



**UNIVERSITY
OF TRENTO**

Doctoral School of Social Sciences
Program in Sociology and Social Research
XXVIII cycle

The social reproduction of licensed professionals: a micro-class approach

Supervisor: prof. Carlo Barone

Ph.D. candidate: Lucia Ruggera

A.Y. 2015/2016

Index

Introduction	5
1.Social reproduction of licensed professionals in five European countries	11
1.1. Introduction	11
1.2.Institutional level: combining theories	13
1.2.1. Social closure theory	13
1.2.2. Credentialism theory	15
1.3. Professional closure strategies in Italy and in Europe	17
1.3.1. Professional closure strategies across four European countries	17
1.3.2. Professional closure strategies in Italy	22
1.4 Decision making processes: combining theories	27
1.5. The ‘Origin - Education – Destination’ association from a big-class to a micro-class perspective: previous research	31
1.6. General hypotheses	34
1.7. Concluding remarks	37
2.Social closure, micro-class immobility and the intergenerational reproduction of the upper class: a comparative study	39
2.1. Introduction	39
2.2. Deriving the hypotheses	40
2.3. Data, variables and methods	43
2.4. Results: the contribution of micro-, meso- and macro-class rigidities to immobility in the higher service class	47
2.5. Results: social closure and micro-class immobility in comparative perspective	52

2.6. Results: credentialism and micro-class immobility in comparative perspective	58
2.7. Concluding remarks	61
3. Social closure and micro-class immobility of the upper class in Italy	65
3.1. Introduction	65
3.2. Previous research and hypotheses	66
3.3. Data, variable and methods	67
3.4. Results: contribution of micro-, meso- and big-class rigidities to immobility in the higher service class	70
3.5. Results: social closure and micro-class immobility	79
3.6. Results: social closure and intra-generational mobility employing big-, meso-, micro- class approaches.	82
3.7. Concluding remarks	82
4. The intergenerational social reproduction of licensed professionals in Italy: analysing micro-dynamics from graduation to the labour market	85
4.1. Introduction	85
4.2. Previous research and hypotheses	86
4.3 Data, variable and methods	87
4.3.1. Data	87
4.3.2. Variables	88
4.3.3. Methods	90
4.4. Results	91
4.4.1. The association between social origins and of fields of study: disaggregating the professionals meso-class into micro-classes	91
4.4.2.. Analysing the association between big-, meso- and micro-classes of high level professionals and fields of study separately by gender	95

4.4.3. Analysing the association Origin-Destination between big-, meso- and micro-classes of professionals considering the employment condition of the professional fathers' micro-class (employed and liberal professionals)	99
4.5. Concluding remarks	106
Conclusions	109
References	115
Appendix A - chapter 2	125
Appendix B - chapter 3	149
Appendix C - chapter 4	158

Introduction

This thesis assesses how processes of social closure enhance intergenerational immobility in the regulated professions and thus promote persistence at the top of the occupational hierarchy. It considers various European countries (Great Britain, Germany, Denmark and Sweden and Italy) that diverge considerably in their degree of professional regulation and in their broader institutional arrangements. This thesis traces the implications of social closure devices for intergenerational immobility by employing different social class approaches (Erikson and Goldthorpe 1992; Grusky 2005).

A vast literature documents the influence of social class on life chances by using a big-class approach in several domains: unemployment, occupational attainment and education (Cobalti and Schizzerotto 1994; Erikson and Jonsson 1996a; Sieben and de Graaf 2001).

Furthermore, systematic comparisons across time and space reveal that these inequalities were highly resilient over time across a variety of institutional contexts (Müller, Lüttinger, and Karle 1989; Treiman and Yip 1989; Müller and Karle 1993; Shavit and Blossfeld 1993; Lauer 2003; Breen 2004; Barone, Lucchini and Schizzerotto 2011). The key tenet of the standard big-class approach has been that, if social classes are perhaps declining as collective actors, for example in a context of weakness of the union membership, they are still in very good shape as generators of inequalities (*see* Barone 2012; Weeden and Grusky 2012).

Literature regarding the upper class only is instead very restricted and it mostly concerns the intergenerational mobility of meso-classes: professional employment, managerial and entrepreneurial jobs (*see* Schizzerotto 1993; Barbagli and Schizzerotto 1997; Patterson et. al 2003). This thesis is placed in this research and it specifically concerns some occupational categories that have escaped from a proper consideration. This is probably to impute to the aggregation of different professional categories into a meso-class. Thus, this work goes beyond traditional studies, integrating the big-class approach with the micro-class approach.

The major source of inspiration of this thesis is the ongoing debate on how social inequalities regarding high level professionals in contemporary societies are theorized and measured. Therefore the understanding of processes behind this possible form of inequality of opportunity is of primary importance, and it has been obscured by employing a big-class approach, or a gradational approach.

It has to be clarified that every approach considered in this thesis is useful according to the hypothesis it is going to falsify. According to the topic of research, some studies prefer the parsimony of the big-class approach, others instead are in favour of a micro-class approach because it allows to reach inequalities at micro-level. This is why in this work most of the attention is paid on the micro-class approach, but its critiques are also considered.

Going into details on how social inequalities have been measured in the sociological literature on social mobility and social stratification, there are at least three ways in which the association between social origin and social destination (OD henceforth) can be examined.

First, occupations can be grade or scale to signal the general desirability of the labour market position, with the OD association that reveals the extent to which those born into families in which parents have desirable occupations are likely themselves to assume equal standing occupations (Treiman 1977; Ganzeboom, de Graaf and Treiman 1992). But, in order to disclose social inequalities of highly regulated professionals, scaling occupations cannot be the most useful way for the purpose of this thesis; for example ISEI classifies accountants with a score of 65 and lawyers (or doctors) with a score of 80 even if both these professional groups have a similar level of legal closure as the first chapter illustrates.

Second, the attention is paid on the influence of occupation-specific resources when children from two professional groups of similar general desirability do not have the same social mobility probability (Grusky and Weeden 2005). Indeed, the basic claim of the micro-class approach is that the forces that make people in one occupation different to another are primarily specific to that particular job or micro-class (Grusky 2005).

According to Grusky and Weeden (2012) sociologists can be a very good example that makes clear the micro-class point of view. They are characterized by: the left-leaning reputation of sociology and the consequent self-selection of

left-leaning recruits; the inculcation of a liberal worldview through lengthy professional training and socialization; the reinforcing effects of interaction with like-minded colleagues. Otherwise, why would economists be different to sociologists?

However, it has to be pointed out that in Grusky and Weeden' paper in 2005 by looking at 82 micro-classes, and across 30 years of data (1972-2002), the authors argue that «micro-classes trends proved to be relatively weak» (Grusky and Weeden 2005, p.155). While lately they get to the conclusion that micro-classes are useful for the understanding of life-course social inequalities and hence of social mobility (Grusky and Weeden 2012). Thus, Grusky and Weeden do not assert that the gradational or the big-class approaches are not useful, but they assert that micro-classes should considered too.

Third, a widely used way in which sociologists deploy occupations for the purpose of studying social mobility is to aggregate them into big-classes and then analyse the exchanges among these classes (Erikson and Goldthorpe 1992; Cobalti and Schizzerotto 1994, Breen 2004). Most of big-class schemes do not rely exclusively on occupational information, but they rely on additional information about self-employment, agricultural sector and other characteristics about a job. With the combination of these information, occupations have been understood as a class position: the Erikson and Goldthorpe class-scheme (EGP scheme henceforth) is almost universally adopted in social stratification research (Breen, Goldthorpe and Jonsson, 1997; Breen, Goldthorpe, Luijckx, Müller, and Pollak 2009; Barone, Luijckx and Schizzerotto 2010; Barone and Schizzerotto 2011).

Even if the big-class tradition draws attention to the argument for which children from two big-classes of similar general desirability do not necessarily have the same mobility chances, the limitation of this approach in studying detailed occupations is that professional groups are presumed to be similar enough in working conditions, employment form, or culture to preclude any need to differentiate them.

The micro-class approach claim, indeed, is that unit occupations or licensed professions, such as lawyers or medical doctors are more deeply institutionalize, than any big-class combinations of those professions (Weeden and Grusky 2001). Thus, by using a micro-class view, it comes to light that professional parents tend

to bring home their occupations, and children accordingly learn occupation-specific skills, profit from occupations-specific networks, and develop occupation specific aspirations (Grusky 2005). For example, the probability that an architect' child will become an architect is accordingly high when compared to the corresponding probabilities of children of other social classes.

The major critique to the micro-class approach is pointed out by Goldthorpe (2002); Goldthorpe (2002:214) notes that «we want to be able to explain, for example, not so much why doctors' children have a high propensity to become doctors [...], but rather why those doctors' children (the majority) who do not become doctors are far more likely to move into other kinds of professional or managerial employment, instead of becoming manual wage workers». In standard accounts of social inequality, children of the upper class probably enjoy high chances of persistence in this class because of larger amounts of cognitive, cultural, social and economic resources to reach higher levels of education and higher occupations of any kind. But a critical observation here is that micro-class analysis entails an analytical shift from the overall amount of family resources available for social reproduction to qualitative type of resources offered for this purpose.

Some notes of conceptual clarifications and definitions may be warranted at this point. In this context, the term licensed professions refers to highly regulated professions (i.e. lawyers, notaries, doctors, architects, engineers), organized in professional associations, which require a mandatory license in order to practice a given set of exclusive tasks in the market sector of professional services (Pellizzari and Orsini 2012). Whereas professionals without a professional associations, which are institutionally unrecognized, are defined as unlicensed professionals.

Furthermore, the analytical strategy has to be clarified, as an important tool that the reader can use to get a better understanding of the empirical chapters of this thesis.

The first step of the analytical strategy in the analysis of the Origin-Education-Destination (OED henceforth) is to integrate the EGP big-class scheme with micro-classes of licensed and unlicensed professionals. In other words, I decompose into three distinct processes operating at different analytical levels macro-, meso- and micro-class rigidities and I assess how social closure affects

intergenerational immobility in professional employment. As Jonsson et. al (2009) suggested, analytically speaking, micro-classes are nested in the meso-classes and in the big-classes, thus when comparing social immobility of licensed and unlicensed professionals, it is more appropriate to use the net micro-classes social immobility. In other words big-class are purged by meso-class effects, and professional meso-class is purge by micro-class effects¹.

The second step of the analytical strategy is to link the social immobility of a licensed professional group to his level of legal closure; of course, then it is necessary to compare results of this link with the ones obtained by unlicensed professional groups.

This is accomplished with a comparison of the intergenerational immobility of licensed and unlicensed professionals across four European countries in chapter two (Denmark, Germany, Great Britain and Sweden) and in Italy in chapter three².

The analytical strategy of chapter four does not differ very much from chapter two and three; but using a very large sample representative of the Italian graduates it allows to use different techniques of analysis and social immobility is calculated at each analytical level. This chapter does not link the level of professionals' social immobility to the degree of professional regulation, but it focuses on the entire OED triangle. Thus, this chapter does not repeat the analysis of the previous one, but it improves its results going into details of the social reproduction of professionals.

As suggested in the last two paragraphs, the structure of this thesis can be summarized as follows.

The theoretical section (chapter 1) delineates an interpretative line to the empirical section (chapter 2, 3, and 4). Indeed, the first chapter provides the theoretical framework of the thesis by using a combination of theories at institutional and individual level which allows to delineate the general hypothesis regarding each empirical chapter.

Chapter 2 proceeds with an international comparison of professional groups in the OED triangle and chapter 3 considers Italian men in the OD association.

1 Empirically this is realized through log-linear models and the implementation of different design matrixes.

2 In these chapters, samples which represent the entire population of these countries are used (except for Italy because it was not possible to include the female population as explained in the third chapter).

Chapter 4 shows by using a sample of Italian graduates the OED triangle disentangling both the Education, and the Origin and Destination. It also checks for gender differences and employment conditions (employed and liberal professionals) within micro-classes. Finally, the theoretical framework and the empirical analyses lead to the conclusion of this work.

1. Theoretical framework: social reproduction of licensed professionals in five European countries

1.1. Introduction

This chapter focuses on licensed professionals, specifically it takes into consideration various theories capable in explaining professional structuration and social inequalities deriving from professionals' social reproduction. As already pointed out in the introduction, professionals across Europe and specifically in Italy have studied as single professions, such as notaries or architect and engineers, but just few times comparing professions one another (Chiesi 2008; Santoro 1998). Therefore this theoretical framework need to be inclusive of the necessary theories and logical tools that allow the reader to understand the other empirical chapters as well as the comparison of the different professions.

As already mentioned, licensed professions are institutionally well defined across European countries and this is because their institutionalization processes originated at the beginning of the 1900's, and for some of them even before, such as doctors and lawyers. These two latest professions, indeed, have seen as very important professions that could not be included in the competition regime, because doctors save people' life and lawyers have to deal with their freedom. Thus, since a long time ago a special consideration and a different competition treatment have given to these professionals.

From a sociological point of view, functionalists, starting with Durkheim, assume that these professions are able to concentrate the mechanical solidarity, something very difficult to find in any other occupations; then, from Weber and neo-weberians originate another concept concerning these professionals groups: the social closure. They assert that interested groups reduce the labour market competition, and thus the pool of candidates, in order to get advantages from closure (Weber 1978 [1922]; Parkin 1979). Obviously, this thesis goes into details of the neo-weberian perspective, first because is strictly linked to the micro-class approach, and second because to highly institutionalized professions correspond forms of legal closure. Indeed, social closure and the credentialism of Collins (1979) are the theories which define the institutional level of this thesis theoretical

framework; this is because the thesis purpose concerns the disclosure of educational and occupational inequalities; nonetheless, professional closure strategies, such as the legal closure in the five European countries are considered.

Then, individual decision-making is taken into account with a combination of theories. Indeed, licensed professions embody processes (e.g. social closure) and traits, such as culture, typically attributed to traditional social classes (Erikson and Goldthorpe 1992; Grusky 2005). Thus, the transmission of the cultural capital is a theory that in this chapter is combined with another one concerning the rational choice theory. Of course, these two theories cover just a little part of the literature able to give an explanation of the individual decision-making, but in order to provide efficient tools to the reader we opt for the two theories. Moreover, this choice is because we believe that the rational choice theory and the cultural capital reproduction give a more complete picture of children of professionals opting to follow in their parents' footsteps.

This chapter is very important because thank to the definition of the macro- and micro-level theories it is easier for the reader to understand and interpret results of empirical chapters. Indeed, the three major hypotheses concerning each chapter are defined.

The structure of this chapter is as follows.

The first part delineates the institutional level through social closure and credentialism theories also considering their lacks in the articulation of processes thorough which social and economic advantages are secured to these occupational groups; moreover, the social class structure and professional closure strategies for the main licensed professions are discussed referring to five European countries: Germany, Denmark, Great Britain, Sweden and Italy (paragraph 1.2. and paragraph 1.3.).

In the second part the individual process of decision making is considered through a combination of theories, namely the rational choice theory, and specifically the relative risk aversion hypothesis (RRA henceforth), and the cultural reproduction theory, highlighting Grusky's (2005) specification of cultural resources transmission at occupational level (paragraph 1.4.).

The third part of this chapter considers how individual processes affect societal outcomes at the macro-level. The so called Origin-Education-Destination triangle is declined following the big-, the meso- and the micro-class perspective

(paragraph 1.5.), and then general hypotheses are reported in order to shed light on each chapter focus (paragraph 1.6.); thus, it will also lead me to the concluding remarks (paragraph 1.7.).

1.2. Institutional level: combining theories

1.2.1. Social closure

Social closure, according to Weber ([1922] 1978, pp. 339–48, 926–55), occurs whenever the competition for a livelihood creates groups interested in reducing that competition. These groups try to monopolize sectors of market and maximize their advantages by closing off opportunities to outsiders. Such exclusion can be based on any characteristic, including race, social background, and gender. However, according to closure theorists, exclusion based on ascribed criteria is being increasingly replaced by exclusion based on «individualistic» criteria, such as educational credentials and knowledge (Larson 1977; Parkin 1979; Collins 1979; Murphy 1988, Abbott 1988; Weeden 2002, Grusky 2005).

Occupational closure is an instance of the more general social closure. The professional groups shaped around occupational positions in the division of labour construct and defend social and legal boundaries in order to get advantages from occupational closure (Weeden 2002; Grusky 2005).

As this discussion suggests, closure theory is predicated on the assumption that social groups can and do act to further their collective economic interests (Sorensen 1996, 2000; Sorensen and Grusky 1998, 2001). Furthermore, recognition of the benefits of occupational collective action may be scattered among the membership of a licensed profession (Weeden 2002; Weeden and Grusky 2005). In many occupations, the collective action function has been centralized in a distinct organization, such as professional associations (Grusky 2005).

Occupational closure secures advantages to professionals at the expense of other groups, whose members do not have access to the profession (Sørensen 1996, 2000). As a result, the privileged group has to constantly protect its control over an asset against attempts by other groups to usurp that asset (Parkin 1979).

According to Sorensen (2000) closure theory has much in common with theories of exploitation: «advantaged exploitation classes are positions in the social structure that allows individuals to gain control over assets or attributes of assets that generate rents» (p. 1545). These rents are defined as payments attached to positions which are independent from the real efforts of a person occupying a position (Sorensen 1998; 2000). The holders of a rent producing asset have interest in securing the continued flow of benefits. In fact, professionals have created professional organizations and processes to entry into a profession to protect rent benefits.

Focusing on professions within a system of licenses, these arrangements bring to the creation of artificial monopolies over the supply of an asset. For example, a reduced number of architects have the right to offer a service and consequently the opportunity to fix the price of a professional performance. This mechanism would not have generated in the absence of an artificial monopoly. Thus, professional associations are interested in erecting systematic barriers to the access to a profession such as credentials which serve to limit supply.

Moreover, it is arguable that there are no analogous organizations within the labour market that represent aggregate classes. For this reason, I claim that it is worth differentiating professional groups in order to investigate the role that various forms of closure play for their social reproduction.

Of course, also closure theory comes with its own limitations. As Murphy (1988) pointed out, internal failings have vanished the effort to launch closure theory into a central place in the stratification research.

Closure theorists have not given enough attention to the process through which closure devices translate into tangible advantages to professionals. As well, closure theory is not able to explain why some professional groups succeeded in assuring closure strategies and the related institutional recognition while others failed (e.g. accountants and labour consultants). And still, there are no empirical evaluations of its core predictions, although closure argumentations have been considered by contemporary stratification researches that apply a micro-class approach in order to evaluate positional inequalities in modern society (e.g. Grusky and Sorensen 1998; Weeden 2002; Grusky and Weeden 2005). This thesis indeed contributes to providing empirical evidence of social closure

argumentations by using various social class approaches and by focusing on professional groups of the upper class of different European countries.

1.2.2. Credentialism theory

A variety of advantages emerge when employment and jobs are closed to outsiders by the collective action of professional associations, by government-approved certification of professions, and by occupational licenses. Professional associations create rent benefits when they gain control over recruitment to a profession through managing the intakings of educational institutions. For instance, only a fixed number of students have access to the medical school.

Credentials as means used to restrict the labour supply can be analysed from two distinct perspectives (Collins 1979, Weeden 2002). From a human capital perspective, educational credentials certify the acquisition of skills and competences, therefore any restrictions of opportunities to attain these credentials will shrink the pool of candidates who can access a given profession. In other words, the point of restrictions in access in closure theory is that more persons may have the capacity and the ability to be a prepared professional, but that they lack the certificates to perform the relevant occupations.

Policy makers and professionals themselves, in turn, support credentials as a necessary device for the quality of the service providers and consequently to protect the consumer from the service providers incompetence. In fact, professionals operate in a delicate market characterized by asymmetrical information and strong externalities (Pellizzari and Pica 2011). In this case credentials are necessary in order to guarantee a good professional performance and protect clients from incompetence.

From an alternative perspective, educational credentials are only loosely, related to the knowledge a person needs to be competent in practicing a profession (Collins 1979, Weeden 2002). Educational credentials are used as rationing devices for access to employment-specific education for professions. This creates advantages linked to the artificial monopoly for those who hold the credentials. Educational credentialing refers to the use of the familiar symbols or markers of

knowledge (e.g., degrees as standard social constructs) conferred by formal educational institutions to monitor entry into professions (Collins 1979).

In this perspective, credentials just serve as a cultural currency that proves the membership to be a specific status group (Collins 1979; Bourdieu and Passeron 1979; Parkin 1979). From this point of view, credentials restrict the labour supply because consumers value the underlying cultural currency and believe that the credentials certify a unique competence to practice a profession. Since educational credentials lead to a licensed system, largely enforced through norms and behavioural rules, they are a means used to restrict access to a profession, capable in excluding candidates who have not met some criteria (Tousijn 1979, 1987; Weeden 2002, Grusky 2005). Thus, certificates are not signal of a high quality performance but they just prove the membership of a given profession.

Moreover, the credentialism literature (e.g. Collins 1979) indicates that credentials are linked to class analysis and cultural capital reproduction (Bourdieu and Passeron 1979). Since «cultural endowments are important for learning, but hard to learn for those not socialized into a given culture» (Sorensen 2000, p. 1547), they can be seen as a source of inequality because they facilitate those who were exposed to the relevant forms of cultural capital needed to obtain the corresponding educational credentials. In fact, those possessing high credentials wish to secure an advantage to their children, providing specific cultural capital employable in the training for the same profession.

Closure theorists, indeed, have specified how economic, cultural and social resources can be used by children of professionals for the purpose of obtaining credentials. These resources give strong advantages and incentives to professionals' offspring to follow in the footsteps of their parents.

Credentials, then, are likely to increase the ability of high status groups, such as licensed professionals, to confer their advantages to their offspring (Parkin 1979; Collins 1979; Murphy 1988).

1.3. Professionals closure strategies in Italy and in Europe

1.3.1. Professionals closure strategies across four European countries

Although closure theory lacks a clear articulation of the processes through which social and economic advantages are secured to some occupational groups, little explanation is given to how and why closure strategies differ among these groups. However, the main assumption of closure theory is straightforward: the higher the extent of closure of an occupational group, the greater the social and economic benefits. For members of licensed professions, closure strategies are strong and effective. In most of the European countries, professions are characterized by deeply institutionalized practices through which professional closure is secured.

The supply restriction (the limited number of professionals who can operate in a professional service market) is produced by two main devices: educational credentialing and licensure³. These processes are strictly linked with the core of the closure theory, for which «closure generates and artificial scarcity of individuals who have the legal, technical, or socially recognized ability to perform the bundle of tasks provided by that occupation» (Weeden 2002, p. 61).

Credentials as precondition for entry into a profession are supported by the state as legitimate basis of social exclusion. In fact, a professional can be identified as a real member of a profession able to perform specific skills and tasks only after obtaining a list of educational and training certifications and, for some countries, also succeeding in the state examination, a professional can be identified as a real member of a profession, able to perform specific skills and tasks.

The legislation, regulations and codes of practice of a range of professional services, such as legal, accountancy, technical, medical and pharmacy services, vary across European countries as well as across these professions (Paterson et al. 2003). A specific regulatory framework of professions exists in all European

³ Entry-market regulation concerns formal certifications and qualifications, such as educational credentials, length of practice, professional examinations and registration in a professional body and rules on areas of reserve practice, in other words the right of a profession to offer a specific service on the market.

member states, but the regulatory scope and intensity vary considerably across these countries⁴.

The aim of this study does not concern why or to what extent this regulation differs between countries, but how licensed professions legislation⁵ affects social phenomenon, such as the social reproduction of professionals' categories and, consequently, its contribution to the social immobility within the service class.

As research on social class mobility and social stratification pointed out that European countries are predominately structured in big-classes because institutional organizations, such union membership help the strength of this kind of structure (Erikson and Goldthorpe 1992). According to Grusky (2005) the U.S. is more inclined be structured in micro-classes, this is because in this country the role played by firms in created this structure is very strong. Jonsson and colleagues' (2009) suggest that Germany is structured in both big- and micro-classes, that it also could be the case of Denmark and that in Sweden micro-classes seem to be not strong. They also suggest that other countries should be study in order to discover whether a structure of micro-classes is strong even with the pre-existence of a big-class structure (see Jonsson et. al 2009). Therefore, even if these studies do not properly focus on licensed professionals, they are used as a starting point for the comparative purpose of this thesis (Jonsson et al. 2009). Indeed, by comparing five European countries (Germany, Sweden, Denmark, Great Britain and Italy), characterized by different class structures and by different levels of licensed professions' regulations, this work argues and empirically shows that micro-level processes of professionals' social production, such as the connection between levels of regulation and the intergenerational

4 If the recent trends in many European countries concern an overall decrease in the conduct market regulation, the entry market legislation seems persistent over time. Market-conduct regulations regard regulation on prices (such as fixed prices or a minimum/maximum price), regulation on advertising, regulation of location or diversification (e.g. geographical restriction on offering services, such as for Latin notary profession) and restrictions on inter-professional cooperation. Moreover, as I will explain in the next paragraph, in Italy even if formally conduct regulations of professionals have consistently decreased, professional associations still maintain in their Codes of Conduct rather than restrictive recommendations on professionals' behaviours.

5 The OECD's index of professional closure regards entry-market regulations for most of the European countries in 2013 (even though it has been calculated for 4 years 1998, 2003, 2008, 2013). This index has been constructed in order to facilitate the comparison between European countries. The interpretation is straightforward: firstly, the index ranks from 0 to 6, where 6 represents the highest level of professional closure; secondly, the respective index score reflects the number of restrictions that are applied and the relative importance of those restrictions; thirdly, the higher the respective index score, the more restrictive the regulation system for that profession.

social immobility of licensed professionals, come to light evidently. This study expects that the relevance of micro-class structuration for intergenerational reproduction at the top varies cross-nationally, reflecting differences between countries in the regulation of the relationship between education and the labour market, in the context of a specific welfare regime. The four countries selected for the comparative analyses are Sweden, Germany, Great Britain and Denmark, which are briefly discussed below.

The German educational system emphasizes occupational specificity to the highest degree. Access to occupations is tightly related to the possession of specific vocational certificates. This applies also to the liberal professions, which have a well-established tradition of professional associations that have managed to impose and preserve strict access regulations (starting with access to its selective university system).

At the opposite extreme, Sweden has a comprehensive educational system in which vocational training is under-developed. Industrial relations involve negotiations between centralized trade unions and employer federations, and even professionals have created a collective organization that represents them all centrally. For most professions, entry regulations are absent or comparatively weak.

Denmark and Great Britain may be seen as intermediate cases, between Germany and Sweden. Denmark has delayed tracking to the age of 16, but has a well-developed vocational system that involves more than 40% of upper secondary students. The British educational system is comprehensive until the age of 16, and vocational training is less developed than in Germany and Denmark. Professional regulation in Denmark and Great Britain is not as high as in Germany, but is definitively more structured than in Sweden.

To measure the degree of entry market regulation, the relevant index developed by the OECD can be used for the following professions: engineers, architects, accountants, lawyers, and pharmacists (Patterson et al. 2003). The index is based on the following indicators for each profession⁶: entry requirements, which include duration of university courses or of other higher

⁶ The compilation of the original indicators draws on multiple sources, including data provided by national statistical offices, questionnaires to professional bodies and national policy documents; *see* Patterson et al. (2003) for more details.

degrees needed to access the profession, duration of compulsory practice, number of professional exams, and number of entry routes to each profession; licensing, including the number of exclusive and shared tasks in each professional field; and the existence of quotas for each profession. The weights of these three dimensions in the overall index score are 40%, 40% and 20%, respectively. Hence, the OECD score reflects the number of access restrictions that are applied and the relative importance of these restrictions. The index ranges from 0 to 6, where 6 represent the highest level of regulation theoretically possible.

The OECD index has two potential limitations. First, it assumes without any empirical validation that different indicators of entry requirements pertain to a common underlying dimension and that therefore they can be summarized by a single summary score. Second, this score does not incorporate two indicators of entry requirements that have been used in previous analyses (Weeden 2002): voluntary certification and association representation. I have recovered these two indicators from Patterson et al. (2003) and I have carried out a factor analysis with these two additional indicators and the two indicators of entry requirements common to the index and to Weeden's analysis (educational credentialing and licensing). I have thus obtained a single dimension that displays a high Pearson correlation (0,78) with the overall index of professional closure. This suggests that the assumption that different indicators form a single dimension of entry requirements is empirically sound⁷.

The index developed by the OECD does not cover some professional groups for various reasons. First, it does not consider regulation in the so-called new professions (social workers, nurses, etc.). These occupations belong to the lower service class of the Erikson and Goldthorpe (1992) schema and are therefore not relevant for this analysis, which focuses on immobility in the higher service class encompassing the liberal professions.

Second, doctors are not covered by the index because it is well-established that this profession displays a high degree of regulation Europe-wide. Indeed, access to this profession always requires completion of long university courses that typically entail access restrictions and *numerus clausus*, as well as internship periods and additional certificates.

⁷ That means that the inclusion or exclusion of single indicators is not very consequential for results in the next empirical chapters of the thesis.

I have reconstructed the value of the regulation index for this occupational category in the selected countries using the same indicators and definitions employed by the OECD for the other professions. As regards licensing, doctors have the full monopoly on medical tasks in our four countries (Rowe and Garcia-Barbero 2005). Hence, their value for the number of exclusive tasks is always 2.4. In contrast, entry requirements vary cross-nationally. I exploit the following data sources to recover the values of the corresponding indicators: Faure et al. (1993), Garoupa (2006) and Rowe, Garcia-Barbero (2005). The third dimension (quotas) applies only to pharmacists and notaries (Patterson et al. 2003) and therefore takes a value of zero for doctors.

Finally, professions in the pure sciences (e.g., physicists) and in the social sciences (e.g., sociologists, communication experts) are not covered by the OECD index for the opposite reason; that is, legal regulation is virtually absent. For the analysis, I will impute to these two categories a value of zero, which I regard as an accurate approximation⁸.

As shown in Table 1.1., there are marked differences in the degree of regulation both between countries and between different professions within countries. For all professions but pharmacists, regulation is highest in Germany. Sweden consistently displays low values for all professions but pharmacists⁹, and Denmark and Great Britain lie in between these two extremes.

Table 1.1. The index of entry-market regulations by country and profession (1998)

	Engineers	Architects	Legal professionals	Accountants	Pharmacists*	Doctors
Denmark	0.0	0.4*	4.0	1.9	2.3	3.5
Germany	2.7	4.11	5.2	5.8	1.6	3.7
G. Britain	0.0	1.5*	2.5	4.1	2.7	3.4
Sweden	0.0	0.0	0.0*	2.4	6.0	3.5

Source: OECD sector indicators of regulatory conditions in professional services (see: product

⁸ There are some professions in these two categories that display some form of regulation, but these are minor exceptions. In particular, using the data provided by the European Commission (see ec.europa.eu/internal_market.htm), I have found that, in the category of unregulated professions in the social sciences, only psychologists have some form of regulation, but they account for less than 10% of this category (Bednar et al. 2004). As regards scientific unregulated professions, only actuaries in Great Britain and Denmark (2% of the scientific professions) and chemists in Great Britain (8%) display some form of regulation.

⁹ In Sweden, only pharmacies are allowed to sell medicinal products, and there is a state monopoly over pharmacies. In Germany, Great Britain and Denmark, retail shops are allowed to sell medicinal products. In Germany, the maximum number of community pharmacies is not fixed.

market regulation – service market at <http://stats.oecd.org/>)

*The closure index of pharmacists has been calculated by Patterson et al. in 2003.

Architects and engineers are the least regulated professions, while legal professionals, accountants and doctors are the most regulated groups. Following the arguments advanced in this section, professionals' regulation in Italy is taken into consideration, for which high level of professionals' micro-classes structuration and social immobility is expected due to the institutional assets, regulation level and previous research on social stratification.

1.3.2. Professionals closure strategies in Italy

Although there are no studies on micro-class reproduction and just little research with regards to professional groups (most of them concern a single profession) in Italy, there is a vast literature on social mobility in terms of big-classes that shows high levels of intergenerational and intra-generational social immobility (Breen 2004; Schizzerotto 2002; Barone and Schizzerotto 2011).

According to the closure index (referring again to the entry-market regulations), licensed professionals in Italy reach one of the highest level of professional regulations across European countries.

Table 1.2. Index of professional closure considering entry-market regulations in Italy

	Index of professional closure (entry-market regulations)					
	Engineers	Architects	Legal prof.	Accountants	Pharmacists	Doctors
(2013)	3.92	3.92	4.04	4.17	4.80*	4.26
(1998)	3.92	3.92	4.33	3.96	4.80*	4.26

Source: OECD organization's calculation

*The closure index of pharmacists has been calculated by Patterson et al. in 2003.

In Italy the main entry barriers to licensed professions include the attainment of a specific degree (for some professions, the first step is passing the university

entrance exams, as for Medicine and Architecture), specialization courses, professional training and state examinations¹⁰.

Table 1.3. Professions' entry barriers: professional associations' year of introduction, tertiary educational level, compulsory training and state examination.

Professional closure in Italy						
Professional association	Year of introd.	5 years degree	Uni. entr. test	Compul. practice	State examination	S. exam. pass rate (2010)
Accountant	2005	Yes*	No	3 years	Annual; 1 practical, 2 written, 1 oral test	Total 48% (100% Naples, 8% Venice)
Doctor	1946	Yes	Yes	3 months	Annual; 2 tests – 3 months practice	Total 98%
Pharmacist	1946	Yes	Yes	6 months	Annual; 1 written, 3 practical, 1 oral test	Total 97%
Veterinarian	1946	Yes	Yes	6 months	Annual; 3 oral and practical tests	N. a.
Lawyer	1933	Yes	No	2 years	Annual; 3 written, 1 oral test	Total 26%
Notary	1913	Yes	No	18 months	Irregular; 3 written, 1 oral test, limit age 50 – Rome	Total 6%
Architect	1923	Yes	Yes	6 months	Annual; 2 written, 1 practical, 1 oral test	Total 49%
Engineer	1923	Yes	No	6 months	Annual; 2 written, 1 practical, 1 oral test	N. a.

