature enough" in the sense of reliably in reflecting the graduate's preferences, capacities and long-term career prospects. Consequently, we could expect aging effect to increase social background effect to some extent over time by status-correction, adjusting individuals' social position to their social background (e.g. Breen - Goldthorpe 2001).

Aging effect however is confounded with a potential cohort-effect here. As mentioned earlier, graduate labour market went through radical changes in the past 15 years in Hungary.

A dramatic increase in the supply of graduates was met by an equal demand until around 2000-2002 but not so much later. One would expect that with the number of applicants growing, employers are more intensively using alternative selection criteria, some of which might reflect social background, and this would then lead to an increase in direct parental effects. By the time of the second data collection in 2004, these tendencies started showing up in the labour market, and – according to our hypothesis – might result in an increase in the direct impact of social background.

It is clearly impossible, with the data available, to disentangle the potential effects: we would need different cohorts followed over time as a minimum to attempt to do so. The difference between our two observations is not only that the individuals are older, but also that they are operating in a potentially very different economic environment. Given that the two processes (i.e. aging effect and the passage of historical time) are inseparable, we can never be quite sure what causes the changes we see. All in all, the increasing tendency of parental impact on wages, as well as on social prestige, in the case of men seems to be in line with both the aging effect and the cohort effect described. Further research is needed to find out whether the strength of this effect is to increase as graduate men move on in their career or stabilise on the 2004 level.

What we have seen in the case of women – significant parental impact in 2000 only – however, does not justify these expectations. A possible explanation may be that it is the gender-specific nature of the early working career that overwrites the general aging and cohort effects. After finishing higher education, women are more likely to feel the pressure of a quick and efficient career-start before leaving work, for a shorter or longer period, to fulfil their role as mothers. On the basis of recent demographic trends in Hungary, around 10% of women with a higher education degree may be expected to give birth before turning 25 and with a further 40% to do so before their 30th birthday.^x By 2004, 5% of the women in our sample working at the time of the second survey had already had some break in their career. The length of such break exceeded 2 years on the average. Furthermore, over 20% of the women working in 2000 were on maternity leave in 2004, and therefore missing from our second set of models. Expecting an early break in their career, women are possibly less affected by the tendency of a flexible career-start and make more effort to achieve a good fit to the position as soon as possible. More insight into Hungarian women's decisions on combining employment and fertility also proves the significant impact of human capital investments, while social origin is less influential if controlled for the other characteristics of

women (Róbert et al 2001). We suggest that the substantial distraction of the classic career route of steady adjustments and upward movements, together with the high number of women missing from the second sample of working graduates might explain why no sign of the expected aging effect was shown in the case of women.

Turning now to the issue of the source of parental impact, further important gender characteristics of the social reproduction process may be explored. Supporting earlier research findings that mother's characteristics are more important in shaping daughters' career, whereas fathers have more impact on their sons' status attainment (eg. Ashaffenburg 1995), we also found that mothers play a greater role in the case of women. In particular, our models show that it is their mothers' highest level of education that influences women's social prestige, while their risk of unemployment is a factor of their mothers' social prestige. Out of the three success measures investigated, it is only women's earnings that seem to be influenced more by their fathers' characteristics. On the other hand, in the case of men, both wage and social prestige score are factors of the fathers' characteristics – a finding that is very likely to reflect the gender influence nature of the socialization in the family as well as the similarly gender influenced nature of the occupational structure.

Out of the indicators for social background applied in this study, parents' education is more closely linked to the cultural atmosphere of the family. Therefore we might risk the conclusion that the significant parameters associated with either parent's diploma suggest cultural ways of transmitting inequalities are present. As explained earlier, parents' occupational status is generally assumed to be linked to the financial situation of the family, but also to its general social standing, social network and power.

From this it follows that with both earnings and social prestige score of women being a factor of either parent's education, it is mostly socially inherited abilities, skills, attitudes and ways of behaviour through which family background affects the quality of jobs taken by graduate women. In other words, it is cultural inheritance that a woman can mobilize to get a good position in the labour market. The odds of finding a job at all, on the other hand, seem to depend more on the financial and network resources of the family. This can be seen from the model where the risk of women's unemployment was estimated. In this model, only the mother's occupation showed significant positive effect.

In the case of men, out of the two significant impacts found, one was generated by (father's) education and the other by (father's) occupational prestige. Since the (notably) stronger effect was associated with the father's occupation (12% higher wage in 2004) we

suggest that, for men, social and financial resources of the family are more significant than cultural factors. These are only vague hypotheses at this stage. To understand the underlying mechanisms in detail, more focused research with specific proxies for cultural, social and also material resources of the family would be needed.

