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Fabrizio Bernardi

EUROPEAN UNIVERSITY INSTITUTE, FLORENCE
DEPARTMENT OF POLITICAL AND SOCIAL SCIENCES

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FABRIZIO BERNARDI

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Abstract
This paper addresses four descriptive research questions. First, is there a direct effect of social background on labour market success over and above the effect of own education? Second, has this effect declined over time? Third, does it vary depending on the level of education achieved and, more precisely, is it weaker among those with higher education. Finally, have the returns on education in the chances of access to the upper class (professional and managerial occupations) varied over time? These questions are addressed for the Spanish case by using comparable social stratification surveys for the years 1988, 1989, 1990-1998, 2005 and 2006. Three measures of success in the labour market (LM) are considered: labour income, a socio-economic index (ISEI) and the chances of access to a given social class. The main findings of the paper are that: there is a considerable direct effect of social origin on LM success; this effect has not changed (and actually if anything it might have increased) over time; and it does not vanish among those with higher education. There is on the other hand evidence of credential inflation, such that the same educational qualification provided better chances to access the most rewarding occupations in the past, compared to nowadays. Once these phenomena and trends are documented, the paper also sets out to investigate possible mechanisms underlying the direct effect of social origins on LM success. It, thus, explores whether the influence of social origins actually become apparent through the choice of field of studies, whether it reflects different abilities captured by performance at school, whether it might hinder social skills related to the family of origin or whether it is due to social networks used in finding a job.

Keywords
Educational Returns, Credential Inflation, Social Origins

Introduction[1]

Sociologists and economists have long established that education is the key predictor of success in the labour market. Social stratification research has also produced solid evidence to show that a strong association remains between social origins and the level of education achieved (Breen and Jonsson 2005). Education is therefore a major channel, probably "the" major channel, through which social inequality is reproduced from one generation to the next. Since Blau and Duncan's classic book in 1967 and the research based on the so-called "Wisconsin model" it has also long been investigated whether and how social origins have an influence on labour market success over and above the effect of own achieved education (Blau and Duncan 1967; Jencks *et al.* 1972; Sewell and Hauser 1975). However, when compared to the large amount of research on "the gender wage gap" (Weichselbaumer and Winter-Ebmer 2005) and the expanding research field on "ethnic penalties" in occupational attainment (Heath and Cheung 2007; Reyneri and Fullin 2011), more recent studies on the direct advantage guaranteed by social class of origin in accessing the most rewarding occupations are both less frequent and less consensual. In particular, as will be discussed in more detail below, some studies point to a declining effect of the direct influence of social origins over time, while others point to stability. This paper thus addresses four descriptive research questions. First, is there a direct effect of social background on labour market success over and above the effect of own education? Second, has this effect declined over time? Third, does it vary depending on the level of education achieved and, more precisely, is it weaker among those with higher education (Hauser 1973; Mastekaasa 2011; Torche 2011)? Finally, addressing the question on change over time of the direct effect of social origins implies also examining whether the direct effect of education on the labour market (LM) success has varied. This question in turn leads directly into the large debate on skilled biased technological change, educational expansion and returns on education (Goldin and Katz 2008). Have educational returns declined over time as a consequence of the fact that higher education has expanded faster than the demand for highly qualified workers? Or has skilled biased technological change fostered a rising demand for highly qualified workers, thus guaranteeing stable or even increasing returns on education? As noted by Bukodi and Goldthorpe (2011) this debate has been largely dominated by economists focusing on earnings returns. Therefore it seems timely that sociologists who are interested in social stratification contribute to this debate. A straightforward contribution is that of broadening the definition of returns on education by also considering returns in terms of the chances of access to a given social class (Wright 2005). The main advantage of focusing also on social class in the analysis of returns on education, is that class position is less affected by measurement error and is a better predictor of life chances and life long earnings when compared to snapshot measures of income, which are commonly used by economists (Erikson and Goldthorpe 2002). The fourth question is, therefore whether returns on education in the chances of access to the upper class (professional and managerial occupations) have varied over time.