Source: Pellizzari and Orsini (2012), their elaboration of OECD regulatory conditions in the professional services.

* Regulatory condition on compulsory requirement recently changed.

After the attainment of the compulsory educational level, potential professionals need to attend a period of compulsory practice, required before taking the professional exam, necessary to be admitted in a licensed profession.

¹⁰ The closure index of entry market regulation for medical doctors has been calculated (following the methodology based on Patterson et al. in 2003) as previously explained for the other four European countries.

This training consists of on-the-job training under the supervision of a profession's member. At the end of the period, the apprentice usually receives a certificate of attendance (Pellizzari and Pica 2011). The main justification behind this requirement is that apprentices need to acquire practical job training before entering into a profession.

It is worth specifying that there are differences among professions and they can be quite large. For example, pharmacists and doctors need a compulsory training that lasts six and three months respectively. Other professions such as notaries or lawyers require two years of compulsory training, and accountants required a training period of three years. Moreover, for some professions this training period is part of the educational careers (e.g. for architects).

There are also specialization courses that characterize some professions, such as accountants. Moreover, notary schools offer a two year course, a voluntary and very expensive course, which is very successful in preparing potential notaries for the compulsory state's examination (Santoro 1998).

Before formally entering into a profession's register («Albo professionale»), applicants are required to pass a state examination in order to be qualified to practice the said profession and become a full member of it.

For most of the Italian licensed professions, the state examination takes place simultaneously once a year, except for notaries (it is irregular, most of the times every two years).

Another difference among professions with regards to how many candidates successfully pass the state examination: the lowest rate of successful candidates was observed with regards to notary profession and medical doctors recorded the highest successful rate (Orsini and Pellizzari 2012).

After obtaining the license, professionals have to respect a code of conduct and for some professions there are also other quantitative constraints (Orsini and Pellizzari 2012). Indeed, pharmacy and notary professions are subject to quantitative entry restrictions based on demographic or geographic criteria. For notaries, in particular, the maximum number of notary seats («Sedi notarili») is fixed by the law, and the total number of notary positions depends on population, level of economic activity and size of the geographical area where notaries can operate (Tousijn 1979, Santoro 1998). The law also imposes strict quantitative

restrictions on the number of pharmacies; even their location is highly regulated (Pellizzari and Pica 2011).

In Italy, licensed professions are subject to a public regulation concerning professionals' behaviour. Professionals are organized into associations (called «Ordini professionali»), which are officially recognized by public bodies and are governed by a self-regulated authority. Membership in professional associations is compulsory for all qualified professionals. Professional associations are in charge of implementing existing rules and elaborating new regulations, often to be subsequently endorsed by public authorities. All associations enforce codes of conduct («Codice deontologico»), formally to ensure standards of competence and accountability of their members. Codes of conduct typically include several restrictions on the economic conduct of members of a profession and also regulate disciplinary procedures, such as the price setting of the professional services. The regulation of members' behaviour specifically concerns: restrictions on price setting, limitations on advertising and competition.

Table 1.4. Professional associations' recommendations contained in code of conducts: fee schedule, advertising, internal competition and quantitative restrictions

Professional conduct regulations in Italy				
Professional association	Fee schedule ("tariffario")	Advertising regulation	Competition between colleagues	Compulsory practice
Accountant	Yes	Yes*	Yes (generic)	No
Doctor	Yes	Yes*	Yes	No
Pharmacist	Yes	No	Yes	Yes**
Veterinarian	Yes	Yes	Yes	No
Lawyer	Yes	Yes*	Yes	No
Notary	Yes	Yes*	Yes	Yes**
Architect	Yes	No	Yes (generic)	No
Engineer	Yes	No	Yes (generic)	No

Source: Pellizzari and Orsini (2012), codes of conduct of licensed professions.

* With reference to the decorum principle: decency («buon gusto»), sobriety, decorum («decoro»)

** For the Italian law there is a notary seat for 7000 inhabitants and a minimum annual income of the notary of 50.000 Euros. The law also fixed a ratio of 3.300 inhabitants for a pharmacy; moreover, the distance between two pharmacies cannot be less than 200 meters.

Professional associations consider price competition unethical, justifying their impositions to the public with the necessity to maintain high quality services and to protect consumers from inadequate performance. Even after the Bersani reform

of 2006 and the Monti law of 2011 (called «Pacchetto Salva Italia») that abolished minimum prices of professional services, codes of conduct of licensed professions still have standard fee schedules («Tariffario»), suggested to all the members of the professions¹¹.

A similar situation can be found in the advertising regulation, which typically aims to limit commercial purpose, also abolished in the Bersani reform of 2006. Nevertheless, professional associations did not entirely apply this reform. More specifically, «professional associations opposed to the reform by interpreting it in a restrictive way» (Pellizzari and Pica 2011, p. 26). Moreover, most of these codes of conduct include different kinds of generic recommendations that limit the competition among members of a profession. This competition is judged by professional associations as unfair behaviour¹².

All these limitations of the competition can generate higher level of licensed professionals' career stability, especially for those operating as self-employed professionals¹³. When actors (such as professional associations) create artificial monopolies over the supply of an asset, thereby «increasing the returns on the asset over what it would have generated in the absence of a monopoly» (Sørensen 2000, p. 23), they also provide a higher propensity of remaining in a specific service-market permanently.

The high level of licensed professionals' social reproduction, as well as their high level of career stability can be associated with entry barriers and behavioural rules imposed by professional associations. These regulations, indeed, penalize newcomers who need to create their own clients portfolio and advantage professionals (definable as insiders) who have been practicing the profession for a long time.

11 Indeed, the OECD's index on conduct-market regulations in 2013, formally based on the legislation, Italy presents low scores of conduct regulations for every licensed profession.

12 For example, many professionals, such as psychologists, lawyers and notaries cannot steal clients from their colleagues, because it is judged as an unfair public behaviour by their professional associations («divieto di accaparramento clientela»).

13 The implementation of liberalization policies takes place in several European countries. Indeed, these legal changes can be interpreted both as country specific and as part of the European Union homogenization process.

1.4. Decision making processes: combining theories

Going into detail of the micro-level theories, we can obtain precious suggestions on individuals' decision-making. If the macro-level theories reported above help us to understand to what extent children of professionals decide to become professionals as well, here it is necessary to provide theories that see individuals deciding from different points of view. To be clear a child of a professional can rationally decide to follow in his or her parent's footsteps but she or he can also be pushed from behind. Then, theories about the transmission of cultural capital and other resources have to be considered. Indeed, the literature on educational and occupational inequalities often recurs to a micro-level explanation, namely rational choice theory, to interpret individual choices (Boudon 1974; Gambetta 1987). According to this model, individual choices are determined by a cost-benefit comparison, such as the probability of success for educational alternatives or advantages in operating on a specific sector of the market, which for licensed professionals is often characterized by limited competition.

Furthermore, it is also useful to borrow Breen and Goldthorpe's (1997) model of Relative Risk Aversion (RRA), a rational action theory of inequality in educational opportunity, based on Boudon's (1974) work. This theoretical model, has received significant attention in the recent literature (Breen and Goldthorpe 1997; Becker 2003; van de Werfhorst and Andersen 2005; Breen and Yaish 2006).

The central argument in the RRA theory is that educational choices reflect the individual's desire to preserve the social status of the family over generations and to avoid downward social mobility. In this case, children of professionals act in order to maximize the probability of maintaining intergenerational status quo (understood as an equal standing social position).

According to the RRA model, education is an instrument with which individuals attempt to maximize the probability of entry into at least the same social class position as that of their parents. Accordingly, inequalities in educational attainment persist even when higher education is formally available to

everyone, because members of different social classes require different levels of education to avoid downward social mobility.

Thus, children of professionals need higher levels of education than children who belong to lower social classes. Moreover, it can be supposed that children of licensed professionals enroll more in the academic track at the upper secondary level to gain an advantage for the university career, while children of the other social classes more often choose differently (Pannichella and Triventi 2014).

The RRA theory links inequalities in educational and positional outcomes to the status-preserving strategies used by members of different social classes. This assertion seems to be more suitable for the higher classes than the lower ones. Indeed, this is linked to professions entry barriers which are able to discourage individuals from every social class and with a different socioeconomic background from entering into a regulated profession.

However, the rational choice model has also some limitations in explaining the development of aspirations, motivations and ambitions to become a professional (Barone 2012). This is because of the cultural capital transmission. Indeed, children of lower social origins, and consequently with a lower cultural background, need to be more ambitious than children of professionals, to continue schooling at, particularly higher, educational transitions.

Nonetheless, variations in educational aspirations across social classes are then hypothesized to be reducible to differences in economic resources and opportunities. In this respect, the RRA approach disregards cultural reproduction theory suggesting that intrinsic social class differences in norms, values, and cultural capital constitute an important source of intergenerational educational inequality (Bourdieu and Passeron 1977).

In order to circumvent this limitation, this study also consider social class differences in norms and cultural capital, starting by the consideration of the cultural capital reproduction (Bourdieu and Passeron 1977) and then going into details of micro-classes reproduction in terms of various kinds of capital, such as social or cultural ones.

As already asserted in addressing the question of why the children of professionals more likely become professionals themselves, the RRA model is not enough; indeed, the reference to the resources available to the children can be better understood by taking an approach in which constraints can channel their

behaviour to different extents (Gambetta 1967, Bourdieu and Passeron 1979). Thus, for children of professionals there is a certain socialization at home which makes it plausible that among educational and professional options they likely consider becoming a licensed professional.

According to Bourdieu's (1984) social reproduction theory, education plays a central role in the reproduction of social inequality and social exclusion. Cultural reproduction refers to the tendency of parents who transmit tastes, values, and orientations that make their children want to hold the same class or occupation as their parents (Bourdieu 1979, 1984, Bourdieu and Passeron 1977).

Thus, cultural capital plays a central role in class transmission and inequalities in cultural capital reflect inequalities in social classes. Focusing on licensed professionals' social reproduction, a basic argument is that professionals' families transmit specific resources, cultures and abilities that pay off in specific professional positions (Weeden and Grusky 2005). The importance of such abilities are presumably stressed by parents that frequently discuss newspapers and written texts at home, providing hands-on instruction in writing (Weeden and Grusky 2001). A similar discussion can be made about the ability to make abstract argumentations and critical debates on various topics (Grusky 2005). But before going into details of cultural reproduction of professionals in terms of micro-classes it is needed to point out that this transmission of different resource also occurs at big- and meso- levels with different characteristics. In other word, transmission of resources can pay off in professional positions or in the upper class position. Indeed, professional families also transmit abilities, such as writing or verbal skills that are useful in many professional occupations (meso-class level).

Generally, children of professionals are also exposed to an abstract cultural capital that lead them to develop abilities in line with that big-class. This is referred to a wide-class culture with which children of professionals are prepared to upper class destinations – big-class level (Erikson and Jonsson 1996, Goldthorpe 1998, Jonsson et al. 2009).

However, according to Jonsson et. al (2009) for professionals social reproduction it is not enough the transmission of abstract skills (e.g. cognitive skills), abstract culture (e.g. culture of critical discourse), class-wide networks or economic resources (as liquid resource) which are typical of big-class

reproduction. Indeed, children growing up in professional families are also exposed to specific professional culture and tastes, including for example aspirations to become a doctor, a point that is clearly missing in the RRA. Moreover, professional networks that may have a similar effect on their aspirations. Simply because they come in frequent contact with other professional families, they will learn about the world of professions and tend to orient themselves to that world (Jonsson et. al 2009). Of course, the more the profession is structured, as a law firm, the more the social networks facilitate micro-class social reproduction.

Furthermore, these social advantages can be exploited by children of professionals because they have the economic resources that make it easier to secure professional credentials or positions. Indeed, Jonsson et. al (2009) assert that this transmission also concern fixed economic resources, such a law firm. Along with the discussion, the transmission from parents to children of concrete occupation-specific cultures and skills that lead to micro-class social reproduction (Grusky 2005). For example, engineers may bring home toys of building constructions, architects can focus on drawing parks or houses with their children, and so on. In other words, specific profession commitments of parents can affect children in a more specific way (micro-level transmission of capitals).

The cultural reproduction of micro-classes is widely discussed also in Bourdieu (1979) even if the author does not properly refers to micro-classes. But the *Distinction* of Bourdieu (1979) gives a major contribution to current debates on the theory of culture transmitted between social classes and micro-classes; it can also be interpreted as one of former challenge to the major theoretical schools in contemporary sociology, specifically in contemporary social stratification studies on social class reproduction from a cultural point of view.

Professional cultures at micro-level are created under specific conditions of closure and training. Indeed, the main conditions under which such cultures are formed and maintained are: a training regime that inculcates a set of values and way of life, that reminds Bourdieu's concept of habitus, and some closure processes that ensure professional members interact principally with one another, protecting their social environment against outsiders' influences and values (Bourdieu and Passeron 1979; Bourdieu 1984; Grusky 2005). These two conditions are more reliable within detailed professions than big-classes. Lawyers,

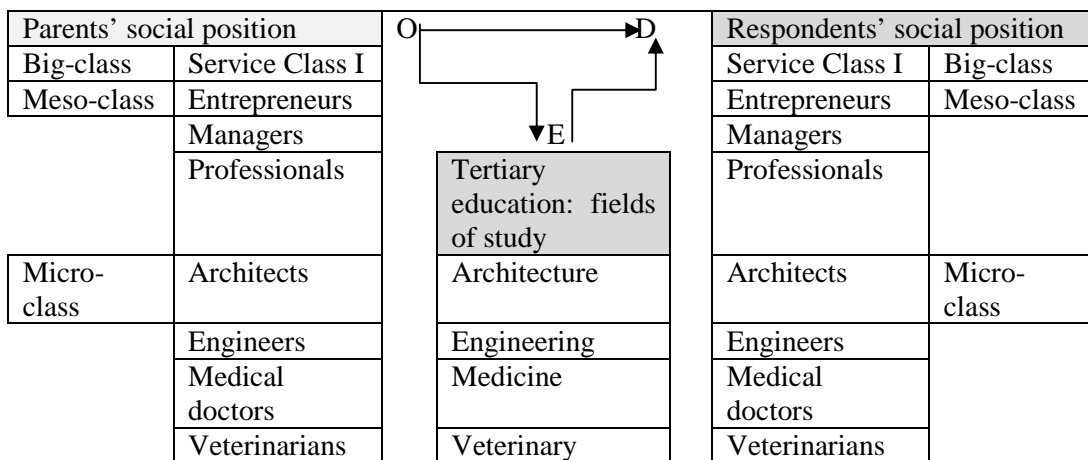
for example, undergo intensive training within law school and interact frequently with one another in a relatively closed workplace (e.g., the closure condition), thus creating and sustaining a specific professional culture (Jonsson et. al 2009).

These professional cultures do not affect just tastes, preferences, aspirations of children of professionals, but also their perceptions of professions desirability; and again these factors tend to improve the level of their micro-class reproduction (see Bourdieu and Passeron 1979).

Finally, these mechanisms that act at different analytical level are investigated empirically in next chapters, and next paragraphs go into details of the analytical and empirical strategies linking this theoretical framework with the empirical analyses.

1.5. The ‘Origin - Education – Destination’ association from a big-class to a micro-class perspective: previous research

Comparing four European countries and then focusing on the Italian case, the Origin-Education-Destination triangle will be employed as a starting point to be declined following the micro-class perspective (Blau and Duncan 1967, Treiman 1970; Erikson and Goldthorpe 1992, Breen 2004; Jonsson et al. 2009). The main step in understanding the empirical strategy of the next three chapters (in studying the social reproduction of licensed professionals) can be graphically illustrated as Figure 1.1. below.



Pharmacists	Pharmaceutical science	Pharmacists
Legal professionals	Law	Legal professionals
Accountants	Economics	Accountants
Non-licensed professionals	Other fields	Non-licensed professionals

Figure 1.1. Origin - Education – Destination of licensed professionals of the higher service class: from a big to a micro-class perspective

Figure 1.1. illustrates that the OED triangle in the case of licensed professionals is highly structured. For example, to become architects individuals have to graduate in architecture and they can also be facilitated if they have an architect as a parent. In this case architects' children are provided with professional cultural and social capital, and architectural skills and aspirations.

Moreover, some authors have focused on social reproduction of micro-classes in a comparative perspective, but have disregarded licensed professions and the level of their regulations. Jonsson et. al (2009) have compared four countries with different big-class and micro-class structures. In this study 82 micro-classes were used and it shows that a micro-class reproduction exists, even if at a comparatively low level, and even in countries such as Sweden in which the micro-classes social reproduction would have been suppressed.

The first aim of this thesis is to fill the lack of studies in the social mobility's literature concerning licensing professionals' social reproduction in a comparative perspective and for the Italian case.

Furthermore, in Italy as well, the literature on social mobility often focuses on the relationship between social origins, education, and destinations (OED) using a big-class approach (Fabbri and Rossi 1997, Barbagli and Schizzerotto 1997, Pellizzari and Pica 2011; Pellizzari and Orsini 2012); and research on the Italian licensed professions mainly focuses on the anticompetitive effect of licensure (Timmons and Thornton 2008, 2010; Pagliero 2010; Pellizzari and Pica 2011).

Some of the studies on the intergenerational mobility of professionals as a meso-class have been implemented within more general analyses of the Italian higher social classes (Fabbri and Rossi 1997, Barbagli and Schizzerotto 1997, Chiesi 1998), whereas other studies focus on a specific professional group, such

as notaries (Santoro 1998), architects and engineers (Checchi 2010, Tousijn 1987), and lawyers (Pica and Pellizzari 2011, Tousijn 1987).

Some of these studies (Tousijn 1987; Fabbri and Rossi 1997; Chiesi 2008; Orsini and Pellizzari 2012;) show a high level of intergenerational immobility for the high professional social class, underlining the effect of social origins on the chances of becoming a member of a licensed profession (Santoro 1998; Checchi 2010; Pellizzari and Pica 2011).

The purpose of this thesis is also to improve the understanding of professionals' social reproduction in Italy focusing on both educational and professional careers of children of licensed professionals.

Even if the social mobility literature is vast, studies on educational and occupational inequalities are needed in specifying these inequalities at the horizontal level. In other words, I focus on educational fields of study and micro-classes of licensed professionals, differentiating the big-class of professionals as shown in Figure 1.1. In this way it is possible to highlight how horizontal micro-processes of social reproduction affect social inequalities in a vertical dimension. Moreover, most of the studies on intergenerational mobility of liberal professionals (self-employed professionals) in Italy have shown high rigidities in their mobility regime (Schizzerotto 1993, 1994, Fabbri and Rossi 1997).

However, no studies have focused on micro-classes of liberal professionals. Thus, to improve the understanding of this topic, it is useful to compare the social reproduction of liberal professionals and employed professionals within a micro-class and between micro-classes.

The next paragraph helps the reader to connect the theoretical framework with the three empirical chapters through the elaboration of the general hypotheses.

1.6. General hypotheses

According to the theoretical framework illustrated above, three main hypotheses which delineate three empirical chapters of the thesis are specified¹⁴.

The study of Jonsson et al. (2009) can be used as a starting point, because using Germany and Sweden as the two ideal-types of countries with high and low micro-classes structure it allows: to consider other two countries that, in terms of micro-class structures, can be placed in the middle of these two poles; to compare professionals' social reproduction according to the level of closure of professions between the four countries and between professions in each country.

Figure 1.2. Professional closure and micro-class structuration in four European countries.

<i>Intergenerational transmission of specific occupational skills</i>			
High			Low
Germany	Denmark	Great Britain	Sweden
<i>Professional closure</i>			
High			Low
Germany	Great Britain	Denmark	Sweden
<i>Vocational and stratified educational system</i>			
High			Low
Germany	Denmark	Great Britain	Sweden

Thus, Germany can be considered as the country in which both big-classes and micro-classes are well structured and in which professional closure is very high. In Denmark this vocational tradition is well established too and the age selection of 16 has recently been established, thus it is difficult to expect weaker processes of intergenerational professional skill transmission. In Great Britain the educational system is comprehensive, as well as Sweden. A strong vocational system and the level of stratification of educational systems in these countries can assure the persistence of a resources transmission model which can establish micro-classes within big-classes.

Professional closure in both Great Britain and in Denmark is lower, than Germany¹⁵. On the contrary, in Sweden the micro-class structure is suppressed as

¹⁴ The three main hypotheses will be specified into details in each chapter of the thesis.

suggested by the industrial relations system and its more comprehensive educational system. Also the level of professional entry-market regulations is lower than the other countries. Of course, the presence of a vocational or a more comprehensive educational system, professional regulation and social stratification are linked to different welfare regime: from the social democratic model of Sweden and Denmark to liberal of Great Britain and to the conservative of Germany (*see* Esping-Andersen 1990). Along with these dimensions, professional regulations and the specific professionals skills transmission that implies the micro-class structure, the main hypothesis of chapter 2 follows:

Hypothesis 1: *the more structured the micro-classes and the higher the professional closure, the stronger is the social reproduction of licensed professionals between countries and between professional groups within a country.*

Analyzing the OED association in the four countries, with specific attention to micro-classes of licensed professionals, would reveal higher rigidities in the mobility regime of these professional groups according to their level of legal closure¹⁶.

Thus, according to the two dimensions concerning the micro-class reproduction and professionals regulations, I expect Italy to be considered with a high immobility rigidities that it goes beyond the comprehensive educational system. The formal selection concerning the educational choices it is about the field of study at tertiary level. In order to specify the hypotheses about the social reproduction of licensed professionals in Italy, I consider how their educational careers differ from those of other higher social classes. In following the parent's occupational careers, children of licensed professionals need to obtain higher educational credentials than children of high entrepreneurs and high managers, because of the entry barriers of licensed professions.

Moreover, according to the theory of specific cultural capital reproduction, I expect that children of licensed professionals are more likely to graduate in the same field of study as their parents than the children of every other social class.

15 Indeed, the strong vocational tradition of the educational system and the early age selection can increase the transmission from parents to children of specific professional skills.

16 All this is done using the other fractions of the High Service class as reference categories (High entrepreneurs, High managers, other low regulated professions).

Given their advantages in terms of cultural, economic and social capital, professionals' children are more likely to follow the same professional trajectory as their parents. According to the previous paragraphs, specific educational choices can be rationally made as well as culturally guided, in as much as professionals' children are pushed from behind by structural factors.

According to the relative risk aversion model, licensed professionals' children try to avoid downwards social mobility. Thus, it can be hypothesized that in terms of big-classes, they try to remain in the higher service class, by exploiting the extra advantages in terms of economic, social, and cultural resources provided by their families (which pay off at wider level).

Then, getting in depth of micro-dynamics of the social reproduction, they can also try to benefit from the advantages related to licensed professions, such as operating in a market with limited competition or inheriting the existing professional activity of the parent. Thus, dynamics of intergenerational professional social reproduction needs to be analyzed at both big-class and micro-class levels.

According to social closure theory the entry barriers of licensed professions, such as credentials and certifications, the arduousness in becoming a licensed professional varies from a profession to another depending on the restrictiveness of their regulation. They also gain advantages from high level of regulation during their professional career, such as code of conduct which in turn are able to decrease the level of the internal competition.

Thus, it is expected that the effect of having a licensed professional father varies the propensity in becoming a full member of a profession according to the restrictiveness of the entry barriers (legal closure).

Then, considering the intergenerational social reproduction of licensed professionals, liberal professionals (self-employed professionals) and employed professionals also differ within each micro-class. According to Pellizzari and Orsini (2012), indeed, the opportunity to enter into the professional market within an existing activity is a great advantage that professionals' children are inclined to exploit. In addition also conduct regulation improves licensed professionals career stability.

The hypothesis 2 regards chapter 3 in which the social reproduction and the intra-generational immobility of Italian male professionals are analysed; while with a sample of graduates, hypothesis 3 concerns chapter 4.

Hypothesis 2: Children of licensed professionals are more likely to obtain a social position in the high service class by following the same professional trajectory as their parents; and the higher the regulation level during professionals' career the higher is their intra-generational immobility of these professionals.

Hypothesis 3: Children of licensed professionals are more likely to have a master degree in the same field of study as their parents than other fractions of the upper class; professionals' daughters obtain the same educational credentials and social position as their parents as professionals sons. These processes are exacerbated when the professional parent is self-employed for both sons and daughters.

1.7. Concluding remarks

A combination of theories and social class approaches has been considered in this chapter as an appropriate way to focus on licensed professionals' social reproduction. Specifically, this chapter has illustrated the guide line of this thesis for the investigation of these occupational groups social reproduction, linking it to their social closure strategies. Indeed, it has been shown how these prestigious professional categories differentiate themselves from all the other fractions of the higher class, including non-licensed professionals.

The connection between micro-dynamics of intergenerational transmission of specific occupational skills and the level of institutionalization of professional groups was discussed as a central point in the investigation of the mobility regime of these highly regulated professionals. Indeed, taking into consideration fractions of the higher service class (including licensed professionals and unlicensed professionals) it is possible to understand how structural forms of social closure are able to produce high levels of social inequalities.

Of course, it has pointed out that intergenerational mobility of the upper class and professionals is studied in next chapters at macro-, meso and micro-level

because of the different mechanisms of each level, such as more or less abstract culture transmission.

Moreover, according to Jonsson et. al (2009) social closure conditions are found at micro-level as well as for the legal closure of licensed professionals.

This chapter, thus, is the theoretically framework for the other three empirical chapters of this thesis, as also pointed out by the three general hypotheses: firstly, comparing licensed professionals' social reproduction across four European countries (Sweden, Great Britain, Denmark and Germany) according to the Origin-Education-Destination association; secondly, going into details of their social reproduction in Italy by using a sample representative of the men and thirdly by using another large sample representative of the Italian graduates with which I conclude in a more complete way the empirical analysis of these professionals. The reason why this study gives more space to Italy, rather than staying on cross-national comparison is because, although literature on social mobility in Italy is vast, no specific attention has been given to these professionals groups, especially employing a micro-class approach. Thus, to be specific, this thesis pays much attention to the educational career of professionals' children in Italy, considering the graduation in a field of study as the first step to become a licensed professional, and finally, focusing on social stratification through an horizontal perspective and the related social inequalities considering the beginning of professionals occupational careers.

2. Social closure, micro-class immobility and the intergenerational reproduction of the upper class: a comparative study

2.1. Introduction

This chapter provides a twofold contribution to the debate encouraged by big-class and micro-class theorists on how social mobility should be studied. It assesses how social closure affects intergenerational immobility in professional employment across four European countries: Great Britain, Germany, Denmark and Sweden. Indeed, it follows the analytical and empirical strategies explained in the introduction and in the theoretical framework (chapter one).

It documents that children of professionals display a strong propensity to reproduce the specific micro-class of their parents. However, when they do not follow in their parents' footsteps, as is often the case, they also display a particularly high propensity to move into other professional occupations (meso-class rigidities), rather than into the other fractions of the upper service class (managerial and entrepreneurial employment) or into lower classes.

Indeed, it argues that previous research has paid limited attention to meso-class rigidities: the intense exchanges occurring within professional employment are the key process of intergenerational reproduction at the top.

The chapter also asserts that the social reproduction of professionals notably differs across these countries and as explained in the theoretical chapter this is in line with their social openness and institutional arrangements. Degree of professional regulation also have significant implications for inequality of occupational opportunity.

The structure of this chapter is the following: I derive the hypotheses after a briefly theoretical debate (paragraph 2.2.) and then I describe data, variable and methods employed in the analysis (paragraph 2.3.); results section is composed by three main parts, starting with the analysis of the contribution of the micro-class intergenerational immobility to those of the meso-, and big-classes (paragraph 2.4.); then I concentrate the attention on the association between professionals' micro-classes immobility and their specific level of professional regulation (paragraph 2.5.); before concluding, I study the Origin-Education association by using fields of study and fathers' profession (paragraph 2.6.).

2.2. Deriving the hypotheses

As mentioned in the first chapter, if regulated professions are particularly rewarding, they enhance the incentives for children from these professions to follow in their parents' footsteps. This mechanism is reinforced considerably if professional parents can transfer a family professional business to their children and, most importantly, a client portfolio.

Moreover, stringent entry restrictions in the form of long university courses, compulsory practice and selective entry exams make the investment in training for these professions both extremely costly and risky for outsiders.

I expect that the relevance of micro-class structuration for intergenerational reproduction at the top varies cross-nationally, reflecting differences between countries in their institutional arrangements concerning their welfare state. Indeed, as reported in the theoretical framework, also the choice of these four European countries was made because of the institutional variety. Nonetheless, the emphasis that the first chapter put on educational systems characteristics is needed because education is the starting point to delineate if access to occupations is related or not to the possession of specific vocational certificates. By using the German educational system as example the reader can better understand this argumentation. Indeed, in Germany the educational system accentuates occupational specificity to the highest degree. Access to occupations is tightly related to the possession of specific vocational certificates. This applies also to the liberal professions, which have a well-established tradition of professional associations that have managed to impose and preserve strict access regulations - starting with access to its selective university system (Patterson et. al 2003; Jonsson et. al 2009).

At the opposite extreme, Sweden has a comprehensive educational system in which vocational training is under-developed. Industrial relations involve negotiations between centralized trade unions and employer federations, and even professionals have created a collective organization that represents them all centrally. For most professions, entry regulations are absent or comparatively weak (Patterson et. al 2003).

Denmark and Great Britain may be seen as intermediate cases, between Germany and Sweden. Denmark has delayed tracking to the age of 16, but has a

well-developed vocational system. Consequently also access to occupations with vocational certificate characterizes this country, indeed, there is a well developed system of professional licenses. For these characteristics I can expect that Denmark it is more similar to Germany. Whereas the British educational system is comprehensive until the age of 16, and vocational training is less developed than in Germany and Denmark (Breen 2004). Professional regulation Great Britain is not as high as in Germany, but is definitively more structured than in Sweden in terms of professionals regulation (Jonsson et. al 2009).

At the same time, these entry barriers enhance the competitive value of the skills and cultural resources acquired in the family of origin and of the social and information resources to successfully navigate these professional careers. Hence, I can expect that micro-class immobility is higher for regulated professions than for non-regulated professions and that the former, therefore, displays a higher degree of immobility in the higher service class. I also can expect a higher degree of professional social immobility in countries like Germany and Denmark than Great Britain and Sweden.

However, micro-class immobility is not the sole mechanism of social immobility at the top of the class hierarchy. Alternative routes to immobility at the top become of critical importance. Indeed Jonsson et al. (2009, pp.980) note that the four types of professionals family resources (cultural, cognitive, economic and network, see. paragraph. 1.4.) can also operate on a broader basis, that is, for the entire meso-class of professionals. More generally, there is abundant evidence that professionals as a whole differ from managers and entrepreneurs in terms of value orientations, political attitudes and lifestyles (Dalton and Klingemann 2007; Lambert and Griffiths 2011).

Finally, the cultural, social, cognitive and economic resources can act also as a generalized means of intergenerational reproduction for individuals who cross the boundaries of their micro- and meso-classes of origin. This is the standard explanatory approach taken in social stratification research. For instance, children of professionals may enjoy higher chances of access to managerial employment (and vice versa) than the lower classes because they are endowed with higher cognitive skills, cultural resources and financial resources to support their educational and occupational careers.

This kind of explanation focuses on the *amount* of resources relevant for a *broad* range of occupations, while the micro-class approach focuses on occupation-specific resources that are valued in a narrow set of occupations. These latter occupations specific resources ensure strong competitive advantages, but only if children are willing to follow in their parents' footsteps.

Meso-class rigidities arise due to resources that are qualitatively differentiated but relevant in a broader set of occupations. Hence, rather than engaging in a contest between micro- and big-class approaches, I see three distinct sets of mechanisms that work as complementary routes to social immobility.

As shown in the theoretical chapter, Germany and Sweden can be seen as the two ideal-types of countries with high and low micro-classes structure and Great Britain and Denmark are in between.

Analyzing the Origin-Destination association in the four countries, with specific attention to micro-classes of licensed professionals, would reveal higher rigidities in the mobility regime of these professional groups according to their level of legal closure¹⁷.

Following the arguments advanced in this section and previously in the theoretical chapter, I expect that micro-class immobility varies accordingly across countries and across occupations.

Before presenting data and methods in the next section, I summarize the hypotheses that guide this chapter's analyses as reported below:

Hypothesis 2.1. *micro-class immobility is stronger in more regulated professions;*

Hypothesis 2.2. *micro-class immobility is strongest in Germany and weakest in Sweden;*

Hypothesis 2.3. *professional regulation enhances the immobility of children of professionals in the higher service class;*

Hypothesis 2.4. *among children of professionals who leave their micro-classes of origin, immobility in the higher service class is further enhanced by strong meso-class rigidities.*

17 All this is done using the other fractions of the high service class as reference categories (high entrepreneurs, high managers, other low regulated professions).

Hypothesis 2.5. *micro-class immobility for more regulated professions is visible since children of professionals graduate in a field of study in line with the domain of parents' profession;*

Hypothesis 2.6. *sons and daughters are both more likely to graduate in a field of study in affinity with their fathers' profession than children of the other social classes;*

2.3. Data, variables and methods

For the analyses, a cumulative dataset that pools three international surveys is used: the European Social Survey (five waves every other year from 2002 to 2010), the European Value Study (wave 2008) and the International Social Survey Programme (wave 2009). These surveys involve nationally representative samples of the populations of a large number of European countries¹⁸.