Finally, we turn to the comparison of our two proxies of employment success: wage and social prestige of the occupation. The substantial difference in the amount of parental impact on these two proxies supports our approach of investigating more than just one aspect of social and labour market status. With SIOPS as a proxy for the quality of positions achieved, the impact of social background appears to be much more moderate, the premia for coming from a “good” family not exceeding 4% when measured by social prestige. This is opposed to an increase of 9-12% when wage is applied. These results imply that researchers of social mobility concentrating on occupational prestige measures and not paying attention to wages can easily underestimate the importance of some potentially serious sources of social inequalities. In fact, our findings appear to be in line with the picture emerging from a non-systematic overview of the related sociological and economics literature. To us, it seems to suggest that economists (and sometimes sociologists) looking at earnings rather than other measures of occupation/social position seem to be more likely to explore direct background effect in their studies than sociologists are. Of course, a systematic meta-analysis on the relevant literature would be needed to find out whether earnings are indeed more directly influenced by social origin than social prestige.

All these comments and results are, of course, conditional on the population studied and the measures applied here, although our statistical models meet the requirements of robustness to some extent. We experimented with different combinations of measures for social background and various ways of dichotomising e.g. father’s SIOPS and our results did not seem to be dependent on these exercises.

Concluding remarks

This paper has shown that social background does not stop affecting labour market opportunities at the entrance of the higher education institutions in contemporary Hungary. Beside studying at a university (rather than at a college) and picking the “right” subject, coming from a “good” family can provide further advantages when it comes to finding a good

job, or (in the case of women) even to finding a job at all. Our analysis has revealed various gender-specific elements of this phenomenon. We have shown that, for women, the influence of social background appears soon after graduation but diminishes a few years later. For men, the tendency is just the opposite: direct social impact on their labour market success only shows up some years after completing their studies. We attributed this difference to family engagements that might significantly divert women's career in their twenties. On the basis of this data, we are, however, unable to tell whether the relatively strong job-person match – as measured by a match between social origin and the position achieved – soon after graduation in the case of women will again be achieved as women start stabilising their position in the labour market after giving birth.

Further contributions of this study are the parallel and fully comparable estimates of wages on the one hand, and occupational prestige scores on the other. Between the two, a systematic difference in the amount of parental impact was found, with wages being notably stronger associated with the occupation or education of the parents. On the basis of this finding, we have suggested that the common use of social prestige scores in the social mobility literature could possibly contribute to sociologists somewhat neglecting the issue of direct impact of social origin.

This study is based on a survey that was not originally designed for an in-depth exploration of the social process of status-transmission. Consequently, not all of our research questions could satisfyingly be answered here. A major improvement to this analysis would be if a reliable estimate of ability would allow us to control for potential ability bias. Also, a better targeted survey would ideally include a carefully selected range of questions to assess cultural, social and financial resources available in the parental house. Methods of job search and direct parental assistance at the stage of labour market entry should also be explored to provide better insight into the actual process of social inheritance.

An in-depth understanding of the underlying factors is necessary, not only for the sake of academic understanding, but also for developing efficient policy measures. At this stage already, one important message does shine out for everyone concerned about social equality. By showing that social reproduction is taking place not only inside but also outside the educational system, we conclude that working towards equal opportunities within the educational system, and even achieving a generally high rate of higher education attainment might not in itself be sufficient to secure equal opportunities in the labour market.

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ⁱ Cited by Card 1998.

ⁱⁱ Cited by Card 1998.

ⁱⁱⁱ The Hungarian system of higher education did not use to differentiate between BA and MA degrees. This is a recent development. A „higher education degree” refers to a degree gained in an institute of tertiary

education, typically after 4 or 5 years of study. The typical age at graduation used to be 23 although it is in increase at the moment.

^{iv} Growing from 25822 to 57056 between 1990 and 2000 (The Hungarian Labour Market 2005).

^v For example among the 20-29 year old graduates, 3% of those with a college degree were unemployed in 2000 but 4% in 2002, while relating ratios are 3% and 7% for university graduates. (Labour Force Survey)

^{vi} Data-collection was commissioned by the National Institute for Lifelong Learning (Nemzeti Felnőttképzési Intézet).

^{vii} For statistics in this section see Blaskó – Róbert 2007.

^{viii} Compared to the entire population of graduates in 1999, women still remain overrepresented in this sample. This is due to their higher responsiveness in the first survey.

^{ix} Although one might consider data on application ratio – our proxy for institutional heterogeneity – to incorporate some aspects of individual ability as well.

^x Own estimations based on Spéder 2006.

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