These questions are addressed for the Spanish case by using comparable social stratification surveys for the years 1988, 1989, 1990-1998, 2005 and 2006. Three measures of success in the LM are considered: labour income, a socio-economic index (ISEI) and the chances of access to a given social class.

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The main findings of the paper are that: there is a considerable direct effect of social origin on LM success; this effect has not changed (and actually if anything it might have increased) over time; and it does not vanish among those with higher education. There is on the other hand evidence of credential inflation, such that the same educational qualification provided better chances to access the most rewarding occupations in the past, compared to nowadays. Once these phenomena and trends are documented, the paper also sets out to investigate possible mechanisms underlying the direct effect of social origins on LM success. It, thus, explores whether the influence of social origins actually become apparent through the choice of field of studies, whether it reflects different abilities captured by performance at school, whether it might hinder social skills related to the family of origin or whether it is due to social networks used in finding a job. While the descriptive evidence on associations and trends is based on solid evidence from various large data sources, the analysis of the mechanisms is much more tentative. The measurement of the various mechanisms is far from optimal and the whole spectrum of possible mechanisms cannot be considered. No definite answer can therefore be provided on how social origin continues to exert an influence on LM success. At most I will be able to disregard some of the most common explanations, thus suggesting where further research might depart from.

The paper proceeds as follows. In the next two sections theories and findings from previous studies on the direct advantage of class of origin over and above own education are reviewed. In the fourth section, a brief description of the evolution in educational participation over time in Spain and the parallel change in the occupational structure is provided. Next, data and measurement issues are described. In the sixth section, the findings of the study are presented, while the last section summarises the main conclusions of the study and puts forward open questions for a broader comparative project.

2. Theoretical considerations and previous research

Classic theories of industrialisation and post-industrialism coincide in assuming a trend from ascription to achievement. A central prediction of both theories is that success in the labour market will increasingly depend exclusively on own achieved education. Among the processes that are usually listed to explain this trend, one finds: the increase in the demand of skilled workers associated with the shift of employment from agriculture to industry and then services; the increase in firm size and hence in the bureaucratisation of recruitment and internal promotion processes on the basis of education credentials used as a screening device by employers; geographical mobility; a general decrease in inequality with economic growth; and the spread of an egalitarian ideology associated with the development of the welfare state (Ganzeboom and Treiman 2007; Treiman 1970). All these processes supposedly strengthen the role of education in determining success in the labour market and reduce the direct transmission of advantage across generations. The first working hypothesis is, therefore, that the direct effect of social origin on occupational achievement, over and above the effect of own education, should have declined in recent decades, while the effect of own education should have increased.

Recent studies have also investigated whether the direct association between social origins on labour market success is weaker among those with higher education (Mastekaasa 2011; Torche 2011). It has actually been argued that the labour market for the highly educated operates more meritocratically, with less space for social origins to exert a direct influence (Breen and Jonsson 2007; Hout 1988). Moreover, as has been noted in the research on inequality in educational opportunities, those from lower social origins who manage to achieve higher education are likely to be positively selected on characteristics such as ability and motivation that are also highly rewarded in the labour market (Bernardi 2012; Mare 1993). Also from a life-course perspective one might argue that people who stay in school longer start their careers at a later age, when they are less likely to be subject to parental influence and control. All in all these three different explanations (meritocracy of LM for the highly