A cumulative dataset is relied upon in order to enlarge sample size for the detailed analyses of immobility within single occupations, and the only four countries that have large enough samples to run these analyses are selected. Although country selection is driven by data constraints, I have already noted that these countries display substantial variability in terms of educational, labor market and welfare arrangements.

These surveys and these specific waves have been selected because they provide detailed measurements of origins and destinations, with four-digit ISCO titles for the occupation of the father¹⁹ (when the respondent was 14) and of the respondent, as well as information on employment status and supervision tasks that can be used to build the Erikson-Goldthorpe class schema.

Unfortunately, not all surveys have information on mother's employment, a limitation that could be particularly harmful for the analysis of women's occupational attainment.

18 I do not report the information on the sampling designs and data collection methods, as they vary across surveys, waves and countries. However, this information is easily accessible online. In particular, for the ESS refer to <http://www.europeansocialsurvey.org/methodology/>; for EVS, see <http://www.europeanvaluesstudy.eu/>; and for ISSP, see <http://zcat.gesis.org>.

19 The issue of only measuring father's occupation, though standard, still warrants some discussion of the limitations for the analysis, especially for daughters. Daughters may well be micro-class-reproducing their mothers' occupations, but I have no way to know; sons may be as well, in which case both the rates and the patterns of micro-class reproduction would be very much underestimated in this paper.

The wording of the questions concerning social origins and occupational destinations is highly comparable across the three original surveys. Therefore, an additional advantage offered by this cumulative dataset over previous cross-national studies of macro- and micro-class mobility is the higher level of comparability.

In preliminary analyses, logistic regression models were used to assess whether the different surveys measure the influence of origins on access to higher service class positions differentially, but these three-way interactions are not statistically significant based on a likelihood ratio test²⁰.

Due to sample size constraints, analysis of the adult population is carried out as a whole. However, I have checked that social inequalities in access to the service class are highly stable across three birth cohorts (1930-45, 1946-60; 1961-80).²¹

After selecting respondents aged 25 to 74, the cumulative sample for these four countries comprises 35,443 cases with valid information for origins and destinations²². The following version of the Erikson-Goldthorpe schema is used: higher service class (I), lower service class (II), skilled white collar (IIIa), routine non-manual workers (IIIb), self-employed workers (IVab), farmers (IVc), skilled manual workers, low-level supervisors and technicians (V-VI), and unskilled manual workers (VIIab). The higher service class is articulated into three meso-classes: entrepreneurs (with at least 10 employees), high-level managers and high-level professionals. The latter category is further disaggregated into the following micro-classes using the four-digit ISCO titles:

- legal professionals (i.e., lawyers, notaries and judges);
- accountants;
- architects;

20 See Appendix A Section 6

21 In Germany and Great Britain, the likelihood ratio test prefers models of constant association over models incorporating the interactions among cohorts, origins and destinations. The former are marginally preferred (p-value: 0.12) also in Sweden, and only in Denmark do the latter display a better fit. Even in Denmark and Sweden cross-cohort variations in the role of origin for access to the upper class are quite limited. Therefore, aggregating cohorts does not make too much torture to the data.

22 I include people aged 65-74 in order to gain statistical power by enlarging the number of valid cases. I take into consideration these people (even if it is unusual for a study of social mobility) because the main purpose of this chapter is linking professional entry-market regulation, which is practically unchanged since the first half of the nineteenth century, with levels of intergenerational immobility of licensed professionals. A control analysis on a restrictive sample has been conducted to be sure that including people these age are not affected the estimates.

- engineers;
- medical science professionals (i.e., doctors, pharmacists and veterinarians);
- other science professionals (e.g., physicists, mathematicians, biologists);
- professionals in the social sciences (e.g., sociologists, communication experts)²³.

Hence, the first five categories refer to regulated professions of the higher service class, while the last two comprise the non-regulated professions of the same class. These distinctions match with the same occupational categories of the OECD index of professional regulation presented in section 1.4., with two minor exceptions²⁴.

The analytical strategy concerning levels of professionals' social immobility proceeds as already explained in the introduction.

Then, logistic regression analysis is used to assess whether professional regulation affects immobility in the higher service class. Moreover, binomial logistic regression is also used to analyze the most rewarding field of study, i.e., to have a propensity for being part of the higher service class.

Finally, linear regression models are employed for each field of study, and thus, by using a dichotomous variable to study the propensity in graduating in a field of study in line with the professional domain of the father. These models are run employing macro-, meso-, and micro-class approaches.

The first step involves the specification of a sequence of log-linear models that control the marginal distributions of origins and destinations in order to estimate relative immobility propensities. These models are specified in order to analyze the association Origin-Destination on the 16x16x2x4 cross-tabulation between origins, destinations, gender and country. The 16 categories of origins and destinations comprise the above seven micro-classes of professionals, the two other meso-classes of the higher service class (entrepreneurs and high-level

²³ See Appendix A –section 1.

²⁴ Ideally, we may want to differentiate the single detailed occupations of legal and medical science professionals, but there are not enough cases for this kind of analysis. These additional distinctions are of little significance for our results because: a) doctors account for about 90% of medical science professionals in all countries; b) lawyers account for at least 70% of legal professionals (and notaries exist only in Germany). We impute to these two professional groups the scores of the OECD index for their modal occupations (doctors and lawyers).

managers) and the remaining seven macro-classes (II, IIIa, IIIb, IVab, IVc, V-VI, VIIab). This nested structure, with greater detail at the top of the class hierarchy, was used because my research questions focus on immobility in the higher service class of children of professionals.

For the same reason, a sequence of log-linear models is specified pertaining to the diagonal cells of the mobility table, i.e., intergenerational immobility is modeled (*see* Xie 1992). These models incorporate macro-, meso- and micro-class rigidities alone and altogether. Macro-class rigidities are captured by a design matrix that specifies one different parameter for each cell that refers to immobility within a big-class; all mobility cells are set to 0 (see section 1 of the appendix A). Meso-class rigidities are expressed by a second matrix that specifies one different parameter for each cell that refers to immobility within a meso-class, i.e., either within entrepreneurs, within managers, or within professionals. Micro-class rigidities are described by a third matrix that specifies one different parameter for each cell that refers to immobility within each of the seven professional groups.

For each of these three matrices, cross-national variations are assessed using three types of models. The models are illustrated with reference to the macro-class specification. I start with a model of homogeneous quasi-perfect mobility that incorporates the macro-class rigidity matrix and that does not interact with country.

Hence, this model does not allow for cross-national variations in social fluidity. The next model of heterogeneous quasi-perfect mobility freely interacts with the country of each macro-rigidity parameter, thus allowing for different levels of macro-class immobility across countries in an unconstrained form. The third specification is a log-multiplicative model of quasi-perfect mobility that estimates a common basic pattern of immobility parameters for all countries and captures cross-national differences with one uniform association parameter (*unidiff*) per country that summarizes the overall strength of social immobility in a given country.

Hence, the comparison between models of homogeneous and heterogeneous quasi-perfect mobility informs us of the importance of country differences, and the comparison between the former and the log-multiplicative specification tells us whether country differences involve only the overall strength of immobility or its qualitative pattern as well. Following the same logic, these three types of

models can be used to assess cross-country variations in meso- and micro-class rigidities.

2.4. Results: the contribution of micro-, meso- and macro-class rigidities to immobility in the higher service class

Table 2.1. reports the fit indices of the above-described sequence of log-linear models. For comparisons among nested models, likelihood ratio tests (column 3) which contrast models in terms of their fit (expressed by the deviance in column 1) and parsimony (degrees of freedom in column 2) are used. The dissimilarity index (the percentage of cases misclassified by each model, column 4) can be used for comparisons among non-nested models, but it does not take parsimony into account.

The purpose of the first step of this analysis, reported in the upper panel A of table 2.1., is to assess whether macro-, meso- and micro-class rigidities display independent influences on social immobility in the higher service class and whether these influences vary cross-nationally. In a second step (panel B), I assess whether these mechanisms are gendered by interacting the corresponding design matrices with gender.

Table 2.1. *Fit indices of log-linear models of quasi perfect mobility with macro, meso and micro-class rigidities*

Model description	L ²	d. f.	Significance	Δ
PANEL A				
0.Conditional Independence Model	6677	1800	-	0.148
<i>Big-rigidities only</i>				
1a. Homogeneous	4407	1792	0,000 (M.0)	0,113
1b. Heterogeneous	4345	1768	0,000 (M.1a)	0,110
1c. Log-multiplicative	4379	1789	0,000 (M.1a)	0,111
<i>Big- and Meso-rigidities</i>				
2a. Homogeneous	4179	1789	0,000 (M.1a)	0,111
2b. Heterogeneous	4113	1756	0,001 (M.2a)	0,108
			0,000 (M.1b)	
2c Log-multiplicative	4146	1783	0,000 (M.2a)	0,109
			0,000(M.1c)	
<i>Big- and Micro-rigidities</i>				
3a. Homogeneous	4110	1785	0,000 (M.1a)	0,111
3b. Heterogeneous	4022	1740	0,001 (M.3a)	0,108
			0,000 (M.1b)	
3c. Log-multiplicative	4073	1779	0,000 (M.3a)	0,109
			0,000 (M.1c)	
<i>Big-, Meso- and Micro-rigidities</i>				
4a. Homogeneous	4005	1782	0,000 (M.2a)	0,110
			0,000 (M.3a)	
4b. Heterogeneous	3903	1728	0,001 (M.4a)	0,106
			0,000 (M.2b)	
			0,000 (M.3b)	
4c Log-multiplicative	3954	1773	0,000 (M.4a)	0,108
			0,000 (M.2c)	
			0,000 (M.3c)	
PANEL B: Big-, Meso- and Micro-rigidities with gender interactions				
<i>Models of heterogeneous quasi-perfect mobility</i>				
4dA Big-rigidities interacted with gender	3815	1696	0,000(M.4b)	0.103
4dB. Meso- rigidities with gender	3886	1716	0,000(M.4b)	0,106
4dC Micro- rigidities interacted with gender	3860	1700	0,000(M.4b)	0,106
4dD Big- and meso- rigidities interacted with gender	3798	1684	0,149 (M.4dA)	0,102
			0,000 (M.4dB)	
4dE. Big-, micro- rigidities interacted with gender	3770	1668	0,000 (M.4dA)	0,102
			0,000 (M.4dC)	
4dF Meso- and micro- rigidities interacted with gender	3837	1688	0,000 (M.4dB)	0,106
			0,000 (M.4dC)	
4dG. Big-, meso- and micro- rigidities interacted with gender	3748	1656	0,006 (M.4dD)	0,101
			0,037 (M.4dE)	
			0,000 (M.4dF)	

Source: ESS 2002-2010, EVS 2008, ISSP 2009

I start with a baseline model of conditional independence that unrealistically assumes that origins and destinations are unrelated²⁵. This model is used only as a yardstick for comparison with more realistic models. Models 1a to 1c add only macro-class rigidities to this model. As shown in table 2.1., they display huge improvements over the model of conditional independence, thus confirming the strength of social immobility in these four countries. For instance, model 1a adds eight macro-class immobility parameters that are kept constant across country and thus loses only eight degrees of freedom relative to the conditional independence model, but it reduces the deviance by more than one third. However, models 1b and 1c, which allow for cross-national variations in macro-class rigidities, improve on model 1a, as indicated by the likelihood ratio tests.

Models 2a to 2c add meso-class rigidities to macro-class rigidities, while models 3a to 3c add micro-class rigidities, and models 4a to 4c incorporate all three immobility mechanisms²⁶. If the homogeneous model specifications of these series of models are contrasted, I can see that model 4a is unequivocally preferred over models 3a and 3b, which in turn are preferred over model 1a. The comparisons among the heterogeneous specifications, or among the log-multiplicative specifications, lead to the same conclusion. In other words, this evidence indicates that immobility in the higher service class is jointly produced by micro-, meso- and macro-class rigidities, in line with my hypotheses. Hence, the immobility of children of professionals reflects not only standard macro-class effects but also their disproportionate chances of following in their parents' footsteps or, at any rate, remaining within professional employment²⁷.

Moreover, models 4b and 4c are preferred over model 4a, which indicates that these three rigidities vary cross-nationally. The corresponding comparisons among models 2a to 2c and among models 3a to 3c lead to the same conclusion. The heterogeneous specifications always display the best fit also when looking at the dissimilarity index. In other words, there are indications that the qualitative pattern of these rigidities is not always the same across nations.

25 See mobility table in Section 2 in the Appendix A. Mobility table are divided from gender and countries, thus the analyses can also be conducted separately.

26 See design matrixes in Section 3 of the Appendix A.

27 Similarly, children of managers (entrepreneurs) enjoy disproportionate chances of becoming managers (entrepreneurs) on top of their higher chances of persistence in the higher service class. In other words, meso-class rigidities operate also for the two other fractions of this class.

In figure 2.1. I plot for each country the immobility parameter that refers to (big-class) immobility in the higher service class across three heterogeneous model specifications. The first one incorporates only macro-class rigidities (model 1b) and therefore describes the overall level of immobility at the top.

As shown in table 2.1., immobility is particularly strong in Germany. The second column plots the same parameter, but purged by micro-class effects (model 3b)²⁸. I can see that it is significantly reduced in Germany and Denmark, but much less so in Sweden and Great Britain. The third column shows that immobility in the higher service class is greatly reduced when purged by meso-class rigidities (model 4b), particularly in Germany and Sweden. Hence, immobility within the professional class is a key driver of immobility at the top. Moreover, in all countries the immobility parameter purged by both meso- and micro-class rigidities is far from negligible, which indicates the strength of pure macro-class rigidities.

As a result of these parameters being taken from nonlinear models, the effect changes across models should not be over-interpreted. However, it is quite clear that these results disconfirm the general claim that 'big class' immobility is largely driven by micro-class rigidities. These micro-class rigidities play a relevant role, at least in Germany and Denmark, but meso-class and macro-class rigidities are more important. It may be noted that also in the analysis by Jonsson et al. (2009), the strong immobility of the liberal professions is not predominantly mediated by micro-class rigidities.

Interestingly, in the third specification, big-class effects are not any stronger in Germany, which indicates that the greater immobility at the top in Germany is entirely attributable to the stronger micro- and meso-class rigidities in this country.

28. By definition, micro-class rigidities enhance immobility at the top only through immobility in professional employment. Therefore, when looking at changes of big-class effects across models, micro-class rigidities must be fitted first; otherwise, by construction, they cannot further reduce big class effects.

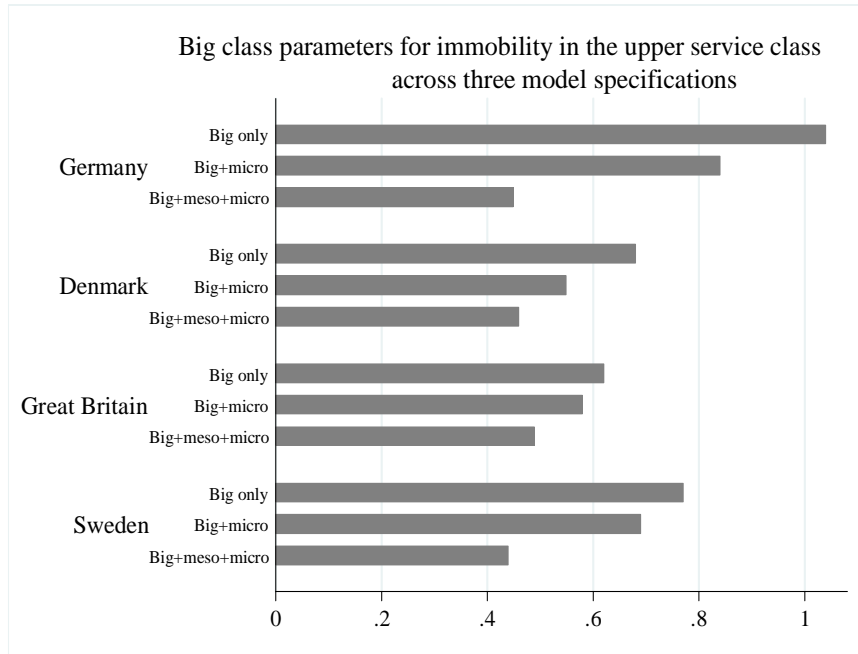


Figure 2.1. Big class parameters for social immobility in the higher service class across three model specifications and across countries. Beta parameters extrapolated from models 1b, 3b, 4b. Source: ESS 2002-2010, EVS 2008, ISSP 2009

Panel B of table 2.1 assesses gender differences in immobility patterns. The previous model 4b is taken as a starting point. This model jointly incorporates the three rigidities and allows them to freely vary across countries.

Then, the models in panel B incorporate gender interactions with one design matrix by one, with a combination of two matrices and finally, with all three matrices together. As seen, the last model is preferred, which implies that the influences of the macro-, meso- and micro-classes of origin are gendered.

However, while the big-class immobility parameters vary significantly across gender only in Great Britain (0.56 for women and 0.42 for men); gender differences are stronger and more systematic for meso- and micro-class rigidities. Immobility within professional employment is higher for women in Germany (1.10 versus 0.82 for men), Denmark (0.98 versus 0.29) and Great Britain (0.56 versus 0.23), and it is equally high in Sweden (0.79 versus 0.82). Conversely, as

regards micro-class immobility in professional employment, I detect systematically stronger effects for men in regulated professions in all countries but Sweden.

The magnitude of these differences is noticeable. The mean of these micro-class parameters in Germany is 2.02 for men and 1.28 for women, in Denmark 2.49 for men and 0.42 for women, in Great Britain 1.81 for men and 0.29 for women, while in Sweden I detect comparatively low values for both genders (0.50 and 0.95, respectively).

On the whole, it is apparent that meso-class rigidities operate for both genders but in a stronger form for women, while micro-class immobility is strong for men and of limited importance for women. These gender differences will be highlighted more in the concluding remarks. For, whether social closure explains the pattern of micro-class immobility parameters is considered.

2.5 Results: social closure and micro-class immobility in comparative perspective

Figure 2.2. plots for each country the relationship between the micro-class immobility parameters for men (taken from the preferred model 4dG in table 2.1) and the scores of the index of professional regulation.

The large size of these immobility parameters is noteworthy. For instance, a value of 3.02 for medical professions in Germany indicates that children of this profession enjoy $e^{3.02} = 20.5$ higher chances of gaining access to the same occupation as their parents than of leaving it.

Overall, relative micro-class immobility propensities are huge. Moreover, in Germany, Denmark and Great Britain, a positive relationship between professional closure and immobility is detected. Immobility is systematically the lowest for the two fields of science and social science, where regulation is virtually absent. It is highest among doctors, legal professionals and accountants; architects and engineers are located in an intermediate position.

Differences between micro-classes appear particularly strong in Germany and Denmark. In Sweden, professional closure occurs to a very limited extent, and it is evident that differences between micro-classes are much more compressed. These

results confirm previous hypotheses, but only for men, as the line representing the relationship between social closure and immobility for women is virtually flat²⁹.

A limitation of this analysis is that the index of professional regulation refers to the late '90s, while the occupational careers of respondents have developed between the late '50s and 2010. Unfortunately, no index of professional regulation is available before 1998. I have therefore rerun the analyses only for individuals aged 25 to 45 to reduce this time discrepancy, and results are virtually identical (*see* section 5 the appendix A). This stability is unsurprising, because regulations of the traditional liberal professions have been enforced at least since the mid-20th century and have remained largely untouched until the '90s (Patterson et al. 2003).

Hence, regulated professions display a much higher degree of micro-class immobility than unregulated professions. I next consider to what extent this tendency affects chances of intergenerational persistence at the top of the occupational hierarchy.

29 However, in Germany, the most regulated country, we detect a clear positive relationship also for women. In Sweden, the most unregulated country; it is unsurprising that we do not find any relationship either for men or for women. Denmark and Great Britain are the true exceptions.

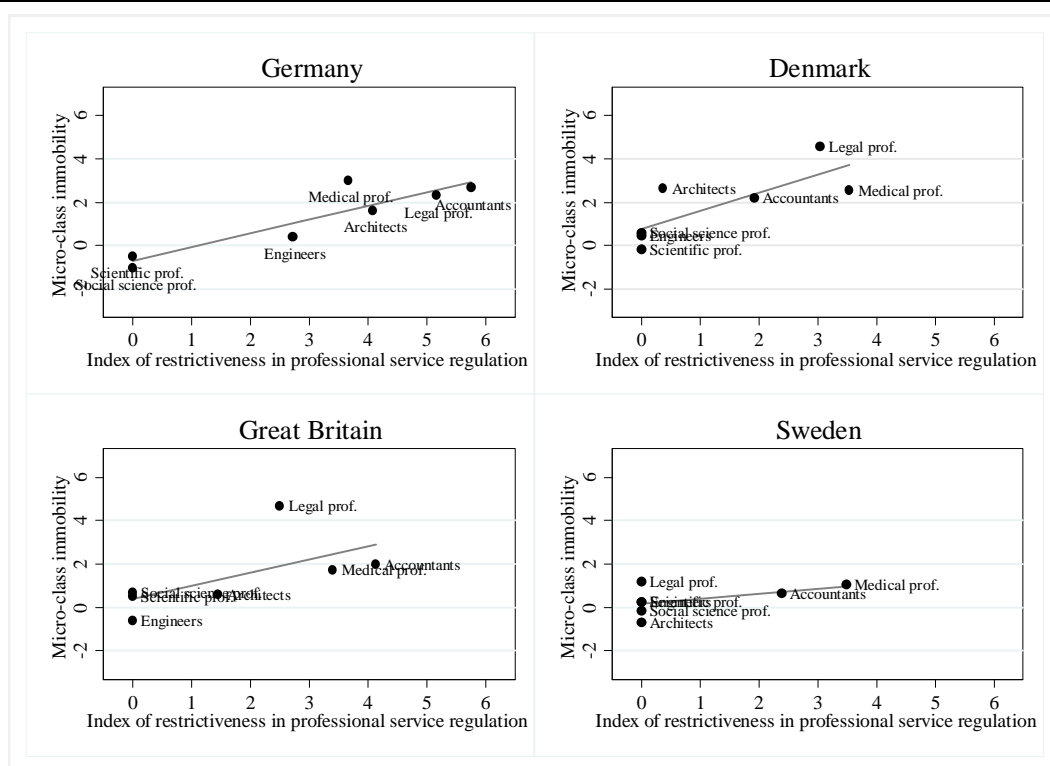


Figure 2.2. The relationship between entry market regulations in professional occupations and immobility parameters for each micro-class. Source: ESS 2002-2010, EVS 2008, ISSP 2009

In particular, I present the results of a model of binomial logistic regression for the total effect of social origins on the probability of gaining access to the higher service class. I compare the eight big-classes, the three meso-classes, and I incorporate the distinction between licensed and non-licensed professionals. I run the models separately for each country, and I control for socio-demo variables (cohort and gender), for survey effects and for their two-way interactions.³⁰

³⁰ These logistic regression models are less parsimonious than the log-linear models; therefore, I contrast regulated professions altogether versus non-regulated professions to save statistical power. Moreover, gender interactions with origins are unexpectedly non-significant, and I do not incorporate them. However, given the previous pattern of results, I suspect that this lack of significant is largely a matter of statistical power.

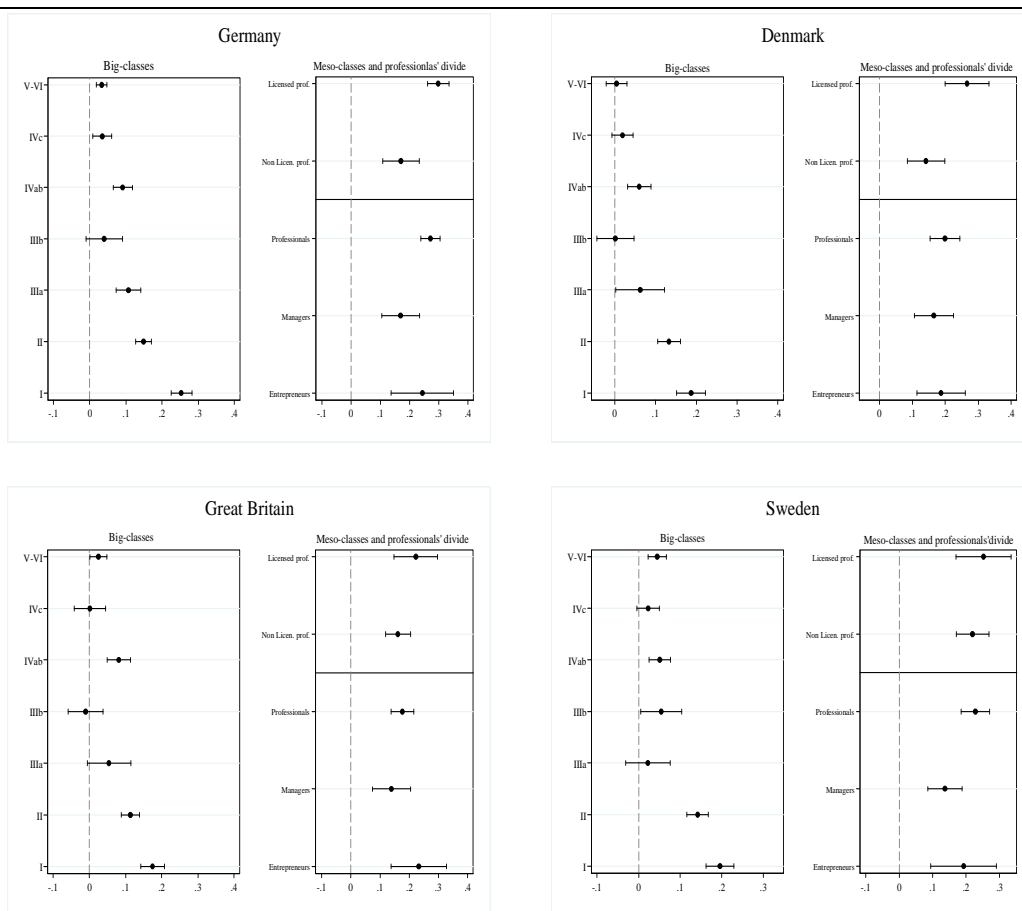


Figure 2.3. Average marginal effects for the probability of being in the higher service class according to the big class, the meso-class and micro-class of origin (ref. cat. unskilled working class). Source: ESS 2002-2010, EVS 2008, ISSP 2009

Figure 2.3. displays the average marginal effects for the influence of family background. Class VIIab of unskilled manual workers (VII) is the reference category. For each country, the panel on the left refers to differences between big classes of origin. As seen, in all countries children of skilled manual workers (V-VI), farmers (IVc) and routine non-manual workers (IIIb) enjoy similar probabilities of upward mobility to the higher service class as the reference category, whereas children of the urban petty bourgeoisie (IVab) and of skilled white collars (IIIa) enjoy a competitive advantage of approximately 10 percentage points in all countries but Sweden, where the advantage is smaller. Children of the lower and of the higher service classes exhibit much higher chances of access to

the top of the class hierarchy in all countries. The influence of the big-class of origin looks more pronounced in Germany, particularly as regards white collars and the higher service class, and looks weaker in Sweden, in line with previous comparative research on social mobility (Breen 2004).

The bottom panel on the right for each nation refers to meso-class differences between entrepreneurs, managers and professionals of the higher service class. As seen, children of managers enjoy less favorable prospects than those of professionals and entrepreneurs, but the confidence intervals for these three social groups overlap for all countries except Germany.

However, from the top panel on the left of figure 2.3. emerges a pattern between countries: the distinction between the group of licensed professionals and the one of unlicensed professionals is similar for Germany and Denmark, and the missing distinction between these two different groups of professionals links Great Britain and Sweden. As previously illustrated and as the theoretical framework suggests this can be the result of different institutional arrangements, starting with educational systems link to the access of occupations through vocational certifications and licenses for professionals.

Moreover, regulated professions enjoy higher immobility prospects than unregulated professionals in Germany and Denmark, indeed confident intervals do not overlap. As expected, in Sweden and Great Britain no difference between regulated and unregulated professions is detected. Overall, there is evidence that variations between and within countries in the degree of social closure are consequential for immobility at the top.

To control whether differences between regulated and unregulated professions are simply driven by differential success in Higher Education, a rerun of the analyses presented in figure 2.3. is carried out with an additional dummy variable that refers to the attainment of tertiary degrees (categories 5 and 6 of the ISCED classification). Thus the direct effects of social origins are estimated. I briefly comment on these results.

Table 2.2. Binomial logistic regression models predicting the probability of being in the Higher Service Class. Average Marginal Effect of having a father in same big-class (Model 1), in the same meso-class (Model 2), in the same licensed or non-licensed professional group (Model 3), considering the OED association in each country. Reference category: working class (VIIab)

Country	Big-class: higher service class	Meso-classes	Average marginal effects	Professionals	Average marginal effects
Germany	0.10*** (0.01)	H. Entrep.	0.12* (0.04)	Non-licensed	0.04 (0.02)
		H. Man.	0.05 (0.02)	Licensed	0.13*** (0.02)
		Profession.	0.10*** (0.01)		
Denmark	0.09*** (0.02)	Entrep.	0.11** (0.04)	Non-licensed	0.05 (0.02)
		Man.	0.08** (0.03)	Licensed	0.15*** (0.03)
		Profession.	0.9*** (0.02)		
Great Britain	0.10*** (0.02)	Entrep.	0.17*** (0.05)	Non-licensed	0.09*** (0.02)
		Man.	0.08 (0.03)	Licensed	0.11*** (0.03)
		Profession.	0.09*** (0.02)		
Sweden	0.09*** (0.02)	Entrep.	0.12* (0.05)	Non-licensed	0.11*** (0.02)
		Man.	0.06** (0.02)	Licensed	0.10** (0.03)
		Profession.	0.11*** (0.02)		

Significance: *** p<0.01, ** p<0.05, * p<0.1 – Standard errors in parentheses.

Source: ESS 2002-2010, EVS 2008, ISSP 2009

As expected, the overall influence of family background is considerably reduced after I control for education. This reduction is stronger for Germany, where education is a stronger mediator of the total effect of family background for both professionals and managers, in line with previous research on German credentialism (Bol and Weeden 2014).

Most importantly for the hypotheses, in Germany and Denmark, I still detect a marked advantage for children of licensed professionals over those of non-

licensed professionals, while this is not the case in Great Britain and Sweden. Indeed, in the former countries no social group enjoys better prospects of persistence at the top than the regulated professions.

2.6 Results: credentialism and micro-class immobility in comparative perspective

As I have seen, regulated professions display a much higher degree of micro-class immobility than unregulated professions. Thus I expect that the same association is visible when looking at the fields of study of the respondent.

The most rewarding fields of study are considered in terms of intergenerational persistence at the top of the occupational hierarchy. In particular, presented in figure 2.4. are the results of a model of binomial logistic regression for seven fields on the probability of gaining access to the higher service class. The models are run separately for each country with a control for socio-demo variables (cohorts and gender), and for survey effects.

Figure 2.4. displays the average marginal effects for the influence of different fields of study. Some of them give access to a licensed profession in each country, such as Law, health-related fields, economics.

According to these results, Germany has the highest propensity to gain access to the top of the hierarchy with regards to graduates in a field of study that allows one to become a licensed professional. In Denmark the trend is very similar to the German's. In Great Britain just Law and scientific fields seem to give more chances in being part of the Service Class (I). In Sweden, Architecture, Engineering, and Law are indeed the most rewarding fields of study.

Next taken into consideration, is the propensity of having graduated in each field of study by social origins by using linear regression models on a binary dependent variable, as explained in the methods section.

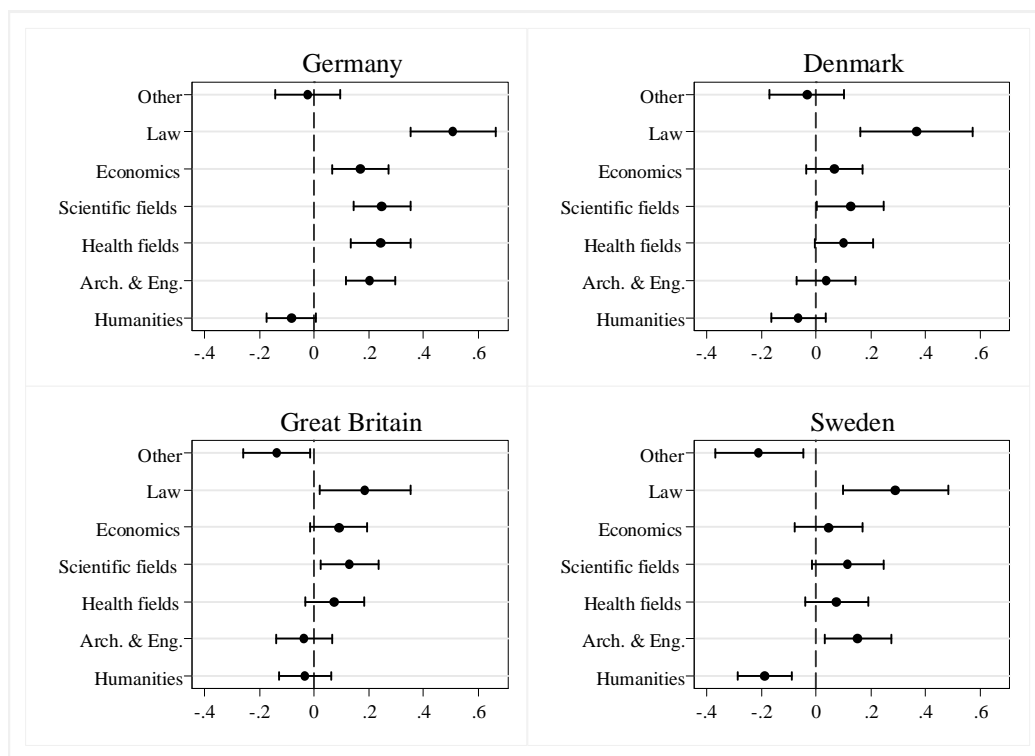


Figure 2.4. Average marginal effects for the probability of being in the higher service class according to fields of study (ref. cat. Social Studies). Source: ESS 2002-2010, EVS 2008, ISSP 2009

Again, the models are run separately for each country employing the big-, the meso- and the micro-class approaches, using the previous controls. Considering micro-classes, architects and engineers are aggregated as dictated by the pre-existing categories of the variable regarding fields of study. This way a proper match is gained with the technical field of study. In figure 2.5., the summary of the results is presented: for each country and for each field of study the parameter concerning the higher service class is plotted as the light gray horizontal bar (from the model considering big-classes), the gray bar represents the parameter of the meso-class of professionals and black bar concerns the micro-class of affinity with the field of study considered. For example, for the field of health, the result concerning medical professionals is plotted.

