The intergenerational transmission of liberal professions

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A B S T R A C T

By using university administrative and survey data on Italian graduates, we analyse the intergenerational transmission of liberal professions. We find that having a father who is a liberal professional has a positive and significant effect on the probability of a graduate of becoming a liberal professional. To assess the processes at work in this intergenerational transmission, we evaluate the effect of having a liberal professional father on the probabilities to undertake each of the compulsory steps required to become a liberal professional, which are choosing a university degree providing access to a liberal profession, completing a period of practice, passing a licensing exam and starting a liberal profession. Having a liberal professional father has a positive and statistically significant effect on the probability to complete a compulsory period of practice and to start a liberal profession; whereas there does not seem to be an effect on the type of degree chosen and on passing the licensing examination, at least after controlling for child’s and parental formal human capital.

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1. Introduction

The focus of this paper is on explaining why children of liberal professional fathers have a larger probability to become liberal professionals. We consider liberal professionals who are self-employed workers providing public services which require them to hold a specific university degree, to obtain a professional license by passing an exam and to complete a compulsory period of practice, which has to be undertaken before the licensing exam.1

By using university administrative data linked with post-graduation surveys covering the universe of graduates in 22 Italian Public Universities in 2002 and 2003, we find that the probability of a graduate child to become a liberal professional increases of 9 (16) percentage points when the father is a graduate liberal professional rather than an entrepreneur (a blue collar). These are huge increases, given that only 13% of graduates become liberal professionals.

Similarly to the intergenerational transmission of income, the occupational transmission has been explained by inheritability of endowments and parents’ investments in their child’s human capital (see Becker and Tomes, 1979; 1986). But, to justify a different degree of transmission for different occupations, it is necessary to recognise that there are two types of human capital investments: the indirect investment through formal education and the direct investment through the transmission of job-specific abilities and knowledge from fathers to children (see Laband and Lentz, 1983; 1992, Evans and Jovanovic, 1989, Dunn and Holtz-Eakin, 2000, Fairlie and Robb, 2007 and Fairlie and Krashinsky, 2012). Liberal professions are a type of occupation where the intergenerational transmission of skills and knowledge is important and helps in lowering the entry barrier costs, e.g. shortening the time needed to set a portfolio of customers and increasing potential early profits.

If parental human capital investments were the only explanation for the occupational transmission from fathers to children, then there would be no reason for thinking that a high degree of occupational transmission is unfair. However, other possible mechanisms explaining the transmission of liberal professions are: the transfer of financial resources, job preferences, family networking and the potential transmission of the family business.2 Furthermore, an additional mechanism which can explain the large intergenerational association in liberal professions is nepotism, i.e. the fact that liberal professional fathers can help their

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1 The liberal professionals considered in our empirical exercise are accountants, lawyers, notaries, psychologists, pharmacists and architects. In some of our auxiliary analyses, which are available upon request to the authors, we also include liberal professions that do not require a compulsory period of practice, i.e. engineers, geo-biologists and agronomists.

children beyond their merits to be accepted and to complete a period of practice, to pass a licensing exam, or to undertake other steps required to become a liberal professional.3

We are unable to evaluate the separate effect of nepotism; but, after controlling for variables which measure child’s and parental formal human capital, and child’s job preferences and family financial resources, we can interpret the residual effect of having a liberal professional father on the probability of becoming a liberal professional as the combined effect of transmission of job-specific skills and knowhow, nepotism, family networking and potential inheritance of the family business. While we capture the formal human capital by controlling for a rich set of measures of educational choices and attainments in high school and university using administrative data, which are unlikely to suffer of measurement errors; our measures of financial resources and job preferences are proxy variables which might not fully control for the two related transmission mechanisms. Nevertheless, because we compute the effect of having a liberal professional father on the probability of becoming a liberal professional as the differential effect with respect to having a father who is an entrepreneur and the transmission of financial resources and job preferences is likely to be very similar between fathers who are entrepreneurs and liberal professionals, we expect the potential bias caused by these proxy variables to be small.

The novelty of our paper is that we decompose for the first time the probability of a graduate to become liberal professional in the product of four probabilities (processes) which represent four sequential steps that a child has to undertake to start a liberal profession, which are choosing degrees providing access to liberal professions which require practice period, completing a compulsory period of practice, obtaining a professional licensing and starting a liberal profession. This approach allows us to evaluate the effect of having a liberal professional father in each of these four specific processes and to explain how this effect is mediated by different mechanisms. In this way we can identify which process is the most important in explaining the intergenerational transmission of liberal professions, and therefore we can provide more precise policy recommendations to improve access to liberal professions.