educated, positive selection of those who are highly educated from the lower class, and weakening parental influence over the life-course) suggest that the social origin advantage (ie the positive association between belonging to the upper class and occupational success over and above own education), should decline, the higher the level of education achieved.
With regard to the variation of educational returns over time, most of the research in economics has addressed the so-called skill-biased technological change (SBTC) hypothesis (Acemoglu 2002). Its empirical starting point is evidence of a widening wage gap in the US between individuals who hold a college degree and individuals who do not. In order to explain this gap, scholars focus on market competition. The main argument is that the evolution of technology, driven by market competition, allows employers to substitute the standardised jobs of poorly educated workers with machines, thus raising productivity and lowering the market value of the lowly educated. The same process, however, gives more value to the skills of the highly educated, whose work becomes more important in order to manage the development of technology, its application to production and the process of marketing product and services in an increasingly competitive economy. However, the expansion of participation in higher education that has taken place in Europe since the 90s, and the high levels of unemployment experienced by young people, even when highly educated, has brought the inflation of educational credentials (IEC) hypothesis back into the public debate (Collins 1979). As happens with the circulation of money, an increase in the number of higher education qualifications in the population, associated with increasing participation, lowers the signaling value of these qualifications to employers. Returns on education are thus expected to decrease. One should note that both mechanisms described by the SBTC and IEC hypotheses can be active at the same time (Goldin and Katz 2008). The observed variation over time of the returns on education will then depend on the interplay between the upgrading of the occupational structure, on one side, and the expansion of the population with high education on the other side. If the expansion in the supply of highly educated workers outstrips the demand, one can expect that returns on education will decrease.

Finally I will consider four plausible explanations of the direct effect of social background on LM success. First, I will explore if social class advantage comes about through the choice of different fields of study. It has in fact been argued that field of study can be decisive in mediating the effect of social origins (van de Werfhorst 2002). Basically, students from upper class families might choose more demanding and prospectively more rewarding field of education. The observed effect of social origin should therefore vanish once the field of study is also considered. Second, the observed effect of social origin can actually reflect class based differences in ability and cognitive skills that are not well captured by level of education achieved. Again, once some indicator of ability and cognitive skills is considered, the direct effect of social origin should decline and disappear. Third, subjects from different social origins might differ in the way they look for and find a job. For instance starting one's own business is more common among those who come from the service class or who have self-employed parents (Arum and Müller 2004). This might be the case because of the availability of initial capital to start up a new business or because they have been socialised into an entrepreneurial culture or because they can get direct advice and assistance from the family in the process of setting up the new business. If the direct social origin effect actually reflects a difference in the job matching process and one takes into account the ways in which the job was found, the effect of social origin should either disappear or strongly decline. Finally, it has been suggested that the upper class families might transmit to their children non-cognitive skills such as self-confidence and social skills that are highly valued in certain economic activities. According to (Goldthorpe 2000) such skills should be more important and thus more highly rewarded in the service sector than in manufacturing, and particularly so in 'the leisure, entertainment, or hospitality industries, [. . .] high-value sales, customer services, or public relations. In the following I will refer to this group as 'social skills intensive service industries'. If Goldthorpe's (2000) argument is true, one can then expect that the effect of social origin should be stronger in the aforementioned industries.

3. Previous research

A direct origin effect on labour market success over and above own education is reported by the large majority of studies on EU countries (for UK: (Bukodi and Goldthorpe 2011; Goldthorpe and Mills 2008); for Germany: (Grätz 2011; Müller *et al.* 1998); for Norway: (Hansen 2001; Mastekaasa 2011); for Sweden: (Erikson and Jonsson 1998); for France: (Vallet 2004); for Italy: (Bernardi 2003; Zella 2010));

A direct comparison of the size of the estimates of the direct origin effect produced in the aforementioned studies is not possible due to different measurement of the dependent variable in terms of earnings, income, occupational status and class of destination. There are also differences in model specifications and statistical analyses. Still, the size of the direct origin effect is not at all trivial. For instance, in Britain having service class origin when compared to an unskilled working class background, provides a 14 percentage points advantage in accessing the service class, net of the effect of own education. For Norway, Hansen (2001) found that those with managerial/executive origins expect on average 15 percent higher earnings than those originating in the working class, again controlling for own education. This result from Norway has been confirmed in a more recent study by Mastekaasa (2011) that shows that the earnings for someone at the top of the parental earnings distribution is expected to be 9.4 percentiles higher in the destination earnings distribution than for someone at the bottom of the parental earnings distribution. The comparative study of 12 EU countries by (Iannelli 2002), table 6) shows that the increase in the occupational status of the first job for young people who have parents with tertiary education when compared to those with lower secondary education or less, again net of own achieved education, ranges from about 4 ISEI points in Sweden and Finland, to about 7 points in Spain, Greece, Romania and Hungary.