Results remark previous finding of the Origin-Destination association. In Sweden micro-classes are suppressed and there is no difference between fields which lead to a licensed or an unregulated profession except for health fields. Great Britain is the only exception of a high influence of the micro-class of origin with regards to the field of Law. For all the other fields of study³¹ the bars concerning the three approaches are similar.

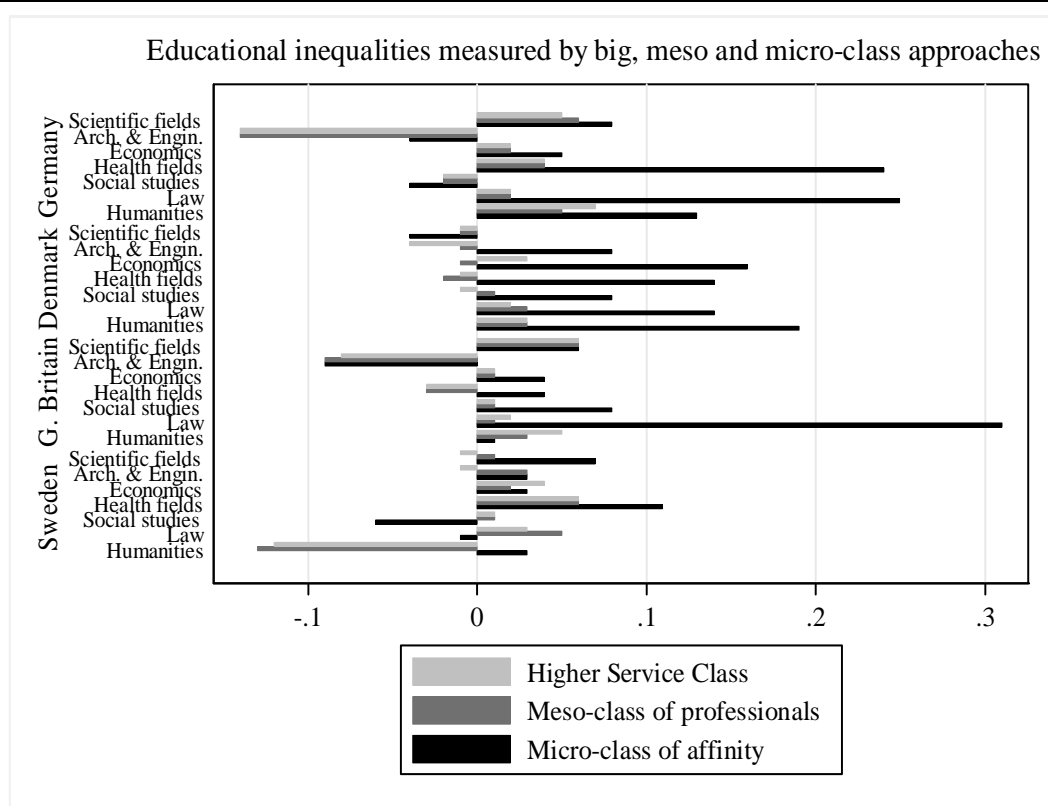


Figure 2.5. Parameters of probability models of being graduated in a field of study measured by big, meso and micro-class approaches. Source: ESS 2002-2010, EVS 2008, ISSP 2009

Micro-classes of affinity are generally very pronounced in Denmark. It is clear that affinities of micro-classes of licensed professionals are very high, but

³¹ See section 6 in the appendix A for fields of study distribution of frequencies.

emphasis has to be made on the affinity of humanities with the micro-class of social studies. It is the highest affinity between fields of study.

Finally, the results obtained for Germany validate the previous findings as well, but with some exceptions. It seems that the technical field has more appeal for lower social classes and again the affinity with humanities is very high from all the three approaches. This result is not in line with the previous theories on educational inequalities for which humanities is often chosen by the lowest social classes, because these fields give access to a wide range of opportunities on the labour market (*see* Goldthorpe 2002).

2.7. Conclusion

These analyses indicate that sons of licensed professionals display a particularly strong relative propensity to inherit the specific occupation of their fathers and that this stronger micro-class immobility translates into higher chances of persistence in the higher service class. Variations among countries and among professions in the degree of regulation of professional services are systematically related to micro-class rigidities.

The interpretation is that, on the one hand, social closure enhances the economic profitability of professions and thus accrues incentives to follow in parents' footsteps. On the other hand, access barriers to regulated professions, such as long university studies, professional practice and selective entry exams increase the costs and risks of failure for outsiders.

Of course, these results are only suggestive of genuine causal relationships. Given the small number of professions and of countries that were compared, only bivariate correlations between the index of professional closure and the immobility parameters could be detected. Nevertheless, these results corroborate the predictions of social closure theory.

To my knowledge, this is the first study based on nationally representative samples that provides systematic evidence relating to direct measures of professional closure with social immobility in a wide range of professions. Previous qualitative and quantitative studies of the liberal professions provided rich in-depth descriptions of the functioning of social closure.

However, because these studies were largely based on case studies of single professions, they could not systematically relate social closure and intergenerational reproduction. These results also contribute to social mobility research and to its growing quest for explanatory mechanisms of intergenerational reproduction.

Finally, these findings illustrate the fruitfulness of the micro-class approach, as social closure is a typical instance of an explanatory mechanism operating at the level of specific occupations but with macro-level consequences for the broader processes of social immobility. The few previous studies based on this approach have mapped micro-class immobility across the occupational ladder rather than directly testing specific micro-class mechanisms (widely discussed in the theoretical framework).

However, these results suggest that micro-class reproduction fueled by social closure works predominantly for men (in all countries but Germany), while for women it appears to be of limited importance. This gendered pattern was unexpected, though it may be noted that Jonsson et al. (2009) reported a similarly attenuated micro-class pattern for women.

It is worth stressing again that in the analyses only the father's occupation was considered and that the mother's occupation may be more relevant for daughters. Selection into employment is another potential limitation of the analyses concerning women. However, this gendered pattern may have a more substantive interpretation.

The economic profitability of regulated professions is considerably reduced if sons and daughters have to share the family professional business and the client portfolio, and if parents have to choose, boys may be privileged. Moreover, men attach high importance to economic rewards, prestige and career opportunities that make liberal professions particularly attractive to them, while women are less instrumental and more sensitive to intrinsic rewards (Barone 2012).

As already noted, I should not take for granted the willingness of children to pursue the same career as their parents, particularly if their family resources provide access to many other attractive options. An important advantage of meso-class reproduction is that it works for a broad variety of occupations. Indeed, I have found that in addition to micro- and macro-class rigidities, children of professionals display a strong propensity to move into other professional

occupations rather than into the ranks of managerial and entrepreneurial employment.

This tendency is stronger for women. This work has argued that professionals share a set of skills, cultural resources and social networks that differentiate them substantially from the managerial cultures of the other two fractions of the service class.

Hence, on the one hand, processes of social closure erect barriers between professions and fuel micro-class immobility at the top. On the other hand, the cultural proximity of different professional groups drives intense intergenerational exchanges between them. These analyses indicate that these two mechanisms are complementary, as they jointly contribute to the immobility of professional children in the upper class.

3. Social closure and micro-class immobility of the upper class in Italy

3.1. Introduction

In Italy professionals are highly regulated in terms of both entry- and conduct regulation, therefore understanding the processes behind their intergenerational social reproduction is very important. Specifically, Italy displays one of the highest levels of professionals' regulation across Europe.

It has to be pointed out that this chapter replicates and extends findings of the previous one regarding four European countries that did not consider Italy (Ruggera and Barone, forthcoming). Indeed, I extend these previous findings, firstly taking into consideration the Italian case, secondly adding the intra-generational mobility analysis and thus considering the conduct regulation and its effect on professionals' intra-generational mobility (missing in most of the previous studies on social mobility). Moreover, to my knowledge this is the first study that uses a micro-class approach for studying this kind of mobility in Italy.

This chapter indeed give another contribution to the debate illustrated in the theoretical framework and in the comparative chapter. As already mentioned, the vats literature on social mobility in Italy shows a persistence intergenerational immobility of big-classes (*see* Barone and Schizzerotto 2011); this suggests that this chapter can shed light on which analytical levels social immobility is produced (big-, meso-and micro-levels). In other words, it uses the analytical strategy previously employed, knowing that big-class rigidities in Italy are supposed to be very strong. Of course, this also concerns the upper class. Upper class social immobility can probably linked to the safety-nets which are supposed to work very well in Italy (Barone 2012).

The analytical strategy explained in the second chapter is also used to study the intra-generational mobility of professionals micro-classes.

The structure of this chapter is the following: I derive the hypotheses (paragraph 3.2.) and explain data, variables and methods of the analysis (paragraph 3.3.); results section is composed by three main part, starting with the analysis of the contribution of the micro-class intergenerational immobility to

those of the meso-, and big-classes (paragraph 3.4.); then I focus on the association between professionals' micro-classes immobility and their specific level of professional regulation (paragraph 3.5.); before concluding, I study the intra-generational immobility of high level professionals of the higher service class (paragraph 3.6.).

3.2 Previous research and hypotheses

Previous studies show that a high level of professional regulation, specifically the entry-market regulation, produces a reduced competition in the professional market and consequently higher benefits for professionals operating in this market, such as higher wages (Patterson et al. 2003; Weeden 2002; Pagliero 2010).

According to the two dimensions concerning the micro-class reproduction and professionals regulations across Europe, in the scheme reported in Figure 1.2. (chapter 1), I expect Italy to be placed right next to Germany.

As specify in the introduction, the literature on social mobility in Italy still focuses on the OED association by using a big- and meso-class approach, and generally results of research show a high level of social immobility (Fabbri and Rossi 1997, Barbagli and Schizzerotto 1997, Barone 2012). To the reader this may be unsurprising.

Moreover, social mobility in Italy has also studied with the same data I am using in this chapter, confirming that social immobility is high also for the upper class (*see* Schizzerotto 2002). This is the reason why I do not expect to find a different picture according to the big-class approach. Furthermore, social mobility studies, even by using this data, have disregarded the micro-class immobility of high level professionals and filling this lack is the aim of this chapter. Indeed, as the analytical strategy already employed, big-class rigidities are purged by the meso-class effects, and meso-class rigidities are purge by the micro-class ones. In this way I obtain the net social micro-class immobility that can be linked to the index of legal closure and the comparison of regulated and unregulated professionals can take place.

At this point a limitation of this chapter has to be revealed to the reader. Aiming to go into details of the micro-class immobility, the analysis has to be reduced to men only (*see* the next section for the details). Thus, the reader has to keep in mind that the inference concerns men only.

Various studies have suggested that in Italy big-classes intra-generational immobility is very high too (Pisati 2000; Schizzerotto 2002; Barone and Schizzerotto 2011)³². Moreover, licensed professionals' intra-generational mobility can also be affected by high levels of professional conduct regulation. Thus, I do not expect any difference in studying professionals' *career stability* by using a big-class approach, but the picture can change by using micro-classes.

As mentioned in the introduction, this chapter replicates part of the analysis of chapter two; indeed, also the previous two hypotheses are the same. I just report the main hypotheses to facilitate the reader in following the guide line of this work.

Hypothesis 3.1. *among children of professionals, who leave their micro-classes of origin, immobility in the higher service class is further enhanced by strong meso-class rigidities;*

Hypothesis 3.2. *micro-class immobility is stronger in more regulated professions;*

Hypothesis 3.3. *the stronger the professional conduct regulation, the greater is the intra-generational immobility of licensed professionals.*

3.3 Data, variable and methods

The major social stratification survey in Italy is the “*Indagine longitudinale sulle famiglie italiane* (ILFI, 1997-2005)”. It is a retrospective survey that includes detailed information on subjects' current and first job (with four digits Isco88 titles) and the other variables needed to construct the EGP class scheme. This is valid for social origins too.

As already mentioned, this study focuses on men only. Data limitation does not allow a proper micro-class analysis of professional women, neither with the

³² I do not go into details of qualitative studies concerning one profession because they do not allow for any comparison with all the other main professions (*see* Santoro 1998, Checchi 2010).

aggregation of some professionals groups³³. This can be due to selection into employment and the low activity rate of women in Italy. However, in the next chapter, by using a recent and large sample that represents Italian graduates, also women can be analysed into details at both educational and occupational level (considering the beginning of professionals careers).

In analysing these data there is the impossibility to build micro-classes with a sufficient number of observations. Thus, I analyse men from 25 to 74 years old³⁴. After age selection the sample comprises 3,501 cases with valid information for origins and destinations and 3,758 for the analysis of the intra-generational mobility.

I use the same version of the EGP scheme of the previous chapter, except for the aggregation of skilled white collar and routine non-manual workers (IIIab)³⁵.

Again the higher service class is divided into three meso-classes: entrepreneurs, managers and professionals. Also the last category is further disaggregated into micro-classes as in the previous chapter, except for the aggregation of the engineer and architects due to data constraints.

Moreover, professional micro-classes correspond to the same occupational categories of the OECD index of professional regulation, with three minor exceptions³⁶.

I analyze the Origin–Destination association by using a sequence of log-linear models that control for the marginal distributions of the variables, thus estimating relative immobility propensities (*see* Xie 1992). This study considers both the first and last occupation of male respondents.

Log-linear models are specified on the 14 x 14 cross-tabulation between origins and destinations or first and last occupation. The 14 categories for these variables comprise the above six micro-classes of professionals, the two other

33 See Appendix B (table 6).

34 As in chapter two I include people aged 65-74 in order to gain statistical power by enlarging the number of valid cases. The purpose is the same as the control analysis conducted to be sure that including people these age are not affected the estimates. Results are robust, but given the little space this analysis is not included in the chapter. .

35 Distribution of frequencies are reported in Section 1 of Appendix B.

36. For data constrains I had to aggregate pharmacists, veterinarian and doctor, as well as notaries and lawyer, but these additional distinctions are of little practical significance for the results because: a) doctors account for about 80% of medical science professionals; b) lawyers accounts for at least 75% of legal professionals. Thus I impute to these two professional groups the scores of the OECD index for their modal occupations (doctors and lawyers). To engineers and architects I impute the score of technical professions as the OECD index suggests.

meso-classes of the higher service class (entrepreneurs and high-level managers) and the remaining six macro-classes (II, IIIab, IVab, IVc, V-VI, VII)³⁷.

Macro- meso- and micro-class rigidities are captured by three design matrixes as specified in the previous chapter (*see* Appendix B).

In this chapter I also test if professionals groups behave differently with other three design matrixes: firstly only regulated professions are considered (with one parameter for each cell that refers to immobility of these groups); secondly, only unregulated professions are considered; thirdly, an equality constraint on the parameters regarding all regulated professions is imposed. This is to see whether they could be collapsed into a single category meaning that regulated professions do not behave differently.

After these analyses based on unscaled models, the Goodman-Hauser model is also considered for the Origins – Destinations association assuming that there is no specific order in the categories of the variables (Goodman, 1979; Hauser, 1984). It orders the categories *a posteriori*. This model is utilized to verify the similarities of professionals’ immobility or mobility, using a very parsimonious model such as RC II of Goodman³⁸. Thus, it is also useful to confirm the robustness of the result obtained with the previous unscaled models (*see* again Appendix B).

As already mentioned, after this decomposition exercise, the intra-generational immobility is considered.

37 To be clear “O” is the variable of “fathers’ professional group”, to “D” corresponds the “son” professional group”. The first model usually used as based model is called “Independence model and its formula is the following:

$$\ln F_{ij} = \lambda + \lambda_i^O + \lambda_j^D$$

for all $i = 1, \dots, 14; j = 1, \dots, 14;$

For a better understanding of this topic it is crucial to put constraints on different sets of association parameters (λ_{ij}^{OD}), basically pertaining the diagonal cells in the origin-destination table. This is done through the design matrix included in the log-linear models. Design matrixes are reported in the appendix B.

38 Its formula follows:

$$\ln F_{ij} = \lambda + \lambda_i^O + \lambda_j^D + \mu_i v_j \quad \text{where } \mu_i = \mu_1 \text{ for } i \in (i) \text{ and } i = 1, \dots, 14;$$

$$v_j = v \text{ for } j \in (j) \text{ and } j = 1, \dots, 14$$

The category scaling μ_i and v_j can be interpreted as measures of relative distance between or relative similarity among occupational categories with respect to the O-D association, at net of social class immobility.

3.4. Results: contribution of micro-, meso- and big-class rigidities to immobility in the higher service class

The purpose of this part of the Origin-Destination analysis is to assess whether macro-, meso-, and micro-class rigidities display independent or complementary influences on social immobility in the higher service class in the case of men.

Table 3.1. *Fit indices of log-linear models to the model Origin – Destination association at the first occupation employing the Big-, Meso-, Micro-class approach (men only, n. obs. 3501)*³⁹.

<i>Model description</i>	L^2	d.f.	Significance	Significance	Significance	Δ
0. Independence Model	1454	169	-	-	-	0.242
1. Big-class rigidities	538	162	0.0000 (M.2)	0.0062 (M3)	0.0000 (M5)	0.126
2. Big- and meso-class rigidities	514	159	1.0000 (M.4)	0.0620(M.5)	-	0.125
3. Big-and micro-class rigidities	520	156	0.0062 (M.5)	-	-	0.124
4. Meso- and micro-class rigidities	1318	160	0.0000 (M.5)	-	-	0.231
5. Big-, meso- and micro-class rigidities	502	153				0.123
Models RC II of Goodman: row and column parameters are constraint to be equal						
6. Big-class rigidities	144	149	0.0001 (M.7)	0.0002 (M.8)		0.036
7. Big- and meso-class rigidities	122	146	0.1247 (M.8)			0.034
8. Big-, meso-, and micro-class rigidities	112	140				0.032
<i>Model description: adding a design matrix to model micro-classes rigidities in more detail way</i>	L^2	d.f.	Significance	Significance	Significance	Δ
9. Micro-class rigidities - regulated professionals	502	155				0.123
10. Micro-class rigidities - unregulated professionals	512	157	0.0067 (M.1)			0.126
11. Micro-class rigidities - regulated professionals with an equality constraint	506	158	0.2615 (M.1)		-	0.124

Source: ILFI (1997-2005)

³⁹ Fit indices of log-linear model for current occupation (Panel B) are in the appendix. This is why results of current occupation do not differ from the first job ones. This will be clear in the section of intra-generational mobility.

The first model of independence displayed in table 3.1. unrealistically assumes that origins and destinations are unrelated. This model is used only as a yardstick for comparisons with the following models. These models impose constraints on different sets of association parameters (λ_{ijOD}), basically pertaining the diagonal cells in the mobility table. This procedure improves model fit by adding diagonal constraints that reflect immobility propensities at the micro-, meso- and macro level.

Model 1 adds only big-class rigidities to the baseline model. As can be seen, it displays huge improvements over the baseline model, thus confirming the strength of social immobility of the upper class in Italy⁴⁰.

Models 2 adds meso-class rigidities to macro-class rigidities, and model 3 adds micro-class rigidities. Model 4 adds micro-class rigidities to meso-class rigidities. Finally model 5 incorporates all three immobility mechanisms.

From the fit indices of these models, the evidence indicates that immobility in the higher service class is jointly produced by big- and meso-class rigidities. Comparing model 2 with models 3, 4 and 5, micro-classes do not improve the fit of any of these models as reported in table 3.1. (*see significance* columns). This means that meso-class and big-class rigidities are very strong and the contribution of micro-class rigidities is not significant. Big-class and meso-class rigidities could be linked to the safety nets; it seems they work very well and they distinguish results of the unscaled log-linear analysis from those reported in the previous chapter, at least for men. But, given the high level of professional regulation in Italy, some differences in professionals' social immobility can be expected. Indeed, at this point, model 9, 10 and 11 are considered. The evidence shows that regulated professionals behave differently from unregulated professionals and that regulated professionals cannot be collapsed in a single category. This is shown in the next paragraph when the level of professional regulation is linked to professionals' micro-classes intergenerational immobility.

Figure 3.1. plots the immobility parameters to the first and the current job that refers to immobility in the higher service class across three different model specifications⁴¹.

40 See Section 2 and 3 in the Appendix B to see the main mobility table for men of this chapter in. See also the additional materials regarding binomial logit regression for the probability to remain in the upper service class for licensed professionals' children.

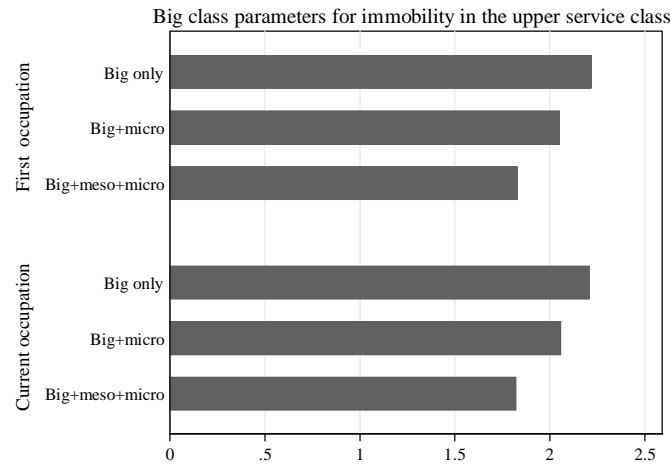


Figure 3.1. Parameters for social immobility in the higher service class across three model specifications. Beta parameters extrapolated from models 1, 3, and 5. Source: ILFI (1997-2005)

The first row refers to big-class rigidities only (model 1) and therefore describes the overall level of immobility in the upper service class. As it can be seen, big-class immobility is very strong in Italy. The second row plots the same parameter, purged by micro-class effects (model 3). The big-class rigidities are not substantially reduced. This confirms results of table 3.1. in which clearly emerges that adding micro-classes do not improve log-linear model fits. The third row shows that immobility in the higher service class is not largely reduced, even if purged by meso- and micro rigidities (model 5). This is valid at the first job and at the current occupation of male respondents.

Moreover, if we link parameters (bars in figure 3.1.) concerning big-, meso- and micro-class rigidities at first and at current occupation we obtain a proxy of the intra-generational mobility. However, the analysis of professionals career stability is useful, firstly, because it allows to go into details of different professionals groups behaviour and, secondly, because of the necessary comparison between professionals and the other fractions of the upper class (see paragraph 3.6.).

41 Models' fits of current occupation are in the Appendix B, because they provide very similar information, as it is visible in Figure 3.2.

The first hypothesis is not falsified, but it is incomplete when using scaled log-linear models. Indeed, according the second set of log-linear models, micro-class rigidities do not appear stronger than fluxes within professionals' meso-class and within the whole upper class (these models are widely discussed in the next section).

Moreover, results are in line with the analysis of Jonsson et al. (2009), when concerning the relevant role played by big-classes. Nevertheless, it is worth paying attention to the micro-mechanisms behind professionals' micro-classes, which determine heterogeneous professionals' micro-classes rigidities, such as the index of entry market legal closure.

3.5 Results: social closure and micro-class immobility

Figure 3.2. plots the relationship between the micro-class immobility parameters for men (taken from model 5 in table 3.1.) and the scores of the index of professional regulation (reported in the first chapter). Compared to unregulated professions, the immobility parameters of licensed professions are larger. Immobility is low for unregulated professions regarding scientific fields and social science and highest among legal professionals and accountants. Architects, engineers and doctors are located in intermediate positions; however their social reproduction is still higher than unregulated professions. These results help us to better understand micro-mechanisms also concerning micro-classes and they also support the second hypothesis; indeed results of Figure 3.2. remark the importance of micro-classes for the understanding of occupational inequalities horizontally (within the meso-class of high level professionals)⁴².

42 The plot for current occupation provides highly similar results.

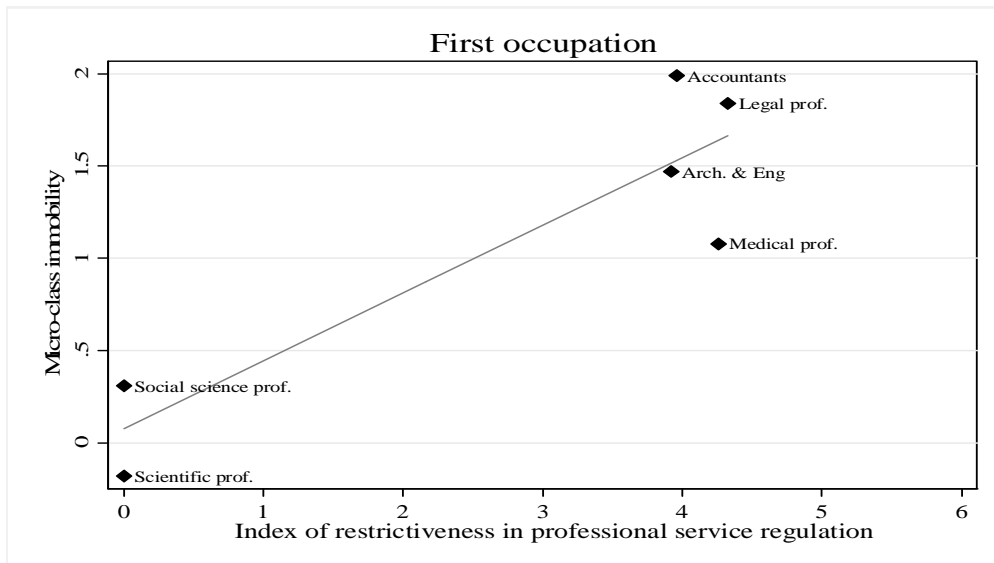


Figure 3.2: The relationship between entry market regulations in professional occupations in the case of men and immobility parameters for each micro-class (architects and engineers in 1998 shared the same legal closure index, thus it is possible to aggregate them). Legend: higher service class (I); lower service class (II); white collars and routine non-manual workers (IIIab); petite bourgeoisie (IVab); farmers (IV c); skilled working class (V-VI); unskilled working class (VIIab). Source: ILFI (1997-2005).

Thus, even if in the previous section micro-classes did not purge the macro-class immobility effects, relating professionals' immobility with their level of regulation shows that without micro-classes an important part of social inequalities would remain unexplained. This is also proved by the last set of log-linear models in table 3.1.. The reason why regulated professionals parameters of immobility cannot be collapsed in a single parameter can be better understood by considering model 8 (or model 5 of the unscaled log-linear models).

Table 3.2. presents the RCII Goodman model of scaled association (model 8 of table 3.1.). This model is based on the restricted Uniform Association Model that assumes all contiguous associations in a table to be identical ($\ln \theta = \phi$; θ_{ij} being the odds ratio). This stringent assumption can be meaningfully relaxed by scaling the distances between the row-social origin (μ_i) and column-social destination (ν_j) categories: ($\ln \theta = \phi\mu_{i+1}-\mu_i$)($\nu_{j+1}-\nu_j$), where μ_i and ν_j are

scaling parameters, while ϕ is the scaled uniform association parameter that describes the association throughout the table, conditional upon the scaling parameters; scaling parameters μ_i and ν_j can be interpreted as measures of distance between, or similarity among, occupational categories with respect to the Origin-Destination association. If these categories were identically scaled, different classes would be regarded as a single class (e.g., $\mu_1 = \mu_2$).

In this scaled association model equal scaling parameters within classes are assumed; and row and column are assumed to be equal (as shown in table 3.2., column 3, parameters of μ_i). This is because there is no ex ante knowledge to claim that the distances between categories of fathers and sons should be different.

Table 3.2. Parameter estimates of RC log-multiplicative model n. 8

EGP class scheme using Big-, meso-, and micro-classes of professionals	Parameters of immobility – big-classes	Social origins and destination Scaling parameters (μ_i) – big-classes	Parameters of immobility – meso-classes	Social origins and destination Scaling parameters (μ_i) – meso-classes	Parameters of immobility – micro-classes	Social origins and destination Scaling parameters (μ_i) – micro-classes
VIIab	-0.3	0.51				
V – VI	0.6	0.36				
IVc	3.28	0.47				
IVab	1.52	0.12				
IIIab	-0.04	0.05				
II	0.28	-0.05				
I	0.45	-				
Entrepreneurs			3.33	0.01		
Managers			-0.53	-0.16		
Professionals			0.39	-		
Scientific professionals					0.37	-0.06
Architects & Engineers					1.58	-0.18
Accountants					1.81	-0.24
Medical professionals					1.33	-0.15
Social science professionals					-0.42	-0.33
Legal professionals					0.97	-0.35

Source: ILFI (1997-2005)

Legend: higher service class (I); lower service class (II); white collars and routine non-manual workers (IIIab); petite bourgeoisie (IVab); farmers (IVc); skilled working class (V-VI); unskilled working class (VIIab).

Taking into consideration both immobility and mobility, the robustness of results in figure 3.2 can be verified in another way. Indeed, the results of immobility in Goodman Hauser-RC model are in line with those of unscaled model 5 in Table 3.1. Again, micro-classes do not improve the fit of models 6 and 7. However, I show results of model 8 because of the comparison between models 9, 10 and 11 highlighting differences within licensed and between licensed and unlicensed professionals intergenerational immobility.

Net of immobility, scaled parameters of social mobility do not follow a clear pattern within professional's micro-classes. Professionals are more similar in terms of mobility, while greater differences exist for licensed professionals in terms of social immobility. Hence, regulated professions display a much higher degree of micro-class immobility than unregulated professions. These results indicate that legal closure can affect the intergenerational immobility of licensed professions.

3.6. Results: social closure and intra-generational mobility employing big-, meso-, micro- class approaches.

According to the theoretical framework and previous studies on intra-generational mobility in Italy, the level of immobility is also high (see Schizzerotto 2002).

Concentrating on the upper service class and following the analytical strategies used above, differences in intra-generational immobility for professionals can emerge. Indeed, considering all the limitations of the competition implemented by controlling professionals' behavior generate higher levels of licensed professionals' career stability.

These regulations, indeed, penalize newcomers who need to create their own clients-portfolio and give an advantage to professionals (definable as insiders) who have been practicing the profession for a long time.

Unfortunately, data constraints do not allow for the separation of self-employed from employees within each professional group. Thus, intra-

generational mobility can be a bit underestimated for self-employed licensed professionals.

Table 3.3. shows that the model which fits the data best is the one including micro-classes in the higher service class (Model 4).

Table 3.3. Fit indices of log-linear models of quasi perfect mobility with big-, meso and micro-class rigidities for the intra-generational mobility (men only, n. obs. 3758)

Model description	L^2	d.f.	Significance	Δ
0.Independence Model	6152	169	-	0.478
1.Big class-rigidities only	1536	162	0.0000(M.1)	0.138
2.Big- + meso-class rigidities	1410	159	0.0000(M.2)	0.133
3.Big- + micro-class rigidities	1123	156	0.0000(M.1)	0.113
4. eso- and micro-class rigidities	1061	153	0.0000(M.1) 0.0000(M.2) 0.0000(M.3)	0.109

Source: ILFI (1997-2005)

From model 1 (table 3.3.) I extrapolated the beta parameter of the higher service class, which is 4.5 (big-class). This is undoubtedly high, but net of big-class immobility, it is possible to understand which meso- or micro-classes characterized this strong intra-generational immobility of the higher service class.

Indeed, figure 3.4. shows results that in a way can be considered unexpected even if distinguishing employed and self-employed professionals career stability could be very different. Property, indeed, is very important since it explains the high intra-generational mobility of entrepreneurs.

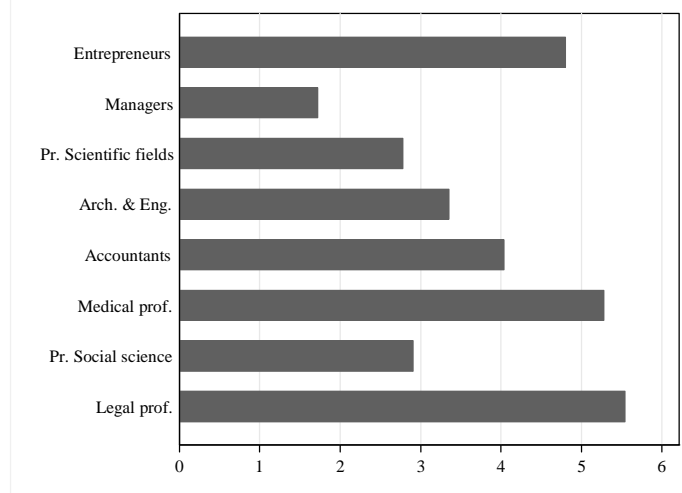


Figure 3.4. Meso-classes and professionals micro-classes parameters for the intra-generational immobility in the service class (I). Beta parameters extrapolated from model 4. Source: ILFI (1997-2005).

Doctors, legal professionals, and accountants show high levels of career stability, while architects and engineers have slightly lower intra-generational immobility. These results are in line with those of Barone et.al (2011) who clearly explain that professions have remained one of the most regulated segments of the Italian labour market with a little internal competition. Hence, the liberal professions have benefited from a noticeable degree of occupational stability, thus further increasing the rigidity of the Italian labour market.