Our approach is similar in spirit to Mare’s educational transition model, which estimates the effect of parental background on the probability of progressing from one educational level to the next using a sequential binary model (see Mare, 1979; 1980; 1981; 2011). The main difference is that, rather than evaluating the effect of family background on school transitions, we estimate the effect of parental occupation on sequential probability processes, which represent sequential steps that a child has to undertake to become a liberal professional.

More precisely, we consider the full sample of graduates and estimate the effect of having a father who is a liberal professional on each of four following probability processes:

I.a the probability to choose university degrees that give access to liberal professions which require a compulsory period of practice, I.b the probability to complete a compulsory period of practice, I.c the probability of passing a professional licensing exam, I.d the probability to start a liberal profession.

Each of these probabilities is conditional on having undertaken the previous step, i.e. completing a period of practice is conditional on having a degree that gives access to liberal professions which require a compulsory period of practice, passing a professional licensing exam is conditional on having completed a period of compulsory practice, and starting a liberal profession is conditional on having obtained a license. Therefore, the probability to become a liberal professional for a graduate is given by the product of the above four conditional probabilities (I.a), [I.b], [I.c] and [I.d]), which are sequential probabilities.4

Our findings suggest that the completion of a compulsory period of practice and the liberal profession initiation are the major processes at work in the transmission of liberal professions from fathers to children. On the contrary, the type of degree choice and the licensing examination do not play a major role in explaining the transmission of liberal professions.

When controlling for the effect of the observed mechanisms of transmission, i.e. for the transmission of financial resources, formal human capital and job preferences, separately on the four different probability processes, we find that the advantage of having a liberal professional father in the same field of study, (i) on the probability to complete a compulsory period of practice (process I.b), is mainly explained by the transmission of formal human capital followed by family networking and/or nepotism, (ii) on the probability to pass a licensing exam (process I.c), is explained exclusively by formal human capital, (iii) on the probability to start a liberal profession (process I.d), is explained by the transmission of the family business and possibly nepotism.

The remainder of the paper is organised as follows. Section 2 summarises the literature related to our research. Section 3 provides some institutional details on the educational system and on the professional licensing in Italy. We then describe the data in Section 4 and provide descriptive measures of intergenerational mobility in liberal professions in Section 5. We assess the effects of having a liberal professional father and of different mediating mechanisms on the probability of becoming a liberal professional and on the four different sequential processes of intergenerational transmission in Sections 6 and 7, respectively. Finally, Section 8 concludes.

2. Related literature

By assuming that the cost to acquire human capital related to a specific occupation is lower for children who follow their father’s occupation and that fathers with a child who is a follower maximise their own earnings as well as their child’s, Laband and Lentz (1983) develop an economic model which explains the mechanisms behind the intergenerational occupational transmission and the differences in this transmission across occupations. Direct and indirect human capital transfers from fathers to children are assumed to be the mechanisms of intergenerational transmission at work, and the explanation given for why some types of occupations are more often transmitted than others is that they require job specific human capital that can be easily and cheaply transmitted from fathers to children. Laband and Lentz (1983) find that for occupations where the direct transmission of job specific knowledge and abilities is more relevant, such as farmers and self-employed people, there is a higher percentage of children following their father’s occupation. High levels of intergenerational transmission have been found also by Dunn and Holtz-Eakin (2000) and Sørensen (2007) for self-employed people, by Lindquist et al. (2015) for entrepreneurs and by Pellizzari et al. (2011) for liberal professionals.

Beside the human capital transmission, another possible explanation for the strong intergenerational association is the presence of credit market imperfections, which may lead to a failure of meritocracy (see Evans and Jovanovic, 1989, Dunn and Holtz-Eakin, 2000, Caselli and Gennaioli, 2005 and Fairlie and Krashinsky, 2012). Evans and Jovanovic (1989) propose an economic model for the decision to be self-employed, and they provide empirical evidence that wealthier people have higher probability of starting a self-employment activity. Dunn and Holtz-Eakin (2000) extend this model to allow for financial capital transfers from fathers to children, so that the decision to become self-employed depends on the personal human and financial capital as well as on the human and financial capital transmitted from the father.

3 We define nepotism as any advantageous effect of the family network which is not meritocratic.

4 In presence of omitted variables which affect all the above four probabilities, the computation of the probability to become a liberal professional is slightly more complicated, because it requires the estimation of a joint quadrivariate probability model that allows for correlation between the error components in the four probability processes. In the paper we show that the estimation results obtained using separate sequential probability models and the joint quadrivariate probability model are similar.
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