On the other hand, no direct effect of social origin on earnings and occupational education have been found in the US by studies based on the Wisconsin Longitudinal Study (Warren *et al.* 2002). Similarly van der Werforst (2002) reports no direct effect of class of origin on class of destination for Dutch men. One should note however, that Torche (2011) for the US and (Ganzeboom and Luijkx 2004) for the Netherlands do document a direct effect of social origin on class of destination.

The discrepancy in the findings on whether the origin effect has declined over time is even larger. Again this might be due to differences in the measurement of the dependent variable, and/or in model specifications. Additionally, there is variation in the time span under consideration. A decrease is reported for Sweden, between the late 1960s and early 1990s (Jonsson 1996), in the Netherlands between the 1920s and the 1980s (De Graaf and Kalmjin 2001; Jonsson 1996), and in Germany (Müller *et al.* 1998). More recent studies however report no variation over time for the class of origin effect on class destination for the cohorts 1948, 1958 and 1970 in Britan (Bukodi and Golthorpe 2011), and in Norway for direct influence of parental earnings on own earnings for the cohorts 1955-1969 (Mastekaasa 2011).

Recent evidence for the conditional effect of social background on the level of education achieved is also not fully consistent. Hout (1988) original finding that importance of social origin declines for the highly educated, was confirmed in Norway (Mastekaasa 2001), while Torche's (2011) in depth study for the US documents a U shape pattern, so that the direct parental influence is stronger among those with low educational attainment and those with advanced university degrees, while it disappears among bachelor's degree-holders.

With regard to changes in returns to education over time and credential inflation for the US there is also solid evidence that the earnings premium associated with tertiary education when compared to

lower education has increased dramatically since 1980. A number of influential studies have argued that the sharp increase in the college/high school earning premium is the result skill biased technological change (SBTC) that disproportionally rewards highly skilled occupations and of the concomitant rise of low paid service jobs for those who are less qualified, combined with the erosion of LM institutions that traditionally protected the earnings of those in the lower tier of the LM (Acemoglu 2002; Autor *et al.* 2008).What seems critical in this respect is that while the relative supply of college workers in the US has declined since the early 80s, as a consequence of slowing educational attainment for the cohorts born after 1949 and of the smaller size of recent cohorts entering the labour market, the relative demand for college graduated - attributable to skills biased technical change, has constantly increased (Golding and Katz 2008). For European countries in the 80s and early 90s there is no clear pattern in the trend of the earning premium (Harmon *et al.* 2001). A more recent comparative study reports however lower earning returns on education for younger cohorts (Middendorf 2008).