However, unregulated professionals (professionals in social science and in scientific fields) and managers display lower intra-generational mobility.

These results are valuable because, firstly, they show how heterogeneous the intra-generational immobility is within the upper service class and, secondly, that career stability of some licensed professionals is even higher than it is for entrepreneurs.

3.7. Concluding remarks

The analyses indicate that big- and meso-class rigidities in Italy are elevated at least for men; this is in line with the social mobility literature.

Moreover, professionals' micro-class rigidities do not significantly contribute to produce the intergenerational immobility of the upper class in the case of men. Indeed, sons of professionals do not seem to follow in their father footsteps disproportionately; social mobility, instead, concerns all professionals' micro-classes (both licensed and unlicensed professionals).

Professionals' meso-class immobility can be interpreted from opposite points of view. From one hand, sons of professionals show high propensities to change their positions for brand new ones not in line with those of their fathers. On the other hand, safety nets within this meso-class work very well (Barone 2012).

Furthermore this chapter analysis shown that the higher the legal closure, the stronger is micro-class immobility of licensed professionals and the lower is social reproduction of unregulated professionals. It also provided evidence that, in terms of social immobility, licensed professionals groups behave differently and that these groups cannot be aggregated in a single category.

To my knowledge this is the first study in Italy that uses this analytical strategy to asses professionals' micro-classes immobility.

Professional associations in Italy are powerful authorities recognized by the state which are able to influence professionals' behavior also through conduct regulation. This chapter also contributed to a better understanding of the intra-generational mobility of the upper service class in the case of men. Of course, with a larger sample, the best way to capture micro-explanatory mechanisms regarding licensed professionals would be articulating the micro-classes in self-employed and employed professionals. However, these results are in line with those of other studies on this topic which claim that job mobility occurs rarely, or it predominantly involves movements within the same social big- class (see Schizzerotto 2002; Barone et. al 2011;).

According to the theoretical framework (see chapter 1) conduct regulation should increase the career stability of self-employed professionals, especially for those self-employed who can inherit the professional practice of the parent.

Also results, referring to figure 3.2. (as in the previous chapter), are only suggestive of genuine causal relationships, which should be considered by future studies with a quasi-experimental design.

Given the data limitation, the analysis concerned men only. Future studies, with bigger sample sizes should go into details of micro-class analysis also considering women and distinguishing self-employed and employed professionals to study the intra-generational mobility of professionals; this could allow a proper comparison between (regulated and unregulated) self-employed professionals and entrepreneurs social immobility. Of course, the latest distinction could also help intergenerational mobility studies and the corroboration of prediction of social closure theory.

In the next chapter, I try to overcome data limitation and extend analyses to women too, considering both the educational and the occupational career of Italian graduates. Also, the distinction of employed and self-employed professionals is considered for both men and women.

Finally, these findings illustrate that the micro-class approach is useful also to assess the broader processes of social fluidity. The few previous studies based on this approach have mapped micro-class immobility across the occupational hierarchy, rather than directly testing specific micro-class mechanisms, such as linking licensed professionals social immobility with the level of professions regulations (Jonsson et. al 2009). How safety-nets work in Italy at the top of the hierarchy is another topic that should be considered from future studies of social mobility.

4. The intergenerational social reproduction of licensed professionals in Italy: analysing micro-dynamics from graduation to the labour market

4.1. Introduction

It has long been known that educational inequalities are prevalent in many western societies. Social advantages are largely reproduced from parents to children through education (Shavit and Blossfeld 1993).

This chapter takes into consideration social inequalities from tertiary education to the labour market. Indeed, it has been shown that also educational fields of study are relevant in the process of social stratification (Van de Werfhorst et al., 2001, 2005, 2007; Van de Werfhorst and Luijkx 2010). In Italy this is exacerbated for those fields of study which give access to the main licensed professions (Chiesi 2008, Tignali 2009).

However, up to now most of the literature has focused on the Origin Education association with no specifications of different professional groups (e.g. Stocké 2007; Barone et.al 2010); accordingly, no specific attention has been given to the intergenerational transmission of professionals' micro-classes. Indeed, this chapter contributes to the literature filling this lack.

As widely explained in the previous chapters, I disaggregate the high professionals meso-class into micro-classes to understand educational and occupational trajectories of licensed professionals' children – comparing them with other unlicensed professionals and the other fractions of the upper class.

With this analytical strategy, well known to the reader, social inequalities can emerge through horizontal specifications. Fields of study at tertiary educational level are considered, while micro-classes are employed in order to study intergenerational mobility.

For such credentialed fields, the system of skill acquisition is actively created and maintained and, hence, institutionalizes a particular dynamic of stratification (Grusky 2005, Weeden 2002, Sorensen 1996, 2000). From the analysis of this chapter it emerges how the family background can affect children's educational attainment and its implications for access to the first job.

This chapter is structured as follows: firstly I discuss previous studies and literature and then I elaborate specific hypotheses (paragraph 4.2.); secondly I consider data, variables and methods (paragraph 4.3.) that I employ in the analysis of professionals' children educational career and their entry into the labour market (par. 4.4.); thirdly I illustrate results which lead to my concluding remarks (paragraph 4.5.).

4.2. Previous findings and hypotheses

In this chapter I show that there are enormous differences in employing different social class approaches to disclose educational inequalities. Indeed, in Italy the main entry barriers to licensed professions is a very long and expensive educational path (*see* chapter 1). When studying licensed professionals employing the micro-class approach, also horizontal educational inequalities should be taken into account.

It is arguable that having a professional parent pays off across all professional occupations, but it can be especially beneficial if parental occupation matches the field of study of the child (e.g. having an architect as a father and studying architecture).

Moreover, when children of licensed professionals follow in their parent footsteps they need to obtain higher educational credentials than children of high entrepreneurs and high managers, because of the entry barriers of regulated professions.

According to social closure theory the entry barriers of licensed professions, differ from one profession to another. Thus, it can be expected that the effect of having a licensed professional father on micro-class reproduction varies according to the restrictiveness of the corresponding educational barriers. This is studied in this chapter taking into consideration gender. According to Chiesi (2008) this is worth investigating, particularly when considering technical fields, such as engineering or architecture. Indeed, these fields cannot be aggregated as in the previous chapter because part of social inequalities would be obscured.

Furthermore, liberal professionals (in other words self-employed professionals) and employed professionals are also differentiated within each

micro-class. According to Pellizzari and Orsini (2012), indeed, intergenerational social reproduction of licensed professionals in Italy is very high when the father is a liberal professional.

I summarize below this chapter hypotheses:

Hypothesis 4.1. sons and daughters of licensed professionals are more likely to graduate in the same field of study as their fathers, but with gender differences.

Hypothesis 4.2. children of self-employed professionals show a higher propensity to become a member of the same profession as their father than children of employed professionals.

Hypothesis 4.3. men inherit more than women the professional business of their licensed professionals fathers.

4.3. Data, variables and methods

4.3.1. Data

The «Sbocchi professionali dei laureati» is a survey which was run in 2011 by the Italian National Institute of Statistics (ISTAT) that targeted university graduates who had obtained their degrees four years prior to the survey. It includes information required in order to conduct our analysis. The survey includes: information regarding educational attainment in vertical and horizontal dimensions; information on fields of study; information on parents' educational level and parents' occupational position (including differences between self employed and simply employed).

Additionally, the survey also reports background information on secondary education, including type of schools attended and grades, as well as demographic information (place of birth, age, gender and nationality). Since this survey regards just graduates an implicit sample selection is present; indeed these data do not represent the entire Italian population. Thus, the reader must be kept in mind that results from the analyses can only be generalized to 2007 graduates⁴³.

⁴³ It is not possible to study upper secondary students because of a lack of information about social origins. Isco code is not entirely provided and thus micro-classes cannot be extrapolated. It would be useful to study the choice of fields of study of upper secondary students in future studies; but at moment the analysis of micro-classes of professionals can be conducted only on graduates.

Additionally, as the vast literature on inequality of education has show that in Italy upper-class children are more likely to graduate, than their socio-economically disadvantaged peers (Schizzerotto 2002; Barone and Schizzerotto 2011).

Moreover, in order to consider credentials which give access to a licensed profession, I take into consideration Master degrees and a full tertiary educational level. Therefore, another sample selection is implied in this survey.

4.3.2. Variables

The first outcome variable, fields of study, is a ten category classification including: humanities (clustered with, philosophy, literature, etc.), scientific fields (including chemistry, natural science, physics, maths, agrarian, and so on), veterinarian clustered with pharmaceutical science, architecture, engineering, medicine, health science (except medicine including professional nurses, etc) law, social and political science, and economics⁴⁴.

This classification differs from the one used in other academic articles where fields of study were shown to be a relevant predictor of labour market performance (Torche, 2011; Davis and Guppy 1997; Hansen, 1996), because the main emphasis regards highly regulated fields of study that give access to specific professions⁴⁵. This classification gives us the opportunity to study in more depth the effect of social class of origin and thus focusing on finer distinctions for profession of parents in family of origin.

The second outcome variable refers to graduates' social class or occupational position at the beginning of the professional carrier of respondents. This variable is measured at big- and meso-class level, and then through micro-classes of professionals as in the previous chapters expect for the more detailed classification of meso-classes; this is also valid for social origins. Big- and meso-class classification is as follows:

- high level entrepreneurs (I);
- high level managers (I);

44 Table C1, shows the distribution of frequencies of the outcome variable with 10 categories used in the multinomial logistic regression models.

45 See the appendix C for the distribution of the outcome and the explicative variables of this chapter; Including the frequency distribution of the cross-tabulation of fields of study and social origins.

- high level professionals (I);
- low managers(II);
- low professionals (II);
- teachers – except for university professors (II)
- skilled white collars (IIIa);
- routine non-manual (IIIb);
- self-employed with no or few employees (IVab);
- farmers (IVc);
- skilled manual working class (V-VI);
- unskilled manual working class (VIIab); which are aggregated in the reference category because of the few number of respondents in these lower social classes⁴⁶.

Micro classes of high level professionals are classified as follows:

- professionals in scientific fields, such as physicists, chemists, mathematicians, geologists;
- architects;
- engineers;
- professional in life science and veterinarian;
- professionals in medical science;
- legal professionals, such lawyers and notaries;
- professionals in social science, including political science;
- professionals in economics science⁴⁷.

The explicative variables concern the occupational position of the father and refers to the occupational situation when the respondent was 14 years old.

Due to a data limitation, pharmacists and veterinarians, are clustered with other numerically little categories of professionals, such as biologist, or pharmacologists⁴⁸;

46 Table A2 shows distribution of frequencies of the aggregate and disaggregate level of social class of origin.

47 Other professionals which miss important information for a classification in these groups are or artists and actors which are far away from the research interest of this thesis, and are aggregate (even if this could be a unconventional choice to make) with the meso class of lower level professionals.

48 In order to approximate the composition of these two professional groups codified with Isco code at 4 digits, it can be useful to use another other data sets, such as ILFI, in which father's occupation is codified with this code. Thus, looking at graduates' professional fathers, pharmacists are 83% of professionals in life science. Accountant as well are the major group of professional in economics science.

The differentiation between employed and self-employed professional fathers characterizes the last outcome variable of this chapter. In order to simplify the results illustration I focus on the service class⁴⁹ (as well as for the explicative variable). As control variables I use, gender, geographical areas (North East, North West, Centre, South, Islands), age⁵⁰, nationality, secondary educational path and grades, and education of the father⁵¹.

4.3.3. *Methods*

In order to verify this chapter hypotheses, multinomial logistic regression models are employed. Indeed, I have two dependent categorical variables: the first concerning 10 fields of study and the second regarding 18 categories social destinations (at disaggregated level). This is to assess the influence of social origin over the likelihood to obtain a degree a specific field of study or to reach a specific class of destination⁵². Thus, model 1 takes into consideration social origin at aggregate level and the first outcome variable, whereas model 2 considers social origin at disaggregated level. Model 2 run with men and women separately. Model 3 concerns the second outcome which is a 8-categories concerning professionals micro-classes within the respective meso-class.

These models do not control for professionals employment situations; whereas in model 4 the employment situation is considered separately by using the second outcome variable (social destinations).

Results are shown in graphical form to enable an easier interpretation of the coefficients and the related significance.

Furthermore, in order to overcome problems which may arise in confronting the magnitude of logit coefficients between different groups (Pisati 2003), I

49 For this analysis the baseline category is not Humanistic field or lower social classes, but professionals in social science, including political science, and professionals in humanities (as high level professors). This is valid also for social origin. Moreover, this choice is suggested by the other big- and meso- classes composed by self-employed only, such as higher entrepreneurs or IVab.

50 Given the pre-existing aggregation 4 classes, and the analysis of graduates with Master degrees, (or a 4 - 6 years degree) age can be inserted in the model just in a dichotomous form.

51 Distributions of frequencies are reported in the appendix C in Table C3 and in Table C4.

52 Multinomial logistic regressions results can be claimed as robust because I also tried to use the same variables with different models, such as multinomial probit. Again results remain almost the same. This is why I decided to report in the thesis just the multinomial regression results.

present Average Marginal Effects (AME henceforth), exploiting their easier interpretation in terms of average differences in probability to graduate in a field of study between classes, calculated in percentage points .

4.4. Models and results

4.4.1. The association between social origins and of fields of study: disaggregating the professionals meso-class into micro-classes.

Figure 4.1 shows the effect of social origin, measured at an aggregate level, on the probability of graduating in fields of study which are required for access to professions in Italy, such as pharmaceutical science, medicine, pharmacy and veterinarian, and law.

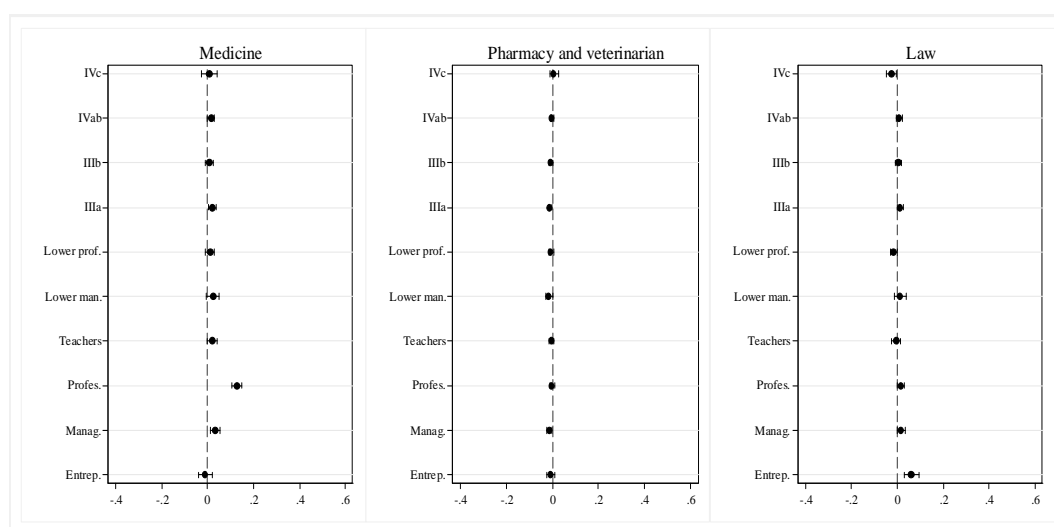


Figure 4.1. Average marginal effects⁵³ from multinomial logistic regression model for the probability of graduating in medical science, pharmacy and veterinarian and law, according to the big- and meso-classes of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbobchi professionali dei laureati (2011).

⁵³ AME, reflects the probability of graduating in a field due to a marginal change in the independent variable of interest, social class, depending on the reference category employed. The baseline category of the dependent variable is humanistic fields. This is not reported in the next plots legend because it can be considered as implicit.

As graphically illustrated children of the higher classes, especially those of professionals meso-class, have a greater propensity than children of the other social classes to graduate in medicine. In the case of pharmacy and veterinarian or law there is no significant difference among social classes.

When referring to the net of controls, the highest AME in medicine for graduates whose fathers are high professionals is that of 12.7 percentage points.

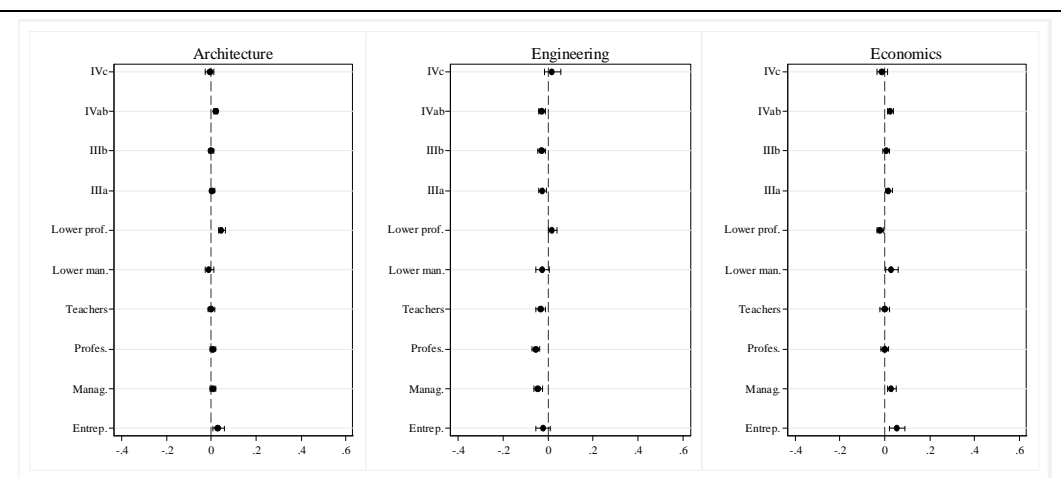


Figure 4.2. Average marginal effects from multinomial logistic regression model for the probability of graduating in architecture, engineering and economics, according to the big- and meso-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (III b); petite bourgeoisie (IVab); farmers (IV c). Source: ISAT- Sbobchi professionali dei laureati (2011).

As for architecture, the higher propensity is found among the meso-class with graduates who have fathers belonging to the low level professionals (service class II). Concerning engineering the AME of the high level professionals is even negative comparing with other non-significant social classes.

No significant AME are found among social classes in the field of economics. The same picture is also regarding figure 4.3. and therefore scientific fields, social and political science and health science (except for medicine).

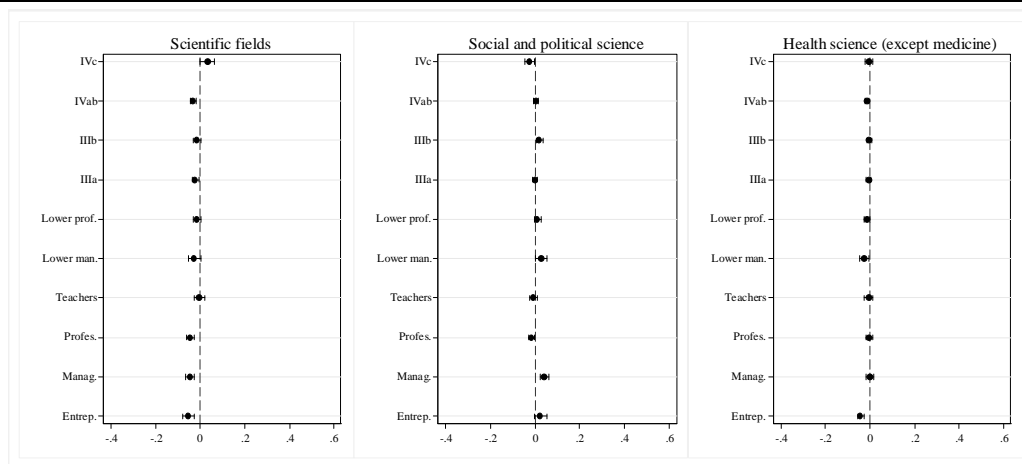


Figure 4.3. Average marginal effects from multinomial logistic regression model for the probability of graduating in scientific fields, social and political science, health science (except medicine), according to the big- and meso-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME. of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbobchi professionali dei laureati (2011).

Overall, big-class and meso-classes seem to suggest that social origins plays a very limited role on graduating in a specific field of study. At this point it is worth introducing micro-classes of professionals in the analysis. Indeed, a different representation emerges considering medicine, law, pharmacy and veterinarian.

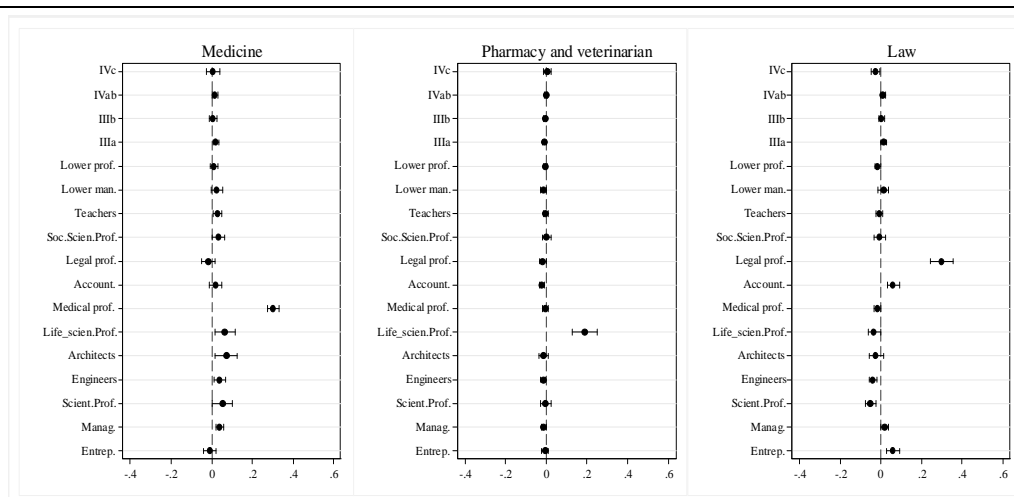


Figure 4.4. Average marginal effects from multinomial logistic regression model for the probability of graduating in medicine, pharmacy and veterinarian, law, according to the micro-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (gender, age, parental education, nationality,

geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbcchi professionali dei laureati (2011).

Figure 4.4. shows that children of high professional fathers in life science (such as pharmacists or veterinarians) have a high propensity to graduate in a field in line with the professional positions of their fathers. Indeed, the AME for pharmacy and veterinarian is 17.9, whereas for all the other classes of origin AME does not reach more than 1.5 percentage points. The evidence indicates that a similar pattern is also found when considering medical fields. As for as law: having a father who operates as a professional in the field of legal science, leads to a high AME of 30 percentage points.

It is also useful comparing the evidence as illustrated by figure 4.5. with of the big- and meso-class analysis.

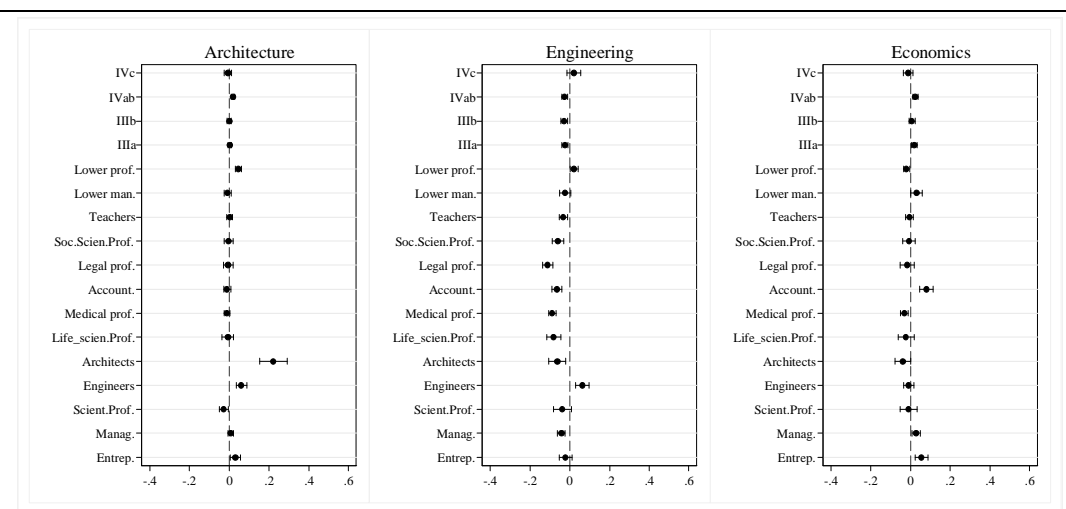


Figure 4.5. Average marginal effects from multinomial logistic regression model for the probability of graduating in economics, engineering and architecture, according to the micro-class of origin (ref. cat. working class-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source : ISAT- Sbcchi professionali dei laureati (2011).

Specifically, when we take into consideration the class and field affinity in architecture, the AME is that of 22.4 percentage points; whereas the AME do not reach a very high level for the class and field affinity in engineering and

economics fields. However, AME are significant if compared with those of the big- and meso-classes.

While the big-class approach does not show a significant propensity for a precise social class of origin, a specific perspective does. Furthermore, big-classes seem to partially cover the intergenerational transmission of professional positions. I remind to the reader that here inference can regard Italian graduates only (specifically MA graduates).

In the case of fields of study that do not give access to a licensed profession, both big- and micro-classes show a similar picture. I do not report in this paragraph AME, but I show them graphically in figure 4.6. in Appendix C.

In the next paragraph gender differences are considered, aiming to partially fill the lack of the previous chapter.

4.4.2. Analyzing the association between big-,meso- and micro-classes of high level professionals and fields of study separately by gender

As previously discussed there is a higher propensity in graduating in more generalist fields for women belonging to lower social class of origin, rather than for men. But, according to the focus of this chapter and the evidence of the previous paragraph, it is necessary to concentrate the attention on micro-classes. Indeed, after the comparison between big- and micro-classes we need to know how gender differences are articulated within micro-classes of professional fathers.

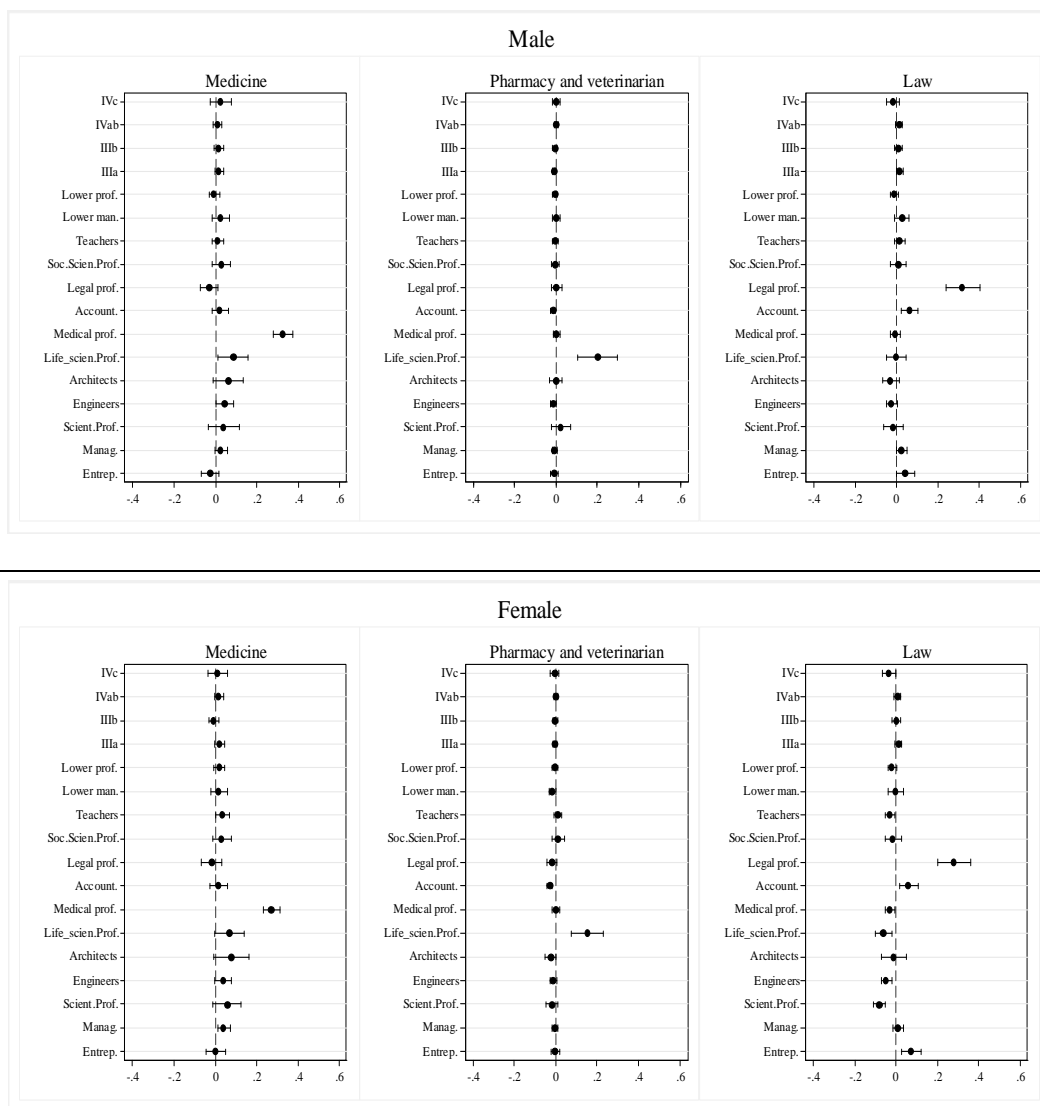


Figure 4.7. Average marginal effects from multinomial logistic regression model for the probability of graduating in medicine, pharmacy and veterinarian, law by gender, according to the micro-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbobchi professionali dei laureati (2011).

As figure 4.7. shows for medicine, pharmacy and veterinarian, and law the affinity between social origins and fields of study is relevant for both men and women.

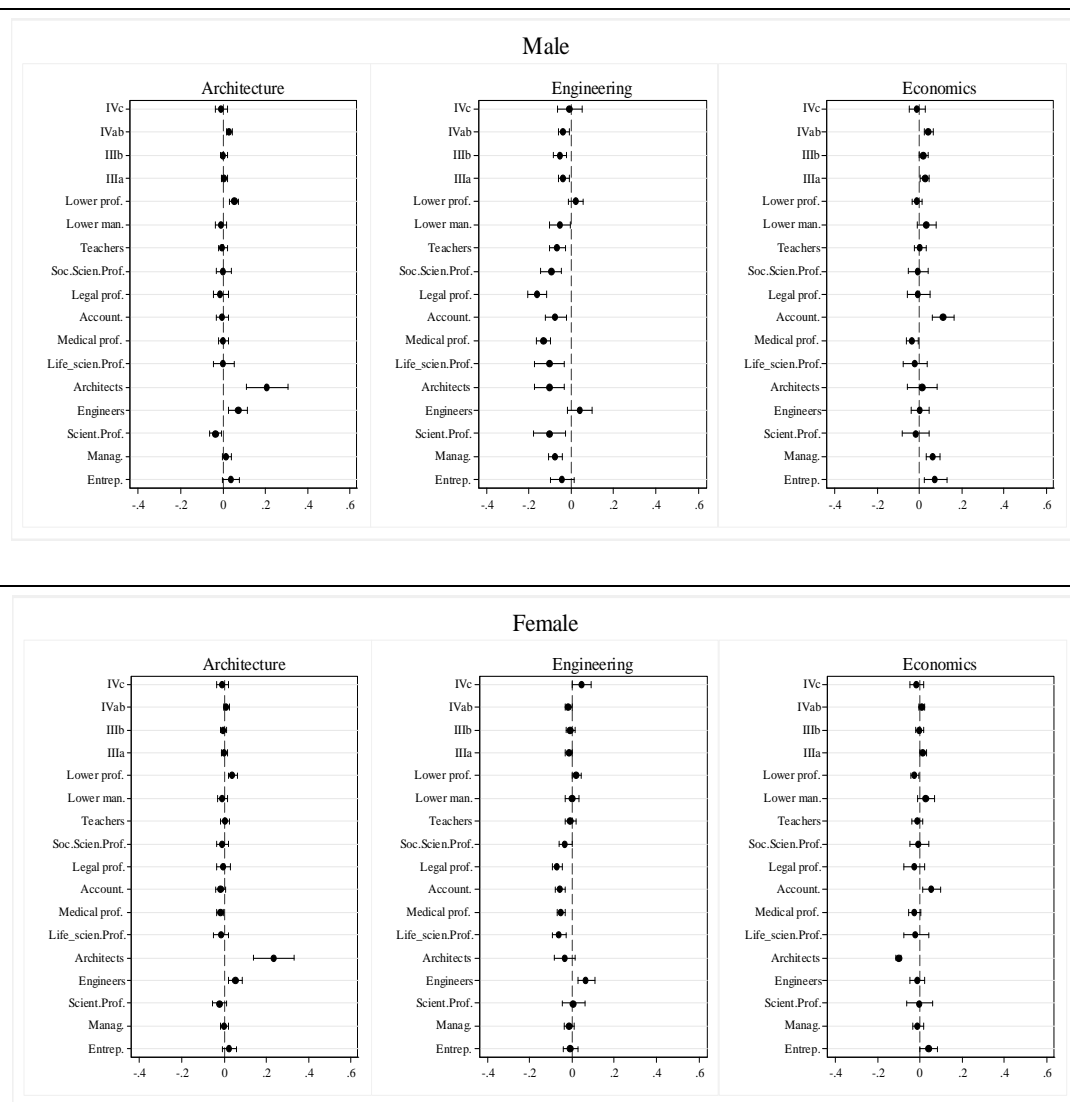


Figure 4.8. Average marginal effects from multinomial logistic regression model for the probability of graduating in economics, engineers and architecture by gender, according to the micro-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbcchi professionali dei laureati (2011).

On the contrary figure 4.8. shows that respondents follow in the father footsteps in different ways. Between men and women in architecture there is just a little difference; but, for women having a architect as a father makes the

difference, and it does not when considering men. In economics having a father in the same field is statistically important for both men and women.

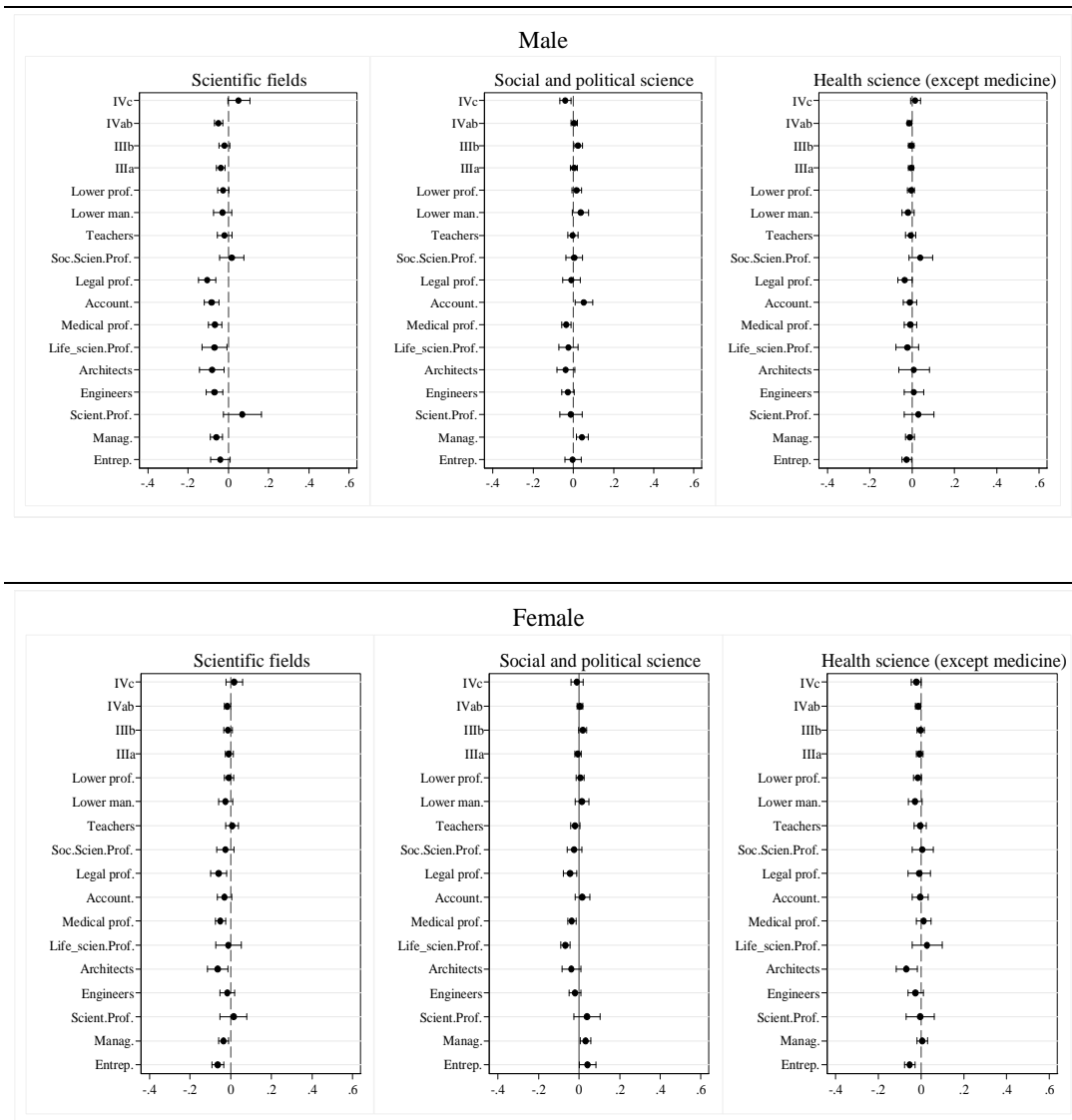


Figure 4.9. Average marginal effects from multinomial logistic regression model for the probability of graduating in scientific fields, social and political science, and health science - except medicine by gender, according to the micro-class of origin (ref. cat. working class V-VIIab). Estimates are at net of controls (age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbocchi professionali dei laureati (2011).

Figure 4.9. illustrates that for fields of study which do not give access to a licensed profession, there are no statistically significant differences for any social class.

At this point I summarize the gender composition of fields of study and I link it with the results reported above.

Tab. 4.1. *Gender composition of field of study and related summary of AME for the affinity between micro-class of origin and graduates' field of study*

Field of study	Male %	Female %	% total	Absolute total	Male AME	Female AME
Medicine	39.89	60.11	100	5009	32.5%	27.1%
Phrm.+veteran.	36.35	63.65	100	1026	20.1%	15.4%
Law	39.77	60.23	100	2756	32%	28.2%
Architecture	46.93	53.07	100	1854	20%	23%
Engineer	19.03	8.02	100	4042	0.01%	0.7%
Economics	49.81	50.19	100	3391	11.9%	10.9%
Scientific fields	52.38	47.62	100	3549	0.07%	1.14%
Soc+pol.science	47.96	52.04	100	2550	3.5%	1.4%
Health (except medicine)	31.58	68.42	100	2058	0.4%	0.01%

As table 4.1. shows when the majority of students that attend a field of study is female, such as for medicine, pharmacy and veterinarian, and law the influence of a professional father is more important for men than women; on the contrary, such as for engineering having a engineer as a father is central (and statistically significant) for women. When a field of study is gender proportionate AME do not present a great difference between men and women. This is as figure 4.9. that shows results for fields of study that do not give access to a licensed profession.

It seems that professional micro-classes are able to weaken some gender stereotypes (or common thoughts), such as engineering for men.

4.4.3. The analysis of the Origin-Destination association considering the employment condition of the fathers' micro-class.

The last part of the analysis concerns the Origin-Destination association, considering the second outcome variable (with no distinction between the

employment situation of professional respondents) and the usual explicative variable at disaggregated level⁵⁴.

Figure 4.10. shows that results are very similar to the ones in the previous section regarding the analysis of Origin-Education in a horizontal dimension. The association between fathers' professions and respondents' fields of study very often conduces the respondent to practice the same professions as their parents. Results of this chapter illustrate that education can be seen as a means that leads to a specific licensed profession rather than just increase social equality and modernization.

⁵⁴ I do not show results in graphical form for professionals in the scientific fields because, as already shown above, they do not present any social class that differs in propensity from the others.

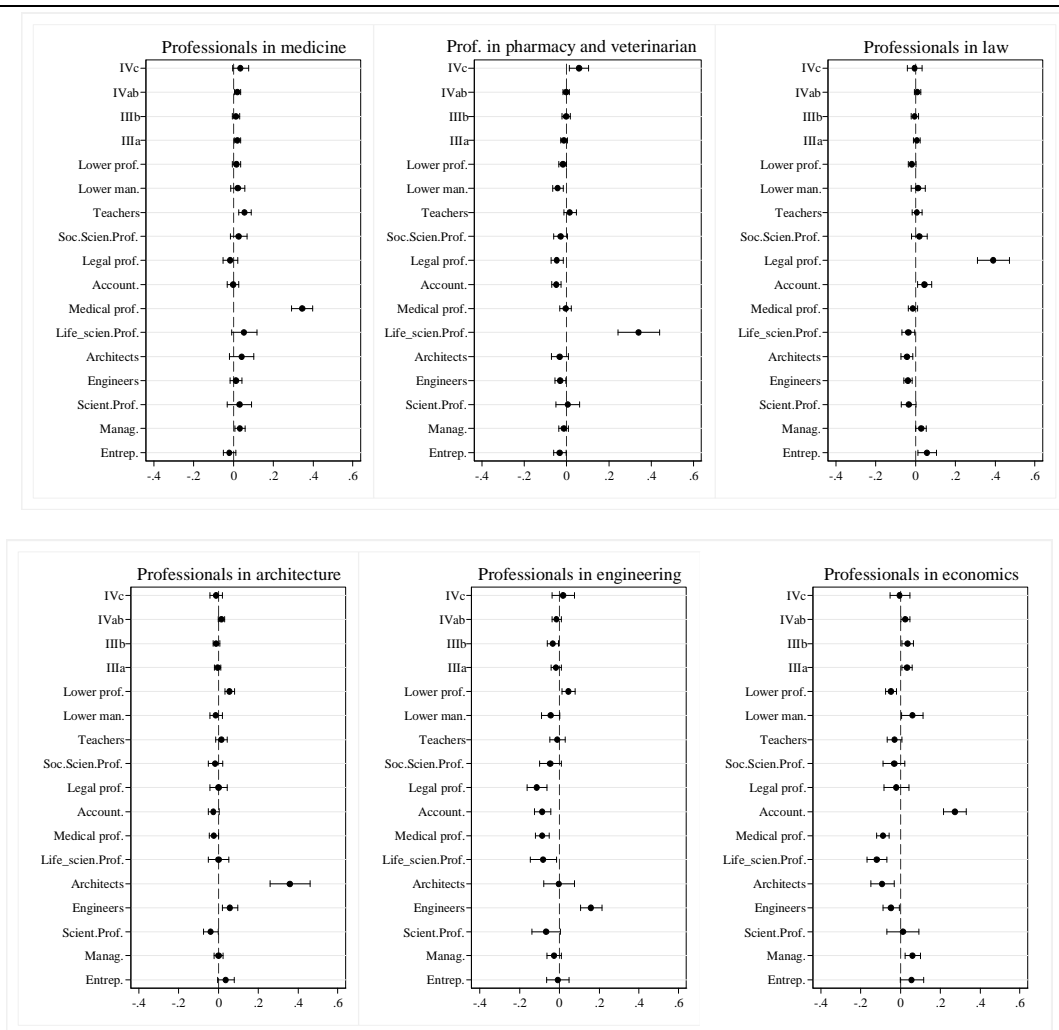


Figure 4.10. Average marginal effects from multinomial logistic regression model for the probability of being a professional in medicine, in pharmacy and veterinarian, and in law, in architecture, in engineering and in economics, according to the micro-class of origin (ref. cat. working class-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc). Source: ISAT- Sbobci professionali dei laureati (2011).

When the field of study gives access just to a specific profession, such as medicine or pharmacy and veterinarian, these results seem a perfect match between the professional fathers' micro-classes and the tertiary educational level, while when looking at economics or law this match is less certain because these fields of study can also be used to achieve other kinds of professions, such as

managerial positions. Looking at graduates, the core prediction of the social closure theory seems to characterize the Italian case.

In illustrating results of the OD association I start from figure 4.11. in which I separate the employment situation of the professional fathers, specifically employed and liberal professional (self-employed). This analysis is important for the focus of the chapter because it allows to demonstrate that inheriting the professional business of fathers increase the propensity of their children to follow in their footsteps. Then, if Italian graduates are considered, it helps to partially cover the lack of the previous chapter.

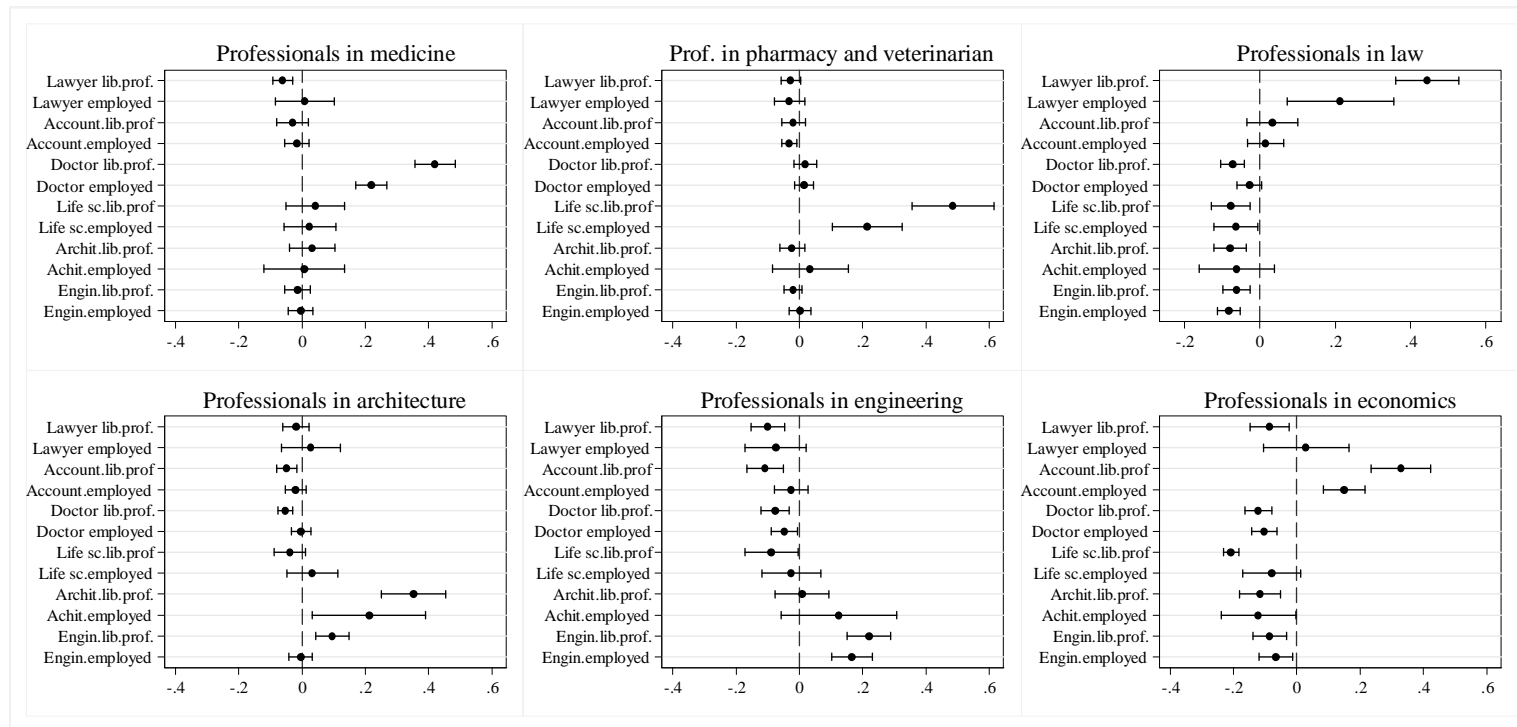


Figure 4.11. Average marginal effects from multinomial logistic regression model for the probability of being a professional in architecture, in engineering, and in economics, according to the micro-class of origin (ref. cat. in social, political and humanities). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Source: ISAT- Sbocchi professionali dei laureati (2011).

As Figure 4.11. illustrates when there is the opportunity to inherit the professional business of the father professionals', children are more inclined to graduate and become full members of a professional group as their parents.

This figure does not differ by gender but just by the employment situation of the professional fathers. The most impressive results regard medicine for which having a liberal professional father increases the affinity with children's destination of an AME of 44 percentage points. In this case also having an employed doctor as a father makes the difference reaching an AME of 21.1 and it is statistically significant in comparison with all the other social classes. This situation is also very similar for professionals in pharmacy and veterinarian and for legal professionals; for the former, having a liberal professional as a father conduces to an AME of 48.5 percentage points, for the latter the AME reach 44. For employed professionals in both these cases AME are about 21.

Concerning accountants AME are statistically significant compared to the other social classes just in the case of liberal professional fathers, whereas for engineers and architects there are no differences between liberal professional and employed professional fathers (indeed confidence intervals overlap).

Below, by using the same model, I separate men from women.

Tab. 4.2. *AME for the affinity between professional micro-class of origin and professional micro-class of destination by employment situation of the respondent's professional father (as micro-class of professionals) and by gender.*

Field of profession	Male AME %	Female AME %
Liberal professionals in medicine	45.89 (0.04)	37.52 (0.05)
Employed professionals in medicine	20.1 (0.03)	23.71 (0.04)
Liberal professionals in pharmacy and veterinarian	49.31 (0.09)	51.76 (0.09)
Employed professionals in pharmacy and veterinarian	28.99 (0.08)	13.66 (0.07)
Liberal professionals in law	40.71 (0.09)	49.21 (0.07)
Employed professionals in law	28.28 (0.06)	10 (0.09)
Liberal professionals in architecture	21.23 (0.06)	54.41 (0.05)
Employed professionals in architecture	34.37 (0.15)	11.70 (0.11)

Liberal professionals in engineering	27.07 (0.03)	15.87 (0.04)
Employed professionals in engineering	17.25 (0.03)	15.02 (0.05)
Liberal professionals in economics	33.43 (0.07)	30.37 (0.07)
Employed professionals in economics	15.84 (0.05)	12.40 (0.05)

Standard errors in parenthesis.

Source: ISAT- Sbocchi professionali dei laureati (2011).

Although, according to the literature that claims that inheriting a professional business (see Orsini and Pellizzari 2012) is more likely for men, results show that also women are reducing the gap with men. Even if AME for men are higher than women. The only exception for which women are more incline than men to inherit the business of the professional father is in the field of architecture. This is still in favor of men when fathers are employed architects.

4.5. Conclusive remarks

The chapter examined the Origin-Education-Destination triangle in a more detailed way than the others traditional studies. Indeed, I combined big-classes, meso-classes and micro-classes of professionals in order to better understand the educational and occupational inequalities. By using a large sample of Italian graduates, this chapter went through arguments that previous one could not consider because of data limitations. Indeed it analysed gender differences and it took into consideration the employment conditions of both respondent and fathers. What I did not examine to get a more complete picture of educational inequalities is the choice of the fields of study by looking at students in the upper secondary education. This is because of a lack of information about father occupational positions. Thus, as a first suggestions for future studies is to consider students choice of tertiary field of study.

The evidence shown that when professionals are licensed the level of their intergenerational immobility is very high, whereas for all the others professionals

this immobility is low. This emerged by considering both respondent education and occupation.

Considering gender differences, when the majority of students attended a field of study is female, such as for medicine, pharmacy and veterinarian, and law the affinity with a professional father in such fields is more important for men than women, on the contrary, in engineering having an engineer as a father is more important (and statistically significant) for women.

As illustrated in the last part of the chapter when there is the opportunity to inherit the professional business of the father professionals' children are more incline to graduate and become full member of the professional group as their parent.

The most impressive results regarded medicine for which having a father liberal professional increases the affinity with children's destination. This situation is very remarkable for professionals in medicine, pharmacy and veterinarian and legal professionals. Whereas for engineers and architects there were no differences between liberal professionals and employed professionals.

I also studied the gender differences in the Origin-Destination association and even if the literature claims that inheriting a professional business (Orsini and Pellizzari 2012) is much pronounced for men, results shown that women are reducing the gap with men. The gender difference does not seem unlikely to disappear in next future. I also illustrated that women were more incline than men to inherit the professional business of the father when considering the field of architecture. This was in favour of men in the case of employed architects.

This chapter analysis demonstrated that social closure and credentialism are useful theories to interpret this evidence. As for the micro-class approach with which professionals social reproduction can be discovered. By using this sample, this chapter illustrated that big- and meso- class approach does not allow shedding light on social inequalities concerning licensed professionals.

Conclusions

This thesis has focused on the role of social closure for the intergenerational reproduction of regulated professionals in five European countries. Indeed, social closure theory demonstrated to be a fruitful theory able to capture social class inequalities in their horizontal dimension, such as immobility processes within micro-classes of licensed professionals and fields of study at tertiary educational level. Moreover, credentialism theory was useful to frame the phenomenon of educational inequalities considering fields of study.

The combination of these theories and the micro-class approach of Grusky and associates allowed to disentangle different groups of professionals and to analyse into details their dynamics of social reproduction. Indeed, these professionals reproduction is strictly linked to the transmission of the four kinds of resources as discussed in the theoretical chapter. Moreover, another mechanism linked to social closure is the legal closure for which the level of institutionalization varies across European countries. As in chapter two and three, the correlation between the social reproduction of licensed and unlicensed professionals and the level of regulation shown that it varies according to the profession and to the country institutions characteristics. The stronger the structure of the education and labour market the higher is professional regulation and professionals' intergenerational immobility. An example can be illustrated with two countries to the extreme of social openness and structuration of country institution, such as Sweden and Germany (*see* chapter two). When considering correlation, explained above, in Germany and in Sweden results are very different. In Germany, licensed professionals immobility linked to the level of regulation shown a strong pattern, while for unlicensed professionals no pattern emerged (intergenerational immobility for these professions was very low); no such gap between licensed and unlicensed professionals was found in Sweden.

Moreover, chapter two demonstrated that in each of the four countries considered, Sweden, Great Britain, Denmark and Germany, there are strong big- and meso-class rigidities, but micro-classes strongly contribute to the upper class immobility. Thus, micro-classes are able to reveal that different fractions of the

upper class have distinctive characteristics, especially when considering micro-classes of professionals.

The second chapter results suggested that micro-class reproduction fuelled by social closure works predominantly for men (in all countries but Germany), while for women it appears to be of limited importance. This gendered pattern was unexpected, though it may be noted that Jonsson et al. (2009) reported a similarly attenuated micro-class pattern for women. It is worth stressing that in the empirical analyses only the father's occupation was considered and that the mother's occupation may be more relevant for daughters. I also mentioned that selection into employment was another potential limitation of the analyses concerning women. Future studies by using large samples should go into details of micro-class patterns for women across European countries, including mothers' occupational positions.

This chapter considered two complementary mechanisms that are in place to the immobility of professional children (meso-class rigidity) in the upper class: first, processes of social closure erect barriers between professions and fuel micro-class immobility at the top, second, the cultural proximity of different professional groups drives intense intergenerational exchanges between them.

Chapter three, concerning Italian men, shown a different picture. From one hand, the transmission of resources can take place in a more abstract dimension. Indeed, a relevant result for the literature on social mobility in Italy was added because the analysis of this chapter indicated that in Italy safety-nets work very well for sons of the upper class at both meso- and big-class levels. From the other hand, it also demonstrate that it is important not to take for granted the willingness of children to pursue their parents' career, especially if it provides access to many other attractive options. Indeed, Italian men seem to find attractive other positions within the whole upper class. Both these two mechanism could increase the social immobility of son of the upper class.

In Chapter four, I examined the Origin-Education-Destination triangle in a more detailed way considering Italian graduates. I combined big-, meso- and micro-classes of professionals in order to understand the educational and occupational inequalities at the top of the hierarchy in Italy thorough a micro-level perspective. Results shown that when a profession is licensed the level of intergenerational immobility is very high, whereas for all the others professions

this immobility is low. This can be seen since graduation in a specific field of study: the strongest OE association regarded medicine, pharmacy and veterinarian, law and architecture.

Considering gender differences, when the majority of students that attend a field of study is female, such as for medicine, pharmacy and veterinarian, and law the influence of a professional father is more important for men than women; on the contrary, such as for engineering, having a engineer as a father is more important for women. In my opinion these processes take place because micro-classes reinforce occupational preferences of licensed professionals' children. This remind the cultural reproduction theory as in chapter one. These gendered results seem to suggest that micro-classes are able to weaken some gender stereotypes (or common thoughts) for which people give gendered representations of occupations, as for engineering that is more suitable for men than women, or vice-versa, midwives are more appropriate occupational position for women than men. Step by step, some social changes can occur when considering gender differences as in chapter four.

I also found that when there is the opportunity to inherit the professional business of the father, professionals' children are more inclined to graduate and become full members of the professional group of their parents. In medicine, having a father liberal professional increases the affinity with children's destination. This situation is also very remarkable for professionals in pharmacy and veterinary and for legal professionals. No such results were found considering professionals in economics in the employed situation. This evidence could be unsurprising for the reader, but at least this thesis, in this case chapter four, sheds light on the magnitude of this social phenomenon, which it has been disregarded for a long time by social mobility studies in Italy.

Along with the results of these chapter, I also studied graduates gender differences in the Origin-Destination association and even if the literature claims that inheriting a professional business (*see* Orsini and Pellizzari 2012) is much pronounced for men, results shown that women are reducing the gap with men. The gender difference does not seem unlikely to disappear in next future.

Then, parent's occupation influence is more important for women than men to inherit the professional business of the liberal professional father is in the field of architecture. This is still in favour of men in the case of employed architects.

To my knowledge, studies on gender difference combined with the employment condition of licensed professionals are really few or they do not exist.

Future studies should get in depth of the focus of this thesis, for example employing statistical methods which allow finding a causal relationship between the level of restrictiveness of licensed professional service and rates of intergenerational immobility and of course considering professional women.

According to the transmission of resources to professionals' children, when professional closure expands the economic profitability of these professions, it enhances the incentives for these children to follow in their parents' footsteps. This mechanism is reinforced considerably if parents can transfer a family professional business to their children and, most importantly, a client portfolio; And licensed professionals parents seem to be open to give these kinds of chances to their daughters too.

To sum up, the mainstream, big-class explanations focus on the amount of generalised resources relevant for a broad range of occupations, while the micro-class approach focuses on occupation-specific resources valued in a narrow set of occupations, where they ensure strong competitive advantages, when professionals' children are willing to follow in their parents' footsteps. However, *tertium datur*: meso-class rigidities reflect resources that are qualitatively differentiated, but relevant for a broader set of occupations. So, rather than engaging in a contest between micro- and big-class approaches, I illustrated three distinct sets of rigidities operating at different levels that work as complementary routes to social immobility.

The analytical strategy, indeed, included big-, meso- and micro-level in the analysis of the upper class immobility. This strategy allowed to consider the cultural, cognitive, social and economic resources for each level: from the broader abstract knowledge to the occupation-specific capital.

Additionally, this thesis gave attention to that the connection between micro-dynamics of intergenerational transmission of specific occupational skills and the level of institutionalization of professional groups because it plays a key role in the investigation of the mobility regime of these regulated professionals.

As well, when institutionalization of profession is well defined, such in the case of Italy, the regulation can affect the social reproduction of licensed professionals since tertiary education. Thus, even if big-class remains a useful and

important approach in social mobility studies this thesis aims to contribute to the literature shedding light on social inequalities by using micro-classes. In other words, this thesis analyses indicated that the children of licensed professionals display a particularly strong relative propensity to inherit the specific profession of their fathers and also that this stronger micro-class immobility translates into higher chances of persistence in the higher service class.

The interpretation I provided takes two factors into account: the first one regards social closure, which enhances the economic profitability of professions and thus produces incentives to follow into the parents' footsteps. The second one regards access barriers to regulated professions, such as long university studies, professional practice and selective entry exams, which increase the costs and risks of failure for outsiders.

When meso- and big-class shown strong rigidities (see chapter three) the interpretation included safety-nets and professionals children willingness children not to pursue the same career as their parents, if their family resources provide access to many other attractive options specifically in the whole upper class.

Of course, by considering results of chapter four, the analyses of the previous one should be rerun with a bigger sample, including women, and finally maintaining the same analytical strategy.

References

Abbott, A.

1988 *The system of professions: an essay on the division of expert labour*, Chicago, Chicago University Press.

Autorità Garante della Concorrenza e del Mercato,

2009 *Il settore degli ordini professionali*, Indagine conoscitiva n. 34

Barbagli, M. and Schizzerotto, A.

1997 *Classi, non caste. Mobilità tra generazioni e opportunità di carriera in Italia*, in «il Mulino», Vol. 3, pp. 547-557.

Barone, C.

2005a *La teoria della scelta razionale e la ricerca empirica. Il caso delle disuguaglianze educative*, in «Rassegna Italiana di Sociologia», Vol. XLVI, n. 3, pp. 411-446.

2005b *È possibile spiegare le disuguaglianze di apprendimento mediante la teoria del capitale culturale?*, in «Polis», Vol. 2 pp. 173-202.

2011 *Some things never change: gender segregation in Higher Education across eight countries and three decades*, «Sociology of education», Vol. 84, n. 2, pp.157-176.

Barone C., Lucchini M. and Schizzerotto, A.

2011 *Career Mobility in Italy: a growth curves analysis of occupational attainment over the 20th century*, in «European Societies», Vol. 13 n. 3, pp. 377-400.

Barone, C., Luijkx, R. and Schizzerotto, A.

2010 *Elogio dei grandi numeri: il lento declino delle disuguaglianze nelle opportunità di istruzione in Italia*, «Polis», Vol. 1, pp. 5-34.

Barone, C. and Schizzerotto, A.

2011 *Career mobility, education, and intergenerational reproduction in five European societies*, in «European Societies», Vol. 13, n. 3, pp. 377-400.

Bednar, W., Lanske, P. and Schaffenberger, E.

2004 *Regulation of the professions of psychotherapist, clinical psychologists, health psychologists in the Member States of the EEA and the Swiss Confederation*, Report Commissioned by the Austrian Federal Ministry for Health and Women, <http://www.pce-europe.org/file/Infos/Publ-EEA-Regulations.pdf>

Black, J.

1996 *Constitutionalising Self-Regulation*, «Modern Law Review», Vol. 59, pp. 24-55

Blau, P. M. and Duncan, O. G.

1967 *The American Occupational Structure*, New York, Free Press.

Bol T. and Weeden K.

- 2014 *Occupational Closure and Wage Inequality in Germany and the United Kingdom*, «European Sociological Review» Vol. 30, n. 6, pp. 1-16.
- Boudon, R.
 1974 *Education, opportunity, and social inequality: changing prospects in Western society*, New York, Wiley.
 1981 *The logic of social action*, London, Routledge and Kegan Paul.
- Bourdieu, P.
 1974 *Education, Opportunity, and Social Inequality: Changing Prospects*, Western Society, New York, Wiley and Sons.
 1977 *Cultural Reproduction and Social Reproduction, in Power and Ideology in Education*, (eds.) J. Karabel and A. H. Halsey, New York, Oxford University Press, pp. 487-511.
 1979 *La distinction: Critique sociale du jugement*, Paris, Minuit; trad. it. *La distinzione: critica sociale del gusto*, Bologna, Il Mulino, 1983.
 1986 *The Forms of Capital*, in *Handbook of Theory and Research for the Sociology of Education*, (eds.) J. G. Richardson, New York, Greenwood Press, pp. 241-258.
- Bourdieu, P. and Passeron, J.C.
 1977 *Reproduction in Education, Society, and Culture*, Beverly Hills, Sage.
- Brante, T.
 2010 *Professional fields and truth regimes: In search of alternative approaches*, in «Comparative Sociology», Vol. 9, pp. 843-886.
- Breen, R.
 1996 *Regression Models: Censored, Sample Selected or Truncated Data, Quantitative Applications in the Social Sciences*, Thousand Oaks, Sage Publications.
 2004 *Social mobility in Europe*, Oxford, Oxford University Press.
- Breen, R. and Goldthorpe, J.H.
 1997 *Explaining educational differentials: towards a formal rational action theory*, in «Rationality and Society», Vol. 9, pp. 275-305.
- Breen, R. and Jonsson, J. O.
 2000 *Analyzing Educational Careers: A Multinomial Transition Model*, in «American Sociological Review», Vol. 65, n. 5, pp. 754-772.
- Breen, R.
 2004 *Social Mobility in Europe*, Oxford, New York: Oxford University Press, 2004.
- Breen, R., Luijckx, R., Müller, W., and Pollak, R.
 2009 *Nonpersistent inequality in Educational attainment: evidence from eight European countries*, in «American Sociological Review», Vol. 114, n. 5, pp. 1475-1521.
- Breen, R. and Yaish, M.

2006 *Testing the Breen–Goldthorpe model of educational decision making*, in *Social and Economic Mobility Frontiers*, (eds.) S. L. Morgan, D. B. Grusky, and G. S. Fields, Stanford, Stanford University Press, pp. 232–258.

Brunello, G. and Checchi, D.

2007 *Does school tracking affect equality of opportunity? New international evidence*, in «Economic Policy», Vol. 22, pp. 781 - 861.

Carr Sanders, A. M. and Wilson, P. A.

1933 *The Professions*, Oxford University Press, Oxford.

Checchi, D.

2010 *Immobilità diffusa: perché la mobilità intergenerazionale è così bassa in Italia*, Bologna, il Mulino.

Chiesi, A.M.

1997 *Lavori e professioni. Caratteristiche e mutamenti dell'occupazione in Italia*, Roma, La Nuova Italia Scientifica.

2008 *L'origine sociale nel successo dei laureati AlmaLaurea* in «X Rapporto sulla condizione occupazionale dei laureati. Formazione universitaria ed esigenze del mercato del lavoro», Il Mulino.

Coleman J.S.,

1990 *Foundations of Social Theory*, Cambridge (Mass), The Belknap Press of Harvard University Press.

Collins, R.

1971 *Functional and Conflict Theories of Educational Stratification*, in «American Sociological Review», Vol. 36, n. 6, pp. 1002–1018.

1975 *Conflict Sociology: Toward an Explanatory Science*, New York, Academic Press.

1979 *The Credential Society: An Historical Sociology of Education and Stratification*, Orlando, Academic Press.

Dalton, R.J. and Klingemann, H.D.

2007 *The Oxford Handbook of Political Behaviour*, Oxford: Oxford University Press.

De Graaf, P. M. and Kalmijn, M.

2001 *Trends in the Intergenerational Transmission of Cultural and Economic Status*, in «Acta Sociologica», Vol. 44, n. 1, pp. 51-66.

Durkheim, E.

1893 *De la division du travail social: Étude sur l'organisation des sociétés supérieures*, Paris, Alcan; trad. it. *La divisione del lavoro sociale*, Milano, Edizioni di Comunità, 1962.