Fewer comparable results are available if one considers returns on education in terms of access to a given social class. Braun *et al.* (1997) find a slight decline in occupational returns in absolute terms for Germany, France, the UK and Hungary between the early 80s and early 90s. However, in relative terms, compared to the chances of lower qualified school leavers, university graduates have preserved if not strengthened their competitive advantage[2]. More recent studies have updated these findings. Absolute probabilities of attaining the service class for university graduates in Germany have remained stable throughout the 1990s and have increased in the 2000s. Relative returns (measured as log-odds ratios of attaining service class) for university graduates when compared to *Abitur* holders are relatively stable from the 1990s. The suggested explanation for declining absolute returns on tertiary education in the 1980s and stable and increasing absolute returns in the 1990s and 2000s is that in the 1980s educational expansion proceeded faster than occupational upgrading, while educational expansion has been very limited since the 1990s (Klein 2011), 8-10). A recent study for the UK that compares three cohorts (1946, 1958 and 1970), shows that absolute returns on accessing the managerial and professional occupations are stable for those with higher tertiary education, and have increased for those with lower tertiary education (Bukodi and Goldthorpe 2011). On the other hand, the relative returns of tertiary education, both and higher and lower, have partly declined when compared to upper secondary education. The main explanation for these findings is that the growth of the managerial and professional occupations have largely exhausted the supply of highly qualified personnel, so that even people with upper secondary education have gained more access to them in more recent cohorts. An almost opposite pattern has been reported for the Netherlands where absolute returns on education have declined between 1960 and 1991, in particular for those with upper secondary education; but relative returns on tertiary education, compared to upper secondary, have increased (Wolbers *et al.* 2001). In this case, the explanation is that the upgrading of occupational structure in the Netherlands has not kept up with the great expansion of education. To sum up, previous research suggests that absolute and relative returns on education depend on the interplay between educational expansion and occupational upgrading. With this lesson in mind, I now turn to examine the Spanish case.

[2] Absolute returns refer to the proportion among those with a given educational level who reach a specified class position. Relative returns are based on the comparison between the proportion of those who have a given educational level (for instance higher education) who reach a specified class position and the equivalent proportion of those with a different educational level (for instance low education). The distinction between absolute and relative returns seems critical in order to test the prediction of the credential inflation and the SBTC hypotheses. It is sufficient to mention here that while credential inflation refers to absolute returns on education, SBTC is usually dealt with in terms of relative returns.

4. Educational expansion and occupational upgrading in Spain

Hannan el al. (1997) in a widely cited paper, classify the Spanish educational system as being at an intermediate level of standardisation and stratification. In other international comparative projects the Spanish educational system has even been pictured as being highly standardised (see for instance (Golsch 2003; Ianelli and Soro- Bonmatí 2003). If one sticks, however, to the original definition set out by (Allmendinger 1989), the Spanish educational systems seems to have moved from a high level of standardisation and stratification for the cohort of students that the entered school in the aftermath of the civil war (1936-1939) to a low level of standardisation and stratification, in more recent years[3].
With regard to the stratification dimension, until the 1970 LGE (*Ley General de Educación;* General Education Law) reform, students had to pass a selective exam at the age of ten and were accordingly sorted into two separate tracks, one of which led to secondary education, while the other might be described as a 'dead-end track' because it offered no possibility to continue onto further education. With the 1970 reform the track system was abolished, and a comprehensive system of compulsory education until the age of 14 was introduced. The comprehensive character of the Spanish educational system was further strengthen with an additional reform (LOGSE - *Ley Orgánica de Ordenación General del Sistema Educativa*; Organic Law on the General Organisation of the Educational System) in 1990, when, with the socialist party in government, the compulsory age of schooling was raised to age 16. After achieving the basic level of compulsory education a student can now choose between the academic-oriented upper secondary track (two years) or vocational training (one and a half years). At this branching point, there is no orientation or selection process based on previous grades by which a student might be refused access to post-compulsory education. Although there are a significant number of private non-subsidised schools, tuition is free both in public schools and in subsidised private schools. These schools jointly account for about 85 per cent of students enrolled in post-compulsory education. Moreover, those who opt for vocational training still have a chance to attend higher vocational education by passing some complementary training modules (a "bridging course") or by moving back to the academic track and then eventually going on to university. Since 1990 two additional reforms of the educational systems have been approved, in 2002 and 2006, but neither of them have altered the comprehensive structure of the Spanish educational system.

With regard to the standardisation dimension, since the 1990 LOGSE reform, the organisation of the educational system has been decentralised and is now the responsibility of the 17 Autonomous Communities (AC) that make up the Spanish state. Therefore it is now up to the discretion of the educational authorities of each AC to establish a substantial part of the curricula in the various phases and cycles. For instance, at the level of primary and secondary education 65 per cent of the content of the curricula is defined by the Ministry of Education at the national level, while the remaining 35 per cent is set at the level of the AC (55 per cent/45 percent if the AC has its own co-official language). Second, the competitive examinations to become teachers vary from one autonomous community to another. And, more importantly, although the formal criteria for having to retake a course are set at national level, the standards and levels of selectivity in the application of the law differ from one AC to another (Bernardi and Requena 2010).