Erikson, R. and Goldthorpe, H.

1992 *The Constant Flux*, Oxford: Oxford University Press.

Esping-Andersen, G.

- 1990 *The three worlds of welfare capitalism*. Princeton, New Jersey: Princeton University Press
- Evetts, J.
2006 *Trust and professionalism in knowledge societies*, «Current Sociology», Vol. 54, n. 4, Monograph 2.
- Fabbri, F. and Rossi, N.
1997 *Caste, non classi. Una società immobile*, in «il Mulino», Vol. 1, pp. 110-116.
- Faure, M., Finsinger, J., Siegers, J. and Van Den Bergh, R.
1993 *Regulation of professions: A law and Economics approach to the regulation of attorneys and physicians in the US, Belgium, The Netherlands, Germany and the UK*, Intersentia, Antwerpen.
- Freidson, E.
1970 *Profession of Medicine: A Study of the Sociology of Applied Knowledge*, Chicago, University of Chicago Press.
1986 *Professional powers: a study of the institutionalization of formal knowledge*, Chicago, University of Chicago press.
2001 *Professionalism: The Third Logic*, Oxford, Polity Press.
- Friedman, M. and Kuznets, S.
1945 *Income from Independent Professional Practice*, New York, National Bureau of Economic Research.
- Gambetta, D.
1987 *Were They Pushed or Did They Jump? Individual Decision Mechanisms in Education*, Cambridge, Cambridge University Press, trad. It. Per amore o per forza? Le decisioni scolastiche individuali, Bologna, il Mulino, 1990.
- Gamoran, A.
2001 *American schooling and educational inequality: A forecast for 21st century*, in «Sociology of Education», Vol. 27, pp. 135-151.
- Garoupa, N.
2006 *Regulation of Legal and Medical Professions in the US and Europe: A Comparative analysis*, Working paper 2006-11, <http://www.fedea.net/documentos/pubs/dt/2006/dt-2006-11.pdf>.
- Goodman, L.A.
1979 *Multiplicative Models for the Analysis of Occupational Mobility Tables and Other Kinds of Cross-classification Tables*, in «American Journal of Sociology» Vol. 84, pp. 804-819.
- Goldthorpe, J. H.
1982 *On the Service Class, its Formation and Future, in Classes and the Division of Labour: Essays in Honour of Ilya Neustadt*, (eds.) A. Giddens and G. MacKenzie, Cambridge, Cambridge University Press.
1987 *Social Mobility and Class Structure in Modern Britain*, Oxford, Clarendon Press.

- 1996 *Class analysis and the reorientation of class theory: the case of persisting differentials in educational attainment*, in «British Journal of Sociology», Vol. 47, 481–505.
- 1998 *Rational action theory for sociology*, in «British Journal of Sociology», Vol. 49, pp. 167–192.
- 2002 *Occupational Sociology, Yes: Class Analysis, No: Comment on Grusky and Weeden's "Research Agenda"*, in «Acta Sociologica», Vol. 45, No. 3, pp. 211–217
- Goode, W. J.
1957 *Community within a Community: The Professions*, in «American Sociological Review», Vol. 22, pp. 194–200.
- Grusky, D. B.
2005 *Foundations of a Neo-Durkheimian Class Analysis*, in *Approaches to Class Analysis*, (eds.) E. O. Wright, Cambridge, Cambridge University Press, pp. 51–81.
- Grusky, D. B. and Sørensen, J. B.
1998 *Can Class Analysis Be Salvaged?* in «American Journal of Sociology», Vol. 103, n. 5, pp. 1187–1234.
2001 *Are There Big Social Classes? in Social Stratification: Class, Race, and Gender*, (eds.) D. B. Grusky, Boulder, Westview Press.
- Grusky, D. B. and Weeden, K. A.
2001 *Decomposition without Death: A Research Agenda for a New Class Analysis*, in «Acta Sociologica», Vol. 44, pp. 203–218.
2011 *Is Market Failure Behind the Takeoff in Income Inequality? The Inequality Reader: Contemporary and Foundational Readings in Race, Class, and Gender*, Boulder, Westview.
- Hanushek, E. A.
2011 *General Education, Vocational Education, and Labour-Market Outcomes over the Life-Cycle*, National Bureau of Economic Research Working Paper Series.
- Hanushek, E. A. and Woessmann, L.
2006 *Does educational tracking affect performance and inequality? Differences-in-differences evidence across countries*, in «Economic Journal», Vol. 116, pp. 63 - 76.
- Hauser, R.M.
1984 *Vertical Class Mobility in England, France, and Sweden*, in «Acta Sociologica», Vol. 27, pp. 87–110.
- Hedström, P.
2005 *Dissecting the Social: On the Principles of Analytical Sociology*, Cambridge: Cambridge University Press,
- Holm, A. and Jæger, M. M.
2008 *Does relative risk aversion explain educational inequality? A dynamic choice approach*, in «Research in Social Stratification and Mobility», Vol. 26, pp. 199–220.

- Joas, H. and Wolfgang, K.
2009 *Social Theory*, Cambridge, Cambridge University Press.
- Johnson, T.
1972 *Professions and Power*, London, Macmillan.
- Jonsson, J. O., Grusky D. B., Di Carlo M., Pollak R. and Brinton, M. C.
2009 *Microclass Mobility: Social Reproduction in Four Countries*, in «American Journal of Sociology», Vol. 114, n. 4, pp. 977-1036.
- Lambert, P. and Griffiths, D.
2011 *Dimensions and Boundaries: Comparative analysis of occupational structures using social network and social interaction distance analysis*, www.socresonline.org.uk
- Larson, M. S.
1977 *The Rise of Professionalism*, Berkeley, University of California Press.
- Lipset, S. and Bendix, R.
1959 *Social Mobility in Industrial Society*, Berkeley, University of California Press.
- Lucas, S.
2009 *Stratification theory, socioeconomic background, and educational attainment: a formal analysis*, in «Rationality and Society» Vol. 21, pp. 459–511.
- MacDonald, K. M.
1995 *The Sociology of the Professions*, London, Sage.
- Maks, J.A.H. and Philipsen, N.J.
2002 *An economic analysis of the regulation of professions*, in L. Vereeck (ed.), *The Regulation of Architects*, Intersentia, Antwerpen.
- Millerson, G.
1964 *The qualifying associations: a study in professionalization*, London, Routledge.
- Murphy, R.
1988 *Social Closure: The Theory of Monopolization and Exclusion*, Oxford, Clarendon Press.
- Need, A. and de Jong, U.
2001 *Educational Differentials in the Netherlands - Testing. Rational Action Theory*, in «Rationality and Society», Vol. 13, n. 1, pp. 71-98.
- Pagliari, M.
2010 *Frictional matching: Evidence from law school admission*, in «Economics Letters», Vol. 108, n. 2, pp. 208–211;
- Panichella, N. and Triventi, M.
2014 *Social inequalities in the choice of secondary school. Long-term trends during educational expansion and reforms in Italy*, in «European Societies», Vol.16, n.5, pp. 666-693.

- Parsons, T.
 1937 *The Structure of Social Action*, Glencoe, Free Press; trad. it. *La struttura dell'azione sociale*, Bologna, il Mulino, 1986.
 1939 *The Professions and Social Structure*, in «Social Forces», Vol. 17, n. 4, pp. 57-67.
- Parkin, F.
 1971 *Class Inequality and Political Order: Social Stratification in Capitalist and Communist Societies*, New York, Praeger.
 1974 *The Social Analysis of Class Structure*, London, Tavistock.
 1979 *Marxism and Class Theory: A Bourgeois Critique*, New York, Columbia University Press.
- Patterson, I., Fink, M. and Ogus, A.
 2003 *The economic impact of regulation in the field of liberal professions in different Member States*, Regulation of Professional Services. Study for the European Commission, DG Competition, www.ec.europa.eu.
- Pellizzari, M. and Pica, G.
 2011 *Liberalizing professional services: Evidence from Italian lawyers*, IGIER Working Paper, n. 372.
- Pellizzari, M. and Orsini, J.
 2012 *Dinastie d'Italia: Gli ordini tutelano davvero i consumatori?*, Milano, Università della Bocconi Editore.
- Pisati, M.
 2000 *La mobilità sociale*, Bologna: il Mulino.
 2003 *L'analisi dei dati: tecniche quantitative per le scienze sociali*, Bologna, Il Mulino.
- Rowe A. and García-Barbero M.
 2005 *Regulation and licensing of physicians in the WHO European Region*, World Health Organization, report n. EUR/05/5051794C, <http://www.aemh.org>.
- Saks, M.
 1995 *Professions and the Public Interest*, London, Routledge.
 2010 *Analyzing the Professions: The Case for the Neo-Weberian Approach*, in «Comparative Sociology», Vol. 9, n.6, pp. 887-915.
- Santoro, M.
 1998 *Notai. Storia sociale di una professione in Italia 1861-1940*, Bologna, il Mulino.
- Schizzerotto, A.
 1993 *La porta stretta: classi superiori e processi di mobilità*, in «Polis», n. 1, pp. 15-43.
 2002 *Vite ineguali. Disuguaglianze e corsi di vita nell'Italia contemporanea*, Bologna, Il Mulino.
- Sciulli, D.
 2007 *Professions before Professionalism*, in «European Journal of Sociology», n. 48, pp. 121-147.

- Silva, E. B.
2005 *Gender, Home and Family in Cultural Capital Theory*, in «British Journal of Sociology», Vol. 56, n.1, pp. 83–103.
- Sørensen, A. B.
2000 *Toward a sounder basis for class analysis*, in «American Journal of Sociology», Vol. 10, pp. 1523-1558.
1996 *The Structural Basis of Social Inequality*, in «American Journal of Sociology», Vol. 101, n. 5, pp. 1333–1365.
- Sørensen, J. and Grusky, D. B.
1998 *The Structure of Career Mobility in Microscopic Perspective*, in *Social Differentiation and Social Inequality: Essays in Honor of John Pock*, (eds.) J. N. Baron and D. B. Grusky, Boulder, Westview Press, pp. 83–114.
- Speranza, L.
1999 *I poteri delle professioni*, Soveria Mannelli, Rubbettino.
- Stephen, Frank H.
2002 *An Economic Perspective on the Regulation of Legal Service Markets*, Evidence submitted to the Justice 1 Committee's Inquiry into the Regulation of the Legal Profession, Scottish Parliament, Official Report.
- Stocké, V.
2007 *Explaining educational decisions and effects of families' social class position: an empirical test of the Breen–Goldthorpe model of educational attainment*, in «European Sociological Review», Vol. 23, pp. 505–519.
- Sullivan, A.
2001 *Cultural Capital and Educational Attainment*, in «Sociology», Vol. 35, n. 4, pp. 893-912.
- Teachman, J. D.
1987 *Family Background, Educational Resources, and Educational Attainment*, in «American Sociological Review», Vol. 52, n. 4, pp. 548-557.
- Treiman, D.
1970 *Industrialization and social stratification*, in «Sociological Inquiry», Vol. 40, n. 2, pp. 207-234.
- Tignali, I.
2009 *Italia è un paese bloccato. Muoviamoci!* Primo rapporto sulla mobilità sociale, Italia Futura.
- Timmons, E. and Thornton, R.
2008 *The Effects of Licensing on the Wages of Radiologic Technologists*, in «Journal of Labour Research», Springer, Vol. 29, n. 4, pp. 333-346.
- Tousijn, W.

- 1979 *Sociologia delle professioni*, il Mulino, Bologna.
 1987 *Le libere professioni in Italia*, il Mulino, Bologna.
- Van De Werfhorst, H.G. and Andersen, R.
 2005 *Social background, credential inflation and educational strategies*, in «Acta Sociologica», Vol. 48, pp. 321–340.
- Van Der Werfhorst, H.G. and Hofstede, S.
 2007 *Cultural capital or relative risk aversion? Two mechanisms for educational inequality compared*, in «British Journal of Sociology», Vol. 58, pp. 391–415.
- Van de Werfhorst, H. G. and Luijkx, R.
 2010 *Educational Field of Study and Social Mobility: Disaggregating Social Origin and Education*, in «Sociology», Vol. 44 n. 4 pp. 695 - 715.
- Weber, M.
 1922 *Wirtschaft und Gesellschaft*, Tübingen, Mohr, trad. Engl. *Economy and Society: An Outline of Interpretative Sociology*, Berkeley, University of California Press, 1978.
- Weeden, K. A.
 2002 *Why do Some Occupations Pay More than Others? Social Closure and Earnings Inequality in the United States*, in «American Journal of Sociology», Vol. 108, n.1, pp. 55-101.
- Weeden, K. A. and Grusky D. B.
 2005 *The Case for a New Class Map*, in «American Journal of Sociology», Vol. 111, n. 1, pp. 141-212.
 2012 *The Three Worlds of Inequality*, in «American Journal of Sociology», Vol. 117, n. 6, pp. 1723-1785
- Xie, Y.
 1992 *The Log-Multiplicative Layer Effect Model for Comparing Mobility Tables*, in «American Journal of Sociology», Vol. 101 n.6, pp. 950-992.

APPENDIX A

Section 1: Distribution of frequencies of variables employed in the analysis of chapter 2.

Source: ESS 2002-2004-2006-2008-2010, EVS 2008, ISSP 2009 (I do not repeat the source for tables and plots in Appendix A)

Table A.1. Social class of origin at disaggregate level: GERMANY

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	0.6
High level manager(I)	1.5
Prof. in scientific fields (I)	0.8
Engineers (I)	3.1
Architects (I)	0.7
Medical professionals (I)	1.1
Prof. in economics (I)	0.3
Prof. in social and political science (I)	0.7
Legal Professionals (I)	0.6
Lower service class (II)	14.7
Skilled white collars (IIIa)	4.7
Routine non-manual (IIIb)	1.7
Self-employed with no or few employees (IVab)	7.2
Farmers (IVc)	5.5
Skilled manual working class (V-VI)	33.5
Unskilled manual working class (VIIab)	23.35
Total (N)	100
	(12246)

Table A.2. Social class of origin at disaggregate level: DENMARK

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	2.1
High level manager(I)	3.2
Prof. in scientific fields (I)	1.4
Engineers (I)	1
Architects (I)	0.3
Medical professionals (I)	1.3
Prof. in economics (I)	1.1
Prof. in social and political science (I)	0.5
Legal Professionals (I)	0.3
Lower service class (II)	17.6
Skilled white collars (IIIa)	2.1
Routine non-manual (IIIb)	3.7
Self-employed with no or few employees (IVab)	13.2
Farmers (IVc)	14.9
Skilled manual working class (V-VI)	14.5
Unskilled manual working class (VIIab)	21.9
Total (N)	100
	(8088)

Table A.3. Social class of origin at disaggregate level: GREAT BRITAIN

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	1.2
High level manager(I)	3.3
Prof. in scientific fields (I)	1.6
Engineers (I)	2.2
Architects (I)	1.7
Medical professionals (I)	0.9
Prof. in economics (I)	1
Prof. in social and political science (I)	0.8
Legal Professionals (I)	0.1
Lower service class (II)	20.9
Skilled white collars (IIIa)	2.3
Routine non-manual (IIIb)	2.7
Self-employed with no or few employees (IVab)	9.7
Farmers (IVc)	3.6
Skilled manual working class (V-VI)	20
Unskilled manual working class (VIIab)	27.9
Total (N)	100
	(8858)

Table A.4. Social class of origin at disaggregate level: SWEDEN

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	1
High level manager(I)	3.6
Prof. in scientific fields (I)	0.7
Engineers (I)	1.8
Architects (I)	0.5
Medical professionals (I)	1.2
Prof. in economics (I)	0.5
Prof. in social and political science (I)	0.9
Legal Professionals (I)	0.5
Lower service class (II)	19.8
Skilled white collars (IIIa)	2.1
Routine non-manual (IIIb)	3.7
Self-employed with no or few employees (IVab)	13.1
Farmers (IVc)	10
Skilled manual working class (V-VI)	21.2
Unskilled manual working class (VIIab)	38.9
Total (N)	100
	(8064)

Table A.5. Social class of destination at disaggregate level: GERMANY

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	0.7
High level manager(I)	7.0
Prof. in scientific fields (I)	1.7
Engineers (I)	2.7
Architects (I)	0.6
Medical professionals (I)	0.9
Prof. in economics (I)	0.4
Prof. in social and political science (I)	1
Legal Professionals (I)	0.5
Lower service class (II)	23.6
Skilled white collars (IIIa)	12.5
Routine non-manual (IIIb)	8.4
Self-employed with no or few employees (IVab)	5.7
Farmers (IVc)	1.2
Skilled manual working class (V-VI)	16
Unskilled manual working class (VIIab)	17.2
Total (N)	100
	(13521)

Table A.6. Social class of destination at disaggregate level: DENMARK

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	1.6
High level manager(I)	10.4
Prof. in scientific fields (I)	1.5
Engineers (I)	1.15
Architects (I)	0.4
Medical professionals (I)	1.5
Prof. in economics (I)	0.7
Prof. in social and political science (I)	1.5
Legal Professionals (I)	0.5
Lower service class (II)	27.9
Skilled white collars (IIIa)	9.3
Routine non-manual (IIIb)	9.6
Self-employed with no or few employees (IVab)	4.1
Farmers (IVc)	1.9
Skilled manual working class (V-VI)	10.6
Unskilled manual working class (VIIab)	17.5
Total (N)	100
	(8343)

Table A.7. Social class of destination at disaggregate level: GREAT BRITAIN

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	1.3
High level manager(I)	12.7
Prof. in scientific fields (I)	1.7
Engineers (I)	0.5
Architects (I)	0.8
Medical professionals (I)	0.7
Prof. in economics (I)	0.6
Prof. in social and political science (I)	1.4
Legal Professionals (I)	0.4
Lower service class (II)	22.8
Skilled white collars (IIIa)	7.5
Routine non-manual (IIIb)	13.3
Self-employed with no or few employees (IVab)	7.6
Farmers (IVc)	3.61.2
Skilled manual working class (V-VI)	8.3
Unskilled manual working class (VIIab)	20
Total (N)	100
	(9265)

Table A.8. Social class of destination at disaggregate level: SWEDEN

EGP scheme – (with micro-classes)	%
High level entrepreneur (I)	1
High level manager(I)	7
Prof. in scientific fields (I)	2.8
Engineers (I)	1.2
Architects (I)	0.6
Medical professionals (I)	1.4
Prof. in economics (I)	1.2
Prof. in social and political science (I)	1.2
Legal Professionals (I)	0.5
Lower service class (II)	30.1
Skilled white collars (IIIa)	7.7
Routine non-manual (IIIb)	14.1
Self-employed with no or few employees (IVab)	5.6
Farmers (IVc)	1.4
Skilled manual working class (V-VI)	10.2
Unskilled manual working class (VIIab)	14.1
Total (N)	100
	(8064)

Section 2– Log-linear models – mobility tables ORIGINS-DESTINATIONS

Table A.9: Origin – Destination - Germany- Men only number of observations 5931

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	9.1	21.2	9.1	0	3	3	0	6.1	0	21.2	0	0	9.1	3	12.1	3	100	33
2.Managers	2.1	12.6	3.2	1	9.5	0	2	1.1	1.1	316	9.5	4.2	2.1	0	11.6	8.5	100	95
3.Unreg. scientific.	0	13	4.4	2.2	17.4	2.2	0	0	0	26.1	2.2	2.2	8.7	0	15.2	6.5	100	46
4.Architects	2.5	2.5	2.5	10	17.5	0	0	2.5	2.5	30	2.5	2.5	10	2.5	12.5	0	100	40
5.Engineers	0.6	9.3	9.3	0.6	17.3	1.2	2.9	3.5	0.6	30.7	2.9	0.6	4.6	1.2	8.7	6.4	100	173
6.Accountants	0	27.8	5.7	0	0	16.7	0	5.6	0	5.6	5.6	0	11.1	0	11.1	11.1	100	18
7.Medical prof.	0	7.7	7.7	0	9.2	3	27.7	4.6	1.5	20	1.5	0	4.6	3.1	4.6	4.6	100	65
8.Unreg. social sc.	0	11.1	8.9	0	4.40	0	2.2	0	2.2	26.7	6.7	0	8.9	0	6.6	22.2	100	45
9. Legal prof	2.6	12.8	5.1	5.1	0	0	7.7	2.6	15.4	17.9	2.6	5.1	10.3	0	10.7	2.6	100	39
10.II	1.6	13.4	3.7	1.3	5.5	0.7	1.5	2.6	2	29.2	5.7	1.7	7.2	0.6	15.2	8.1	100	873
11.IIIa	1.5	11.2	4.5	1.9	6	0.8	1.1	1.9	1.1	27.2	6.3	3.4	6	0.8	15.3	11.2	100	268
12.IIIb	1	7.1	1	3	4	0	0	1	0	28.3	5	1	6.1	0	25.3	17.2	100	99
13.IVab	3.3	11.4	2.4	1.2	2.9	0.7	0.7	0.5	0.7	21.9	5.5	2.1	19.1	0.7	15.5	11.4	100	420
14.IVc	2.8	7.3	3.1	0.6	2.8	0.3	0.6	0.6	0.3	12.3	3.9	1.7	3.1	17.3	22.4	21.2	100	358
15.V-VI	0.7	8.3	1.4	0.7	4.5	0.3	0.2	0.7	0.3	16.4	4.2	2	5.7	0.5	34.5	19.83	100	1962
16.VIIab	0.4	6.9	1.2	0.1	2.4	0.4	0.3	0.3	0.1	14.9	3.8	1.8	5.7	1.6	29.5	30.6	100	1397

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.10. Origin – Destination - Germany- Women only number of observations 5800

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	5.3	7.9	0	0	0	0	0	2.6	0	52.6	13.2	5.3	10.5	0	2.6	0	100	38
2.Managers	1.2	10.9	1.2	0	0	0	0	0	1.2	41.5	23.7	9.8	2.4	0	4.9	3.7	100	82
3.Unreg. scientific.	0	7.3	1.8	3.6	1.8	0	1.8	0	0	56.4	16.4	5.5	0	1.8	0	3.7	100	55
4.Architects	0	7.9	0	7.9	0	0	7.9	2.6	2.6	39.5	7.9	13.2	2.6	0	0	7.9	100	38
5.Engineers	0	7.1	4.9	2.7	3.8	1.6	2.2	2.7	0.5	42.2	16.7	6.5	4.3	0	1.1	3.8	100	185
6.Accountants	0	0	10	0	0	0	10	0	0	55	10	5	10	0	0	0	100	20
7.Medical prof.	1.6	8.1	4.8	1.6	0	0	14.5	4.8	1.6	35.5	11.3	4.9	4.8	0	1.6	4.8	100	62
8.Unreg. social sc.	0	5.9	2.9	0	0	0	0	5.9	2.9	52.9	20.6	8.8	0	0	0	0	100	34
9. Legal prof	0	3	6.1	0	0	0	3	0	12.1	30.3	24.2	6.1	9.1	0	3	3	100	33
10.II	0.4	5.6	1.9	0.8	1.1	0.5	1.8	2.6	0.7	39.4	21.4	10.3	3.9	0.4	3.7	5.6	100	842
11.IIIa	0.7	3.3	1.1	1.1	0	0.4	0.7	1.1	0	35.9	27.5	12	5.1	0.4	2.5	8.3	100	276
12.IIIb	0	1	0	0	1	0	1	1	0	24	26	20	4	0	9	13	100	100
13.IVab	0.5	5.8	0.5	0.5	1.4	0	1.6	1.2	0.7	31.7	18.8	11.3	9.5	0.5	5.1	11.1	100	432
14.IVc	0	4.9	1.4	0.4	0.4	0	0.4	0.4	0.4	24.6	15.1	7	7	3.9	4.2	18.3	100	285
15.V-VI	0.5	3.9	0.4	0.1	0.9	0.3	0.5	0.4	0.1	24.3	17.8	4.2	4.2	0.9	7.8	16.4	100	1969
16.VIIab	0	4	0.4	0.2	0.4	0.1	0.1	0.3	0.2	19.7	17.3	4.2	4.2	0.5	8.8	24.4	100	139

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.11. Origin – Destination - Denmark- Men only number of observations 3873

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	3.7	23.2	4.9	1.2	2.4	0	4.9	0	0	25.6	2.4	1.2	7.3	0	9.8	13.4	100	82
2.Managers	1.5	18.1	3	0	3	1.5	2.3	3.8	0.8	36.8	3.7	3	6	0	10.5	6	100	133
3.Unreg. scientific.	3.2	15.9	3.2	1.6	1.6	1.6	1.6	1.6	1.6	30.2	3.2	1.6	11.1	1.6	14.6	6.4	100	63
4.Architects	0	10	0	10	0	0	0	0	0	40	0	0	0	0	20	20	100	10
5.Engineers	0	17.1	5.7	5.7	5.7	0	2.8	0	0	25.7	0	0	2.9	0	17.1	17.1	100	35
6.Accountants	4.8	26.2	4.7	0	0	9.5	2.4	0	0	33.3	4.8	0	2.4	0	2.4	7.1	100	42
7.Medical prof.	1.8	3.6	3.6	3.6	3.6	0	25	3.6	5.4	37.5	5.4	0	1.8	0	0	8.9	100	56
8.Unreg. social sc.	0.	9.5	0	9.5	9.6	4.8	0	4.7	0	28.6	9.5	4.8	9.5	0	4.8	14.3	100	21
9. Legal prof	9.1	27.3	0	0	0	0	0	0	36.4	27.3	0	0	0	0	0	0	100	11
10.II	2.8	18.6	3.9	0.9	2.3	0.3	3.5	2.8	0.6	29.1	4.1	2.4	4.3	0.9	11.2	12.3	100	667
11.IIIa	1.1	13.9	3.2	0	2.2	1.1	0	3.2	0	36.6	4.3	2.2	3.2	2.2	9.7	17.2	100	93
12.IIIb	1.3	5.3	1.3	0	2	0.7	0.7	1.3	0.7	34	3.3	4	2.7	1.3	16	25.3	100	150
13.IVab	3.4	14.3	2	0.4	2.6	0.6	0.4	1.4	0	23.1	3.4	1	10.4	1.4	18.5	17.1	100	498
14.IVc	1.8	9.3	1.7	0.2	2	1.5	1.3	0.7	0.3	14.5	1.7	1.5	6.8	15.1	15.8	25.9	100	602
15.V-VI	2	9.7	1.5	0	1.7	0	0.9	1.1	0	23.6	3.4	2.4	5.4	0.6	25.3	22.5	100	538
16.VIIab	1.7	9.9	0.9	0.3	2	0.6	0.6	1.2	0.1	19	3.6	2.1	4.6	0.9	23.5	29.6	100	872

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.12. Origin – Destination - Denmark- Women only number of observations 3901

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	6.3	6.3	1.3	0	0	0	1.3	2.5	3.8	40	11.3	8.8	5	0	2.5	11.3	100	80
2.Managers	1.8	8.9	1.8	0.9	0	0	2.7	5.4	3.6	45.5	15.2	8	2.7	0	1.8	1.8	100	112
3.Unreg. scientific.	0	11.4	4.6	0	2.3	0	4.6	4.6	2.8	273	11.4	18.2	0	2.3	2.8	9.1	100	44
4.Architects	0	7.1	0	0	0	0	0	0	0	42.9	21.4	28.6	0	0	0	0	100	14
5.Engineers	0	5	5	2.5	0	2.5	5	7.5	0	45	10	7.5	2.5	0	2.5	5	100	40
6.Accountants	0	2.5	2.5	0	2.5	5	0	2.5	5	47.5	10	12.5	0	2.5	7.5	0	100	40
7.Medical prof.	0	15.9	6.8	0	0	0	9.1	6.8	0	34.1	13.6	6.8	0	0	2.3	4.6	100	44
8.Unreg. social sc.	0	4.8	0	0	0	0	0	14.3	0	38.1	23.8	14.3	0	0	0	4.8	100	21
9. Legal prof	0	13.3	0	0	0	0	13.3	0	0	40	13.33	6.7	0	6.7	0	6.7	100	15
10.II	0.3	10.6	1.3	0.6	0.4	0.3	1.6	2.6	1	40.7	16.1	14.3	1.58	0.4	2.2	6.2	100	698
11.IIIa	0.9	5.6	0	0	0	0.9	1.9	1.9	0	38.9	15.7	14.8	0.9	0.9	0.9	16.7	100	108
12.IIIb	1.2	2.9	1.2	0	0	1.2	0.6	0	0.6	35.9	20	15.9	0.6	0	2.4	17.7	100	170
13.IVab	1.5	8.8	0.6	0.2	0.2	1.2	1.2	0.9	0.2	30.3	18.2	16.3	4.4	1	4	11.1	100	522
14.IVc	0.5	9.7	0.4	0.2	0.2	0.5	0.7	0.7	0	28.1	15	19.8	3	2.5	4.1	14.51	100	565
15.V-VI	0.7	7.7	0.9	0	0	0.3	0.9	0.3	0.2	32.3	16.2	19.6	2.7	0.2	4.3	13.4.	100	586
16.VIIab	0.5	7.4	0.1	0	0	0.4	0.6	0.7	0.1	25.9	13.1	20	2.5	0.1	4.8	24	100	842

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.13. Origin – Destination – Great Britain - Men only number of observations 3709

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	12.7	23.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	12.7	1.8	1.8	16.4	0	9.1	9.1	100	55
2.Managers	3.7	21.5	2.8	1.9	0	1.9	0.9	3.7	0	21.5	1.9	0	8.4	1.8	0	8.4	100	107
3.Unreg. scientific.	3.7	14.8	7.4	1.9	0	0	1.9	0	0	25.9	5.6	1.9	13	0	9.3	14.8	100	54
4.Architects	1.6	22.2	0	4.8	1.6	1.6	0	1.6	0	26.9	1.6	0	9.5	1.6	9.6	17.5	100	63
5.Engineers	3.8	20.7	7.6	3.8	0	0	3.8	0	0	15.1	3.8	3.8	9.4	0	13.1	15.1	100	53
6.Accountants	5.4	16.2	10.8	2.7	0	8.1	2.7	2.7	0	27	5.4	5.4	2.7	0	8.1	2.7	100	37
7.Medical prof.	2.6	17.9	5.1	5.1	0	0	7.7	5.1	2.6	30.8	0	2.6	12.9	0	0	7.7	100	39
8.Unreg. social sc.	0	4.4	8.7	0	4.4	0	0	4.4	0	26.1	0	4.35	13	0	21.7	13	100	23
9. Legal prof	0	20	0	0	0	0	20	0	40	0	0	0	20	0	0	0	100	5
10.II	1	19.8	3.4	1.4	1.8	1.1	1	2.1	0.8	24.4	2.8	3.2	10.3	1.3	10	15.7	100	794
11.IIIa	1.2	13.9	2.5	2.5	0	2.5	2.5	1.3	0	17.7	5.1	0	10.1	0	6.3	34.2	100	79
12.IIIb	1.1	13.9	1.1	1.1	0.5	0	0	0	0	20.9	1.1	3.3	11	1.1	15.4	30.8	100	91
13.IVab	3.5	15.5	3.5	2.1	0	0	1.6	1.1	0.3	14.4	2.7	2.4	20	3.2	11.8	17.4	100	374
14.IVc	0.7	9.2	2.1	0.7	0	2.1	1.4	0.7	0	17.6	2.11	2.8	14.8	18.3	5.6	21.8	100	142
15.V-VI	1.3	13.7	2.4	1.5	0.9	0.7	0.3	1.5	0	15.9	2.4	3.5	8.5	2.1	18.1	27.21	100	746
16.VIIab	1.6	11.4	1.4	1.3	0.6	0.2	0.4	0.5	0.4	11	2.2	3.6	11.5	1.9	16.5	35.4	100	1047

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.14. Origin – Destination – Great Britain - Women only number of observations 4346

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	0	22.2	0	0	0	0	0	4.4	0	31.1	8.9	15.6	2.2	0	2.2	13.3	100	45
2.Managers	0	13.6	1.1	1.1	0	0	1.1	1.1	1.1	38.6	7.9	17.1	9.1	0	1.1	6.8	100	88
3.Unreg. scientific.	2.4	18.3	3.7	1.1	0	1.2	2.4	3.7	0	29.3	10.9	9.7	4.9	0	1.2	9.7	100	82
4.Architects	3.9	13	0	2.4	0	1.3	1.3	5.2	1.3	31.2	6.5	19.5	9.1	0	1.3	6.5	100	77
5.Engineers	1.7	16.8	4.2	0.80	0	1.7	0.8	2.5	0	31.9	13.5	12.6	5.9	0	1.7	5.9	100	119
6.Accountants	0	16.7	0	0	0	0	0	2.4	2.4	47.6	19.1	7.1	2.4	0	0	2.4	100	42
7.Medical prof.	3	15.2	0	3	0	0	6.1	6.1	3	33.3	15.2	9.1	3	0	0	3	100	33
8.Unreg. social sc.	2.6	15.4	0	0	0	2.6	0	7.7	0	46.2	7.7	7.7	2.6	0	5.1	2.6	100	39
9. Legal prof	0.	0	0	0	0	0	0	0	0	50	0	25	25	0	0	0	100	4
10.II	0.9	14.1	1.3	0.1	0	1	1.1	1.9	0.5	35.5	12.7	15.7	4.7	0.1	2.7	7.7	100	931
11.IIIa	0	9.3	1	1	0	0	0	1	2.1	25.8	9.28	29.9	4.1	0	5.15	11.3	100	97
12.IIIb	0	8.6	0.8	0	0	0	0	0.8	0	31.3	11.7	22.7	2.4	0.7	1.6	19.5	100	128
13.IVab	1.4	13.3	0.7	0.2	0	0.7	0.9	1.6	0.2	27	11.4	18.4	8.4	0	4.9	10.7	100	429
14.IVc	0	10.2	0.7	0	0	1.4	0	0	0	35.4	7.5	16.3	3.4	6.8	1.4	17	100	147
15.V-VI	0.8	8.7	0.9	0.1	0	0.1	0.2	1.1	0.4	24	13.2	24.2	3.2	0	4.6	18.5	100	854
16.VIIab	0.9	8.2	0.2	0	0.1	0.3	0.5	0.7	0.1	18.9	10.7	26.1	4.9	0	5.7	22.9	100	1231

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.15. Origin – Destination – Sweden - Men only number of observations 3946

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot %	(N)
1.Entrepreneurs	14.6	2.4	12.2	2.4	4.9	0	0	0	0	26.8	2.4	2.4	14.6	2.4	7.3	7.3	100	
2.Managers	0.65	8.4	5.8	3.3	0.7	1.3	5.2	1.9	1.3	37	2.6	6.5	7.8	0	5.8	11.4	100	
3.Unreg. scientific.	0	4.2	12.5	0	0	0	4.2	12.5	4.2	33.3	0	12.5	0	4.2	4.2	8.3	100	
4.Architects	2.3	11.6	4.2	0	9.4	0	2.3	2.3	2.3	34.9	0	2.3	4.7	2.3	9.3	11.6	100	
5.Engineers	1.6	18	8.2	4.9	6.6	0	3.3	1.6	4.9	26.2	3.3	1.6	4.9	0	3.3	11.5	100	
6.Accountants	0	0	6.3	0	0	0	6.3	0	0	62.5	0	2.3	4.7	2.3	9.3	12.5	100	
7.Medical prof.	2.1	8.3	12.5	0	8.3	2.9	8.3	6.3	0	39.6	2.1	4.2	2.1	0	0	4.2	100	
8.Unreg. social sc.	0	8.3	2.8	5.6	8.3	5.6	2.8	2.8	2.8	38.9	0	5.6	0	0	2.8	13.9	100	
9. Legal prof	0	10.5	0	0	0	0	10.5	0	5.3	47.4	5.3	5.3	0	0	5.3	10.5	100	
10.II	1.7	11.9	5.4	1.2	2.6	0.8	1.8	2.4	1.2	36.4	3	4.9	5.6	0.5	10.4	10.4	100	
11.IIIa	0	7.7	1.3	0	2.6	0	2.6	1.3	0	32.1	6.4	5.1	3.9	0	15.4	21.8	100	
12.IIIb	0	8.7	4.8	0.8	0.8	0	0	0.8	0.8	39.6	0.7	7.9	2.4	0.8	16.7	15.1	100	
13.IVab	3.8	7	2.7	0.4	2.1	0.8	0.4	1.1	0	28.5	2.3	3.6	13.6	1.5	15.5	16.7	100	
14.IVc	2.3	7.4	2	1.1	1.3	0	1	0.5	0	19.9	2.6	2	8.4	17.1	17.1	17.4	100	
15.V-VI	0.9	9.7	3.7	0.6	1.3	0.9	0.6	0.5	0.2	26.1	3.1	3.5	5.2	0.35	24.7	18.6	100	
16.VIIab	1.4	5.5	1.9	0.1	1.5	0.1	0.3	0.5	0.5	22.8	3	4.6	6.8	0.9	28.2	21.8	100	

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.16. Origin – Destination – Sweden - Women only number of observations 3937

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Tot.%	(N)
1.Entrepreneurs	5.3	5.3	0	0	0	5.3	5.3	2.6	0	42.1	13.2	15.8	0	0	0	5.3	100	38
2.Managers	0	5.7	2.4	0.8	0.8	2.4	1.6	3.3	0.8	39	14.6	17.1	0.8	0	1.6	8.9	100	123
3.Unreg. scientific.	0	3.4	13.8	3.5	3.5	0	0	3.4	0	34.5	20.7	13.7	0	0	0	3.5	100	29
4.Architects	0	8.3	0	2.7	0	0	0	2.8	0	50	8.3	13.8	5.5	0	0	8.3	100	36
5.Engineers	0	4.9	6.2	1.3	2.5	1.2	7.4	0	1.2	50.6	7.4	13.6	3.7	0	0	0	100	81
6.Accountants	0	4.2	8.3	0	0	4.2	4.7	4.2	1.14	35.2	19.3	17.1	7.9	0	0	4.17	100	24
7.Medical prof.	0	4.8	4.8	2.4	0	0	9.5	9.5	2.4	47.6	7.1	9.5	0	0	0	2.4	100	42
8.Unreg. social sc.	0	2.8	8.3	0	0	0	8.3	8.3	2.8	47.2	2.8	8.3	0	2.8	0	8.3	100	36
9. Legal prof	0	11.1	5.6	5.6	0	0	5.6	0	0.5	44.4	11.1	11.1	0	0	0	0	100	18
10.II	0.1	7.3	2.8	0.5	1	2.6	2.9	1.7	0.4	40.6	9	17.6	3.8	0.9	1.4	7.2	100	778
11.IIIa	0	2.3	0	0	0	0	0	3.4	1.1	35.2	19.3	17.1	8	1.1	1.1	11.4	100	88
12.IIIb	0.6	2.5	2.5	0	0	0.6	1.8	0.6	0	37.4	12.3	23.3	0	0.6	4.9	12.9	100	163
13.IVab	0.6	6.9	0.4	0.8	0.8	0.6	0.8	0.6	0.2	31.8	16.9	21	7.3	0.6	2.6	8.3	100	509
14.IVc	0.3	4.6	1	0.5	0.3	0.8	0.3	1	0.5	27.5	12.4	26.3	3	1.5	3.3	16.9	100	396
15.V-VI	0.6	4.1	1.6	0.3	0.2	1.6	0.7	0.9	0.1	29.9	13.2	26.9	3.6	0.2	3.4	12.5	100	824
16.VIIab	0.4	4	1.2	0	0.1	0.4	0.8	0.5	0.1	22.7	11.9	31.3	4.6	1.1	2.7	17.9	100	752

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Section 2 – log-linear models- mobility tables

Tab B 4– 3544 observations for the ORIGIN –DESTINATION association in ITALY

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Tot %	(N)
1.Entrepreneurs	15.2	0	0	0	0	6.1	0	0	24.2	18.2	9.1	3	0	24.2	100	33
2.Managers	1.5	1.5	1.5	3	3	3	0	10.5	32.8	19.4	3	0	7.5	13.4	100	67
3.Unreg. scientific.	0	0	0	0	0	0	0	0	0	50	0	0	0	50	100	2
4.Engineers-Architects	0	0	0	25	0	0	0	12.5	37.5	0	12.5	0	0	12.5	100	8
5.Accountants	0	0	0	0	25	0	0	12.5	25	25	12.5	0	0	0	100	8
6.Medical professionals	0	0	4.2	4.2	0	20.8	8.3	0	20.8	20.8	12.5	0	0	8.3	100	24
7.Unreg. social sc.	0	0	16.7	0	0	16.7	0	0	33.3	16.7	0	0	0	16.7	100	6
8. Legal professionals	0	0	0	0	0	0	0	28.6	14.3	57.1	0	0	0	0	100	7
9.II	0	0.8	0.8	2.5	0	2.5	2.5	0.8	40.5	19	7.4	0	14.5	9.9	100	121
10.IIIab	0.7	0.3	1.7	2.3	1	2.7	2.7	0.7	25.5	22.9	4.3	0.3	18.5	18.9	100	302
11.IVab	0.3	0.7	0.8	0.9	0.4	1.5	1.5	0.3	16.7	16.3	23.	0.7	18.7	18.7	100	689
12.IVc	0.2	0.6	0.4	0	0	1	1	0.4	4.4	5.8	4	28.6	22.5	32.3	100	521
13.V-VI	0	0	0.7	0.2	0.4	0.7	0.7	0	11.3	12.2	4	0.7	42.7	27.2	100	452
13.VIIab	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	7.4	10.5	3.1	1.9	34.4	41.4	100	1304

Section 3 - Design matrices for the Big-, Meso- and Micro-class rigidities

Table A.17: Design Matrix for the Big-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Entrepreneurs	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
2.Managers	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
3.Legal prof.	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
4.Architects	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
5.Engineers	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
6.Accountants	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
7.Health prof.	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
8.Unreg. social sc.	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
9.Unreg. scientific	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0
10.II	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
11.IIIa	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
12.IIIb	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
13.IVab	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
14.IVc	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0
15.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0
16.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

Legend: II: lower service class; IIIa: skilled white collars; IIIb: routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table A.18: Design Matrix for the Meso-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Entrepreneurs	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.Managers	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.Legal prof.	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
4.Architects	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
5.Engineers	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
6.Accountants	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
7.Health prof.	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
8.Unreg. social sc.	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
9.Unreg. scientific	0	0	3	3	3	3	3	3	3	0	0	0	0	0	0	0
10.II	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.IIIa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.IIIb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.IVab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.IVc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table A.19.: Design Matrix for the Micro-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Entrepreneurs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.Managers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.Legal prof.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4.Architects	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
5.Engineers	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
6.Accountants	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
7.Health prof.	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
8.Unreg. social sc.	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
9.Unreg. scientific	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0
10.II	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.IIIa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.IIIb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.IVab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.IVc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Section 4 – Fields of study

Table A.20. Distribution of frequencies of fields of study

Field of study – MA only	%
Humanities	14.1
Technical and engineering	17.3
Science and computing	14.9
Medicine	13.6
Economics	18.9
Social and political science	12.6
Law and legal services	8.5
Total	100
(N)	(2873)

Section 5 – controlling for a lower age – Results do not change

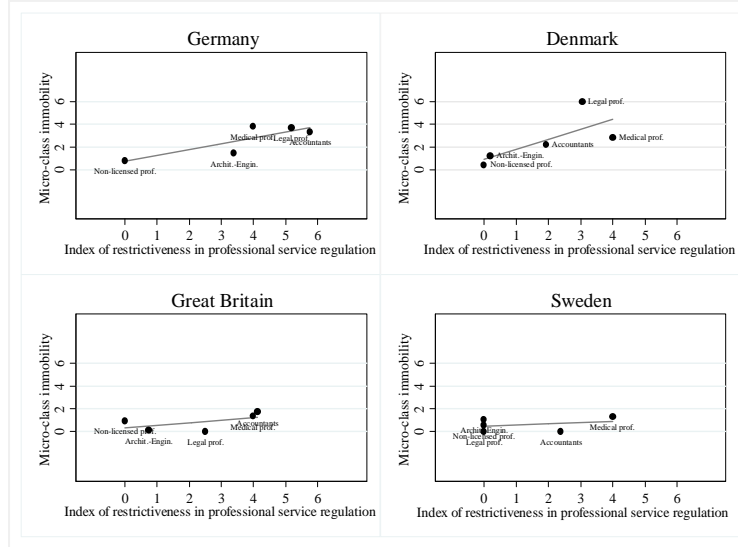


Figure A1: The relationship between entry market regulations in professional occupations and immobility parameters for each micro-class, considering 25-45 years old respondents.

Section 6 – Binomial logistic regressions

Table A.21.: Likelihood-ratio test: the significance of interactions using a *big-class approach* to model OD association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.26	0.26
Denmark	0.23	0.01*
Great Britain	0.41	0.55
Sweden	0.95	0.13

Table A.22.: Likelihood-ratio test: the significance of interactions using a *meso-class approach* to model the OD association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.13	0.35
Denmark	0.40	0.01
Great Britain	0.58	0.69
Sweden	0.93	0.16

Table A.23.: Likelihood-ratio test: the significance of interactions using a *distinction between licensed and non-licensed professionals* to model OD association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.20	0.46
Denmark	0.50	0.0*
Great Britain	0.72	0.73
Sweden	0.93	0.23

Table A.24.: Likelihood-ratio test: the significance of interactions using a *big-class approach* to model OED association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.87	0.81
Denmark	0.35	0.01
Great Britain	0.16	0.63
Sweden	0.88	0.20

Table A25 Likelihood-ratio test: the significance of interactions using a *meso-class approach* to model OED association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.8144	0.9291
Denmark	0.5601	0.0594
Great Britain	0.4797	0.8061
Sweden	0.8956	0.3691

Table A.26. Likelihood-ratio test: the significance of interactions using a *meso-class approach and the distinction between licensed and non-licensed professionals* to model OED association.

Country	M2: Sig. int. Origin*Survey	M2: Sig. int. Origin*cohort
Germany	0.20	0.46
Denmark	0.49	0.01
Great Britain	0.72	0.73
Sweden	0.93	0.24

Section 7 - Note on the institutional level: social class structure and educational characteristics in five European countries (Great Britain, Sweden, Denmark, Germany and Italy).

Through the comparison among the countries mentioned above, I shed light on professionals' intergenerational mobility considering both different levels of professional regulations and different class structures.

It is well documented that the common denominator between these countries is that they have a strong big-class structure because of institutional assets, such as big-class organizations and unions (Breen 2004)⁵⁵. On the contrary, describing these European countries in terms of micro-classes is much more difficult.

The micro-class structure refers to occupational identities and processes of reproduction in which specific skills and knowledge are transmitted from parents to children. Moreover, Jonsson et. al (2009) suggest Germany and Sweden as two ideal-types in terms of the whole micro-class structures: the former with a strong one, while in the latter it is suppressed. Specifically: in Germany the micro-classes

⁵⁵ It is not a coincidence that proponents of the micro-class approach are from USA.

are stronger because the educational system is highly stratified: children have to choose which school to attend at the early age of 10, whereas in Sweden this choice is significantly postponed in comparison.

However, in their research there are no explicit references for licensed professionals' social reproduction. To fill this gap in the literature, by combining the approaches of big-, meso-, and micro-classes and by using the level of professional regulations as main dimensions, I classify and investigate professionals' social mobility in a comparative perspective.

Then, the Italian case is considered into details to improve the understanding of this phenomenon. Italy is characterized by high level of big-class social immobility, as well as by one of the highest levels of professional closure in Europe (Patterson et. al 2003; Breen 2004). This closure concerns both entry-market and conduct-market regulations. Thus, the attention is given to both educational and occupational attainments of children of licensed professionals.

APPENDIX B – Source: ILFI (1997-2005). I do not repeat it under the appendix tables of plots

Section 1: Distributions of frequencies of variables employed in the chapter

Table B.1. *Distribution of frequencies of social class of origin at disaggregate level*

EGP Scheme – (with micro-classes)	%
High level entrepreneur (I)	0.8
High level manager (I)	1.5
Prof. in scientific fields (I)	0.1
Engineers - Architects (I)	0.1
Medical professionals (I)	0.6
Professionals in economics (I)	0.3
Professionals in social and political science (I)	0.3
Legal Professionals (I)	0.2
Lower service class (II)	2.7
Skilled white collars and routine non-manual (IIIab)	7.8
Self-employed with no or few employees (IVab)	17.1
Farmers (IVc)	14.7
Skilled manual working class (V-VI)	13.2
Unskilled manual working class (VIIab)	40.7
Total (N)	100 (13719)

Table B.2.: *Distribution of frequencies of social class of destination at disaggregate level (first job)*

EGP Scheme – (with micro-classes)	%
High level entrepreneur (I)	0.6
High level manager (I)	1.1
Prof. in scientific fields (I)	0.6
Engineers - Architects (I)	0.4
Medical professionals (I)	1
Professionals in economics (I)	0.5
Professionals in social and political science (I)	0.6
Legal Professionals (I)	0.4
Lower service class (II)	14.8
Skilled white collars and routine non-manual (IIIab)	22.4
Self-employed with no or few employees (IVab)	14.3
Farmers (IVc)	2.4
Skilled manual working class (V-VI)	14.7
Unskilled manual working class (VIIab)	25.6
Total (N)	100 (3773)

Table B.3. *Distribution of frequencies of social class of destination at disaggregate level*

EGP Scheme – (with micro-classes)	%
High level entrepreneur (I)	0.2
High level manager (I)	0.3
Prof. in scientific fields (I)	0.2
Engineers - Architects (I)	0.1
Medical professionals (I)	0.1
Professionals in economics (I)	0.2
Professionals in social and political science (I)	0.2
Legal Professionals (I)	0.3
Lower service class (II)	3.9
Skilled white collars and routine non-manual (IIIab)	5.9
Self-employed with no or few employees (IVab)	3.7
Farmers (IVc)	0.6
Skilled manual working class (V-VI)	6.7
Unskilled manual working class (VIIab)	26.3
Total (N)	100
	(8176)

Table B.4. *Fit indices of log-linear models to the model Origin – Destination association at the first occupation employing the Big-, Meso-, Micro-class approach (men only, n. obs. 3501)⁵⁶.*

Model description	X ²	d.f.	Significance	Significance	Significance	Δ
0. Independence Model	2031	169	-	-	-	0.242
1. Big-class rigidities	593	162	0.0000 (M.2)	0.0012 (M3)	0.0000 (M5)	0.126
2. Big- and meso-class rigidities	551	159	1.0000 (M.4)	0.0620(M.5)	-	0.125
3. Big-and micro-class rigidities	571	156	0.0000 (M.5)	-	-	0.124
4. Meso- and micro-class rigidities	1753	160	0.0000 (M.5)	-	-	0.231
5. Big-, meso- and micro-class rigidities	539	153				0.123
Models RC II of Goodman: row and column parameters are constraint to be equal						
6. Big-class rigidities	173	149	0.0000 (M.7)	0.0000 (M.8)		0.036
7. Big- and meso-class rigidities	136	146	0.1736 (M.8)			0.034
8. Big-, meso-, and micro-class rigidities	127	140				0.032

⁵⁶ Fit indices of log-linear model for current occupation (Panel B) are in the appendix. This is why results of current occupation do not differ from the first job ones. This will be clear in the section of intra-generational mobility.

Section 2 – log-linear models- mobility tables

Tab B.5. Distribution of frequency for the ORIGIN –DESTINATION association of men in ITALY (3544 observations)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Tot %	(N)
1.Entrepreneurs	15.2	0	0	0	0	6.1	0	0	24.2	18.2	9.1	3	0	24.2	100	33
2.Managers	1.5	1.5	1.5	3	3	3	0	10.5	32.8	19.4	3	0	7.5	13.4	100	67
3.Unreg. scientific.	0	0	0	0	0	0	0	0	0	50	0	0	0	50	100	2
4.Engineers-Architects	0	0	0	25	0	0	0	12.5	37.5	0	12.5	0	0	12.5	100	8
5.Accountants	0	0	0	0	25	0	0	12.5	25	25	12.5	0	0	0	100	8
6.Medical professionals	0	0	4.2	4.2	0	20.8	8.3	0	20.8	20.8	12.5	0	0	8.3	100	24
7.Unreg. social sc.	0	0	16.7	0	0	16.7	0	0	33.3	16.7	0	0	0	16.7	100	6
8. Legal professionals	0	0	0	0	0	0	0	28.6	14.3	57.1	0	0	0	0	100	7
9.II	0	0.8	0.8	2.5	0	2.5	2.5	0.8	40.5	19	7.4	0	14.5	9.9	100	121
10.IIIab	0.7	0.3	1.7	2.3	1	2.7	2.7	0.7	25.5	22.9	4.3	0.3	18.5	18.9	100	302
11.IVab	0.3	0.7	0.8	0.9	0.4	1.5	1.5	0.3	16.7	16.3	23.	0.7	18.7	18.7	100	689
12.IVc	0.2	0.6	0.4	0	0	1	1	0.4	4.4	5.8	4	28.6	22.5	32.3	100	521
13.V-VI	0	0	0.7	0.2	0.4	0.7	0.7	0	11.3	12.2	4	0.7	42.7	27.2	100	452
13.VIIab	0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.1	7.4	10.5	3.1	1.9	34.4	41.4	100	1304

Tab. B.6. Distribution of frequency for the ORIGIN –DESTINATION association of professional women in ITALY (3544 observations)

	3	4	5	6	7	8	(total) N
3.Unreg. scientific.	0	0	0	0	0	0	0
4.Engineers-Architects	0	0	12.5	12.5	0	0	2
5.Accountants	25	0	0	0	0	0	1
6.Medical professionals	0	0	0	9	4.5	0	3
7.Unreg. social sc.	0	0	0	0	0	0	0
8. Legal professionals	0	0	0	0	0	0	0

Section 3 - Design matrices for the Big-, Meso- and Micro-class rigidities employed in the log-linear analysis of chapter 3

Table B.7. Design Matrix for the Big-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Entrepreneurs	1	1	1	1	1	1	1	1	0	0	0	0	0	0
2.Managers	1	1	1	1	1	1	1	1	0	0	0	0	0	0
3.Legal prof.	1	1	1	1	1	1	1	1	0	0	0	0	0	0
4.Arch. & Eng.	1	1	1	1	1	1	1	1	0	0	0	0	0	0
5.Accountants	1	1	1	1	1	1	1	1	0	0	0	0	0	0
6.Health prof.	1	1	1	1	1	1	1	1	0	0	0	0	0	0
7.Unreg. social sc.	1	1	1	1	1	1	1	1	0	0	0	0	0	0
8.Unreg. scientific	1	1	1	1	1	1	1	1	0	0	0	0	0	0
9.II	0	0	0	0	0	0	0	0	2	0	0	0	0	0
10.IIIab	0	0	0	0	0	0	0	0	0	3	0	0	0	0
11.IVab	0	0	0	0	0	0	0	0	0	0	4	0	0	0
12.IVc	0	0	0	0	0	0	0	0	0	0	0	5	0	0
13.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	6	0
14.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	7

Legend: II: lower service class; IIIab: skilled white collars and routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table B.8. Design Matrix for the Meso-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Entrepreneurs	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2.Managers	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3.Legal prof.	0	0	3	3	3	3	3	3	0	0	0	0	0	0
4.Arch. & Eng	0	0	3	3	3	3	3	3	0	0	0	0	0	0
5.Accountants	0	0	3	3	3	3	3	3	0	0	0	0	0	0
6.Health prof.	0	0	3	3	3	3	3	3	0	0	0	0	0	0
7.Unreg. social sc.	0	0	3	3	3	3	3	3	0	0	0	0	0	0
8.Unreg. scientific	0	0	3	3	3	3	3	3	0	0	0	0	0	0
9.II	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.IIIa	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.IVab	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.IVc	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: II: lower service class; IIIab: skilled white collars and routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Table B.9. Design Matrix for the Micro-class rigidities

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.Entrepreneurs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.Managers	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.Legal prof.	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4.Arch. & Eng	0	0	0	2	0	0	0	0	0	0	0	0	0	0
5.Accountants	0	0	0	0	3	0	0	0	0	0	0	0	0	0
6.Health prof.	0	0	0	0	0	4	0	0	0	0	0	0	0	0
7.Unreg. social sc.	0	0	0	0	0	0	5	0	0	0	0	0	0	0
8.Unreg. scientific	0	0	0	0	0	0	0	6	0	0	0	0	0	0
9.II	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10.IIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11.IVab	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.IVc	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13.V-VI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14.VIIab	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Legend: II: lower service class; IIIab: skilled white collars and routine non-manual workers ; IVab: self-employed workers, IVc: farmers; V-VI: skilled manual workers, low-level supervisors and technicians; VIIab: unskilled manual workers.

Section 4

Table B.10. Fit indices of log-linear models to the model Origin – Destination association and at current occupation employing the Big-, Meso-, Micro-class approach. (men only, n.obs. 3482)

Panel B			
Model description	L ²	d.f.	Δ
0. Independence Model	1157	169	0.212
1.Big-class rigidities	577	162	0.133
2.Big- and meso-class rigidities	550	159	0.132
3.Big-micro-class rigidities	556	156	0.135
4.Big-, meso- and micro-class rigidities	537	153	0.129
5. Meso-, micro-class rigidities	1019	160	0.205

Source: ILFI (1997-2005)

Section 5: additional material – LOGISTIC REGRESSION

By using a binomial logistic regression Figure 3.3 displays the average marginal effects for the influence of family background in being in the upper class. Social classes V-VIIab of skilled and unskilled manual workers are the reference category.

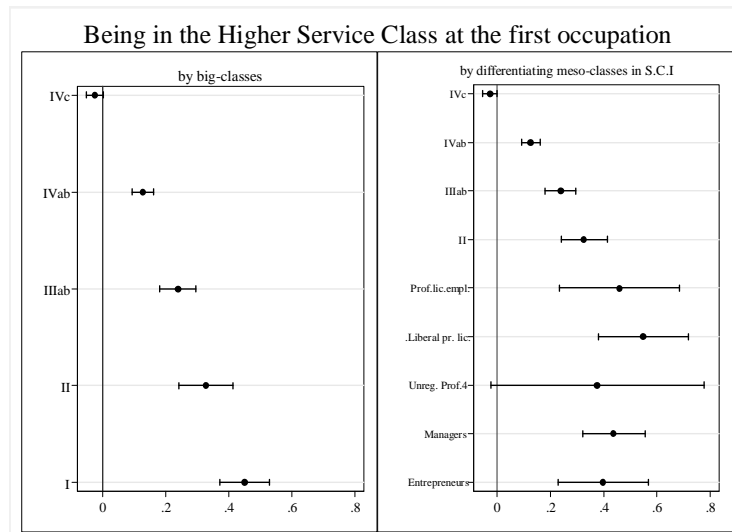


Figure B.1 Average marginal effects for the probability of being in the higher service class according to the big class, the meso-class, and the micro-class of origin (ref. cat. Skilled and unskilled working class V-VIIab). Legend: higher service class (I); lower service class (II); white collars and routine non-manual workers (IIIab); petite bourgeoisie (IVab); farmers (IVc).

The results are clear. Children of skilled farmers (IVc) have the lowest propensity to gain a position in the higher service class according to the big-class approach, whereas children of the urban petty bourgeoisie (IVab) and higher social classes have competitive advantages.

The second panel on the right refers to meso-class differences between entrepreneurs, managers, and professionals (employed and self-employed) of the higher service class. Unregulated professionals do not present a significant propensity to be in the upper service class. Children of professionals enjoy favorable prospects comparable to entrepreneurs, even if the propensity of self-employed professionals is a bit higher.

However, the panel on the right of Figure 3.3 indicates that professionals are not a homogeneous category with respect to their chances of immobility at the top. In line with the hypotheses, licensed professionals enjoy higher immobility prospects.

Overall, there is evidence that variations between professions in the degree of social closure are consequential for there to be immobility at the top.

APPENDIX C

Section 1: Distribution of frequencies of variables employed in chapter 4.

Source: ISTAT, Sbocchi professionali dei laureati (2011). I do not repeat the source for tables and plots in appendix C.

Table C.1. *Distribution of frequencies of fields of study*

Field of study	%
Humanities	15.2
Scientific fields	11.4
Pharmaceutical science and veterinarian	3.3
Medicine	16.2
Engineering.	13.0
Architecture	6.0
Economics	11.0
Social and political science	8.3
Law	8.9
Health science (except medicine)	6.7
Total	100
(N)	(26760)

Table C.2. *Distribution of frequencies of social class of origin firstly considering meso-classes into the upper service class and secondly considering micro-classes into the meso-class of high level professionals – EGP scheme*

EGP scheme – (with meso-classes)	%	EGP Scheme – (with micro-classes)	%
High level entrepreneur (I)	1,8	High level entrepreneur (I)	1.5
High level manager(I)	5,4	High level manager(I)	5.0
High level professionals (I)	23,6	Prof. in scientific fields (I)	0.6
Low managers(II)	10,9	Engineers (I)	2.4
Low professionals (II)	20,4	Architects (I)	0.6
Teachers (II)	16,4	Prof. in pharm. and veterinarian (I)	0.6
Skilled white collars (IIIa)	2,1	Medical doctor (I)	4,6
Routine non-manual (IIIb)	19,4	Prof. in economics (I)	1.9
Self-employed - no or few employees (IVab)		Prof. in social and political science (I)	1.4
Farmers (IVc)		Legal Professionals (I)	1.1
Skilled manual working class (V-VI)		Teachers(II)	4.6
Unskilled manual working class (VIIab)		Low level professionals(II)	7.5
		Low level manager (II)	2
		Skilled white collars (IIIa)	16,4
		Routine non-manual (IIIb)	9.3
		Self-employed - no or few employees (IVab)	16.9
		Farmers (IVc)	1.9
		Skilled and unskilled manual working class (V- VI-VIIab)	21.8
Total (N)	100	Total (N)	100
	(26760)		(26760)

Table C.3: *Distribution of frequencies of control variables employed in each regression model of the chapter*

Father education	%	Geogr. areas	%	Gender	%	Citizenship	%	Age	%
Until lower secondary	34,4	North-West	27,0	Male	45,6	Italian	98,3	Untill 30	76,9
Upper secondary	41,3	North - East	11,5	Female	54,4	Not italian	1,7	More than 30	23,1
University (BA)	24,3	Centre	31,6						
University (MA)		South Islands	20,7 9,3						
Total (N)	100 (26760)	Total (N)	100 (26760)	Total (N)	100 (26760)	Total (N)	100 (26760)	Total (N)	100 (26760)

Section 2

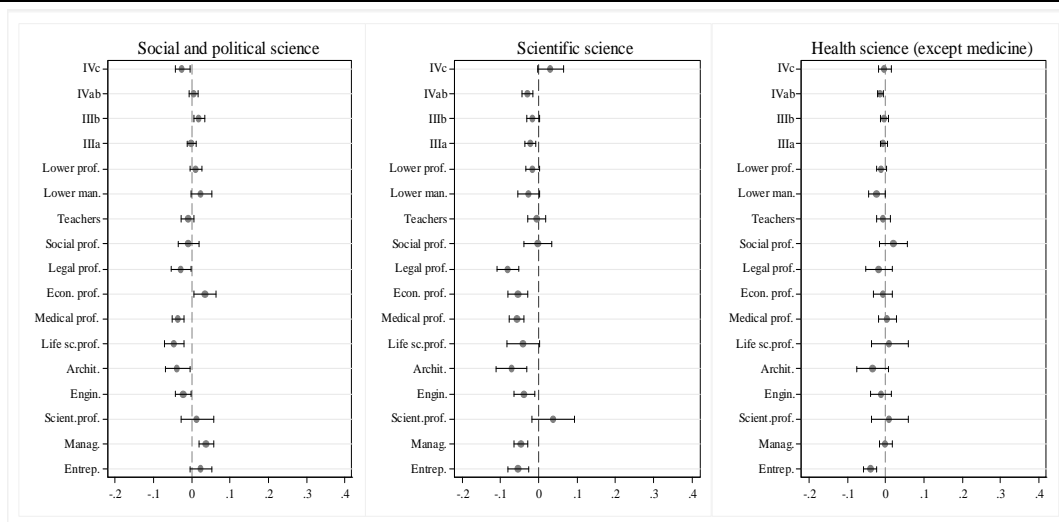


Figure C.1. Average marginal effects from multinomial logistic regression model for the probability of graduating in social and political science, scientific science and health science - except medicine, according to the micro-class of origin (ref. cat. working class-VIIab). Estimates are at net of controls (gender, age, parental education, nationality, geographical area, type of high school, high school grade). Black dots denote the AME of social classes and black lines denote 95% confidence intervals. Legend: white collars (IIIa), routine non-manual workers (IIIb); petite bourgeoisie (IVab); farmers (IVc).

Section 3: Cross-tabulation of Origin-Education of Italian Graduates

Tab C.4. Distribution of frequency of the OE association (28779 observations)

	Hum.	Scient	Pharm.	Med-.	Eng.	Arc..	Econ.	Soc	Law	Health	Tot.%	(N)
1. Ent.	11.4	8.6	3.4	10.5	12.8	8.1	16.2	10.7	14.5	3.6	100	475
2. Man.	11.6	9.2	2.8	18.9	12.6	6.0	11.8	11.7	10.3	5.1	100	1694
3.Unreg. scientific.	14.1	18.5	3.9	20.5	13.7	2.9	8.8	9.7	3.9	4.4	100	205
4. Engineers	9.1	9.3	2.5	22.7	24.9	11.6	8.1	4.7	5.0	2.4	100	799
5. Architects	11.3	6.5	2.2	22.4	10.8	29.0	6.4	3.8	6.5	1.6	100	186
6. Life sc.prof.	9.3	9.7	24.7	23.4	7.9	5.2	6.6	3.0	5.7	4.4	100	227
7. Medical prof	6.3	6.8	3.1	55.7	7.1	3.5	5.0	3.7	6.6	2.5	100	1835
8. Accountants	10.4	8.3	1.4	16.2	10.4	4.4	18.0	11.6	15.3	4.1	100	588
9. Legal prof.	12.1	6.1	2.0	13.0	4.9	4.6	7.5	4.6	42.7	2.6	100	347
10.Soc. prof.	14.9	14.0	4.3	21.9	11.9	4.5	7.7	7.7	8.4	4.5	100	464
11.Teachers	16.8	12.8	3.6	19.7	14.2	5.4	8.3	6.8	8.6	3.8	100	1552
12.Low managers	15.0	11.1	2.6	16.9	14.5	4.7	12.2	10.3	9.3	3.4	100	621
13.Low prof.	13.9	12.5	3.1	13.5	18.2	10.0	8.2	9.2	6.4	5.1	100	2298
14.IIIa	16.2	11.7	3.1	14.6	13.7	5.6	11.8	8.2	89.3	6.0	100	4460
15.IIIb	17.9	12.6	2.8	12.0	12.0	5.0	11.1	10.3	8.5	7.3	100	2477
16.IVab	16.8	10.7	3.1	11.7	11.6	7.0	13.5	8.5	8.8	7.8	100	4534
17.IVc	19.3	16.8	4.0	9.6	14.3	4.2	9.0	5.4	5.4	12.1	100	554
18.V-VI-VIIab	17.5	13.7	3.5	9.0	13.6	4.9	11.5	7.9	7.7	10.8	100	5463