As far as the occupational structure is concerned, in the second half of the 20th century Spain has moved from being characterised by a very large agricultural sector to a configuration that is more characteristic of post-industrial societies. According to the labour force survey 20% of working people were still employed in the primary sector in 1977; but the figure dropped to 5% in the first three quarters of 2007. Changes in the occupational structure have been described as an "asymmetrical polarisation": strong growth in the top tier of the employment structure, moderately strong at the

[3] According to Allmendinger (1989, 233) standardisation refers to "the degree to which the quality of education meets the same standard nation wide". What is important in this regard is whether curricula are nationally defined, whether teacher training is uniform, whether there is a national standardised examination system, and whether there is no large variation in funding across schools and universities.

bottom and extremely weak in the middle (Bernardi and Garrido 2008). The occupations that have most expanded are those that require a university degree (such as professionals and technicians) on the one hand, and unskilled jobs in the construction and consumer sector on the other hand. In spite of the expansion of occupation for the highly qualified, Table 1 below suggests that educational expansion has grown at a faster rate than the creation of highly qualified jobs in the labour market. The table presents the educational distribution of different birth cohorts (upper panel) and the occupational class of the first job achieved by the same birth cohorts (bottom panel). While 10% of those born between 1940-1950 achieved a university (short or long) degree, 12% of this group obtained a first job in the upper class (class I-II in the the EGP class scheme). However for those born between 1971-1980 the proportion of university degree holders has risen to 30%, while only 20% of them managed to find a job in the upper class.

[TABLE 1 ABOUT HERE]

The lack of balance between supply and demand is reflected in the supply-demand ratio for highly qualified workers at entry in the labour market, presented in the lower row of the table. It is evident that starting from the 1951-60 birth cohort, the supply of highly qualified people has been greater than the growth in opportunities for them to find a job in the upper class.

5. Data and variables

The empirical analysis is largely based on a social mobility survey undertaken in Spain in 2006 by the *Centro de Investigaciones Sociologicas* (CIS). A national representative sample (N=7,671) was interviewed and detailed information on current and first job, education and social origins was collected.[4] Immigrants are excluded from the present study since for the years under analysis in Spain they are almost exclusively first generation and the study of the direct effect of education and social origin for first generation immigrants implies additional complications that cannot be properly addressed here. The analytical sample is therefore made up of native born citizens, aged 28-65. All the analyses are replicated separately for men and women and for those aged 28-45.

I consider three dependent variables that refer to respondent's LM success: occupational class, occupational status (measured as ISEI Ganzeboom and Treiman (1996)), and monthly net labour income. The analysis for labour income is limited to those who were employed at the time of the survey; while the analysis for occupational class and occupational status refer to the current job for those employed at the time of the survey or the last job, or for those who were unemployed or inactive with some prior work experience[5].

With regard to the occupational class, I study the probability of access to the service class (professionals and managers, class I and II in the EGP class scheme) and, in a separate analysis the

[4] Immigrants are excluded from the present study since for the years under analysis in Spain they are almost exclusively first generation and the study of the direct effect of education and social origin for first generation immigrants implies additional complications that cannot be properly addressed here.

[5] I have also replicated the analysis on occupational class and status restricting the sample to those who were employed at the time of the survey and the results do not change. Note that in 2006 the unemployment rate for those aged 28-45 was very low. One might expect that including those not employed at the time of the survey might affect the results in times of high unemployment, such as that of the current big crisis. It would then become particularly interesting to study the direct effect of social origin on employment. For 2006 no direct effect of social origin on the probability of being employed over and above own education is found (results not shown here but available on request).

probability of avoiding the working class; broadly defined to include both skilled and unskilled manual occupation in the agricultural, industry and service sector (EGP IIIb, V-VI-VIIab). Education is coded in seven categories: primary or less, lower secondary, lower vocational training, upper secondary, higher vocational training, tertiary education (short degrees) and tertiary education (long degrees, masters and doctoral studies). The social class of origin is based on the father's occupation when the respondent was 16. If the father was missing then respondents were asked about their mother, or other heads of household. Social class of origin is coded in six categories using the EGP class scheme: service class, white collars (IIIa), small employers with and without employees, self-employed farmers (IVc), urban working class (IIIb, V-VI-VIIa) and agricultural workers (VIIb). I will generally focus on the comparison between the service class and the urban working class. Descriptive statistics for education, social origins and the four dependent variables (i.e. access to the service class, avoidance of the working class, ISEI and labour earnings), are presented in Appendix 1.

By drawing on the CIS 2006 survey it is also possible to investigate different mechanisms that might underlie the direct effect of social origins. One can in fact test whether the direct influence of social origins on occupational success comes about through the choice of field of studies, whether it reflects different abilities captured by performance at school, whether it might hinder social skills related to the family of origin, or whether it is due to social networks used in finding a job (van der Werfhorst 2002; Mastekaasa 2011). Details and descriptive statistics for the variable used to operationalise each of these mechanisms are also provided in Appendix 1.

With regard to change over time I examine the variation in the social origin direct effect on the first job for various birth cohorts, included in the CIS 2006 survey. I also investigate changes in the social origin direct effect from 1988 to 2006 using several Spanish mobility surveys. I have thus employed the CIS 1988 and CIS 1989 surveys, both with samples of over 27,000 cases. The *Encuesta Socio-demografica* in 1991 is the largest and most detailed social mobility survey ever undertaken in Spain, with a sample of over 150,000 cases. This has been the traditional data source for social mobility studies in Spain (Ballarino *et al.* 2009; Carabaña 1999). For the years 1990-1999 I have also merged the "The Public Opinion of Spaniards" monthly survey data, collected by ASEP. These are repeated surveys with samples of around 1,200 individuals every month (the resulting N is 101,237). Finally for 2005 I have analysed the Spanish EUSILC module on intergenerational reproduction of inequality (N=28,829). All the aforementioned surveys provide information on education, current or last occupation and social origins. The merged data sets make for a total analytic sample of 346,809 cases [6].

When comparing the effect of social origin in these different surveys, the analysis is limited to the probability of accessing the service class. No income information is available in the older surveys, and differences across surveys in the coding of occupations might bias more finely grained measures of occupational success, such as the ISEI. On the other hand, identifying the professionals and managerial occupations that make up the service class is straightforward. There are also some differences in the original coding of education across surveys that impede the use of a common detailed classification. In the CIS 1989 and EU-SILC, primary education also includes those with uncompleted primary education. There are also some discrepancies in the coding of primary and lower secondary across surveys, due to changes in the structure of the educational system over time. A more serious limitation is that there is no separate information for the vocational training tracks in the CIS 1988 survey and EU-SILC 2005. Note however that since the dependent variable is access to the service class, what seems particularly relevant is the distinction between short university degree and

[6] In Appendix 2 I discuss issues of coding and comparability across surveys in details. Various tests suggest that the measurement of occupational class and education is fairly consistent in the various surveys, and that it is legitimate to interpret substantively (and not simply as due to measurement errors) the change in the coefficients of interest across surveys.

long ones. This distinction is available for all surveys with the exception of EU-SILC (2005). Faced with these difficulties in the empirical analysis, I have followed two strategies. First, I have estimated models with the most detailed classification available for education in each survey. Despite the aforementioned discrepancies, each survey uses rather detailed coding of at least 6 categories. In this way I have sought to minimise within each survey the part of the social origin effect that might be due to measurement error in own education. Then, I have replicated the analysis using a four level common classification that distinguishes lower secondary education or less, upper secondary or vocational training, lower tertiary education, and longer tertiary education. In any case, in commenting on the results I give special weight to the contrast between the SD 1991 and the CIS 2006 because they are the most comparable surveys, with the most detailed measurement of education, occupational class and class of origin.

With regard to the statistical models, I use linear probability models for the analysis of occupational class (access into the service class and avoidance of the working class) with robust standard error and OLS regression for monthly labour earnings and ISEI, again with robust standard errors. I have performed a wide range of robustness checks with different models and specifications. They include: a) the estimation a logit model instead of a LPM for the analysis of occupational class; b) the estimation of an OLS regression with a log transformation of labour income; c) the estimation of an ordered logit for labour income recoded into 10 ordered categories[7]; d) the estimation of a quantile regression for labour income; c) the replication the analysis of occupational class and ISEI only for those employed; and e) the replication of the analysis separately for men and women and for the youngest cohort (28-45). The complementary analyses confirm that the findings presented in the following section are robust[8].

6. Results

Table 2a and Table 2b address the question on whether at the beginning of the 21st century in Spain there is a direct effect of social background on labour market success over and above the effect of own education. Table 2a studies the social origin advantage for the chances of accessing the service class and avoiding of the working class, while Table 2b does the same for monthly net earnings and occupational status (ISEI). Is there, then, a direct effect of social background on labour market success? The straightforward answer is "yes" and this effect seems sizeable for the four measure of LM success considered. If one considers the chances of accessing the service class, those who themselves come from the service class enjoy an advantage of 13 percentage points when compared to those who have working class origins[9]. The premium of having upper class origins instead of working class roots rises to 23 percentage points among young (28-45 years old) respondents. If one considers the monthly net labour income, the premium for young male respondents with a service class background is equal to 213 euros per month (model 2 table 2b). The confidence interval for this estimate is large. Still, in substantive terms about 200 additional euros a month seems a rather substantial amount of money. For income I have also estimated a quantile regression that shows that

[7] Between 0 and 300€, 301€ and 600€, 601€ and 900€, 901€ and 1200€, 1201€ and 1800€, 1801€ and 2400€, 2401€ and 3000€, 3001€ and 4500€, 4501€ and 6000€, 6001€ or more. These categories were suggested in the CIS 2634 questionnaire for those who could not, or did not want to, provide a precise value for their monthly income.

[8] Overall I have results from about 200 regression models that are far from the 2 millions regressions of Xala-I-Martin (1997) but they are still too many to be presented even in an internet appendix. Therefore only part of the results of the robustness checks are presented in Appendix 3, while the others can be reproduced using the Stata commands that are available for replication.

[9] Only 1.2% of the predicted values based on the LPM fall out of the interval 0 and 1. The estimated service class advantage in terms of the marginal effect in the equivalent logit model is 9%

the class of origin advantage is largely concentrated in the top quantiles. More precisely, while the direct class advantage is almost null in the lowest to the median quantile (about 25 to 75 euros) it is already large in the 0.75 quantile (160 euros) and very large (400 euros) in the 90th percentile (See Appendix Table 3.1)[10]. I will return to this finding later on, commenting on the conditional effect of class of origin for the highly educated and those employed in the social skills intensive service sector. However for the moment, three additional findings stand out.

First, the class of origin advantage is stronger for men than for women. This finding is consistent across all the measures of occupational success considered. Second, the class of origin advantage tends to be stronger for young respondents (those aged 28-45). Third, if one compares model 1 to 3 and models 3 to 6 in Table 2a, it transpires that the effects of class of origin are greater for avoiding a downward move (models 3 to 6) into the working class than for moving upward into the service class (model 1 to 3). The exception from this general pattern is of course for those with a service class background, for whom accessing the service class is the only possibility to avoid a downward move.

[TABLE 2A AND 2B ABOUT HERE]

The evidence of a sizeable class of origin presented in Table 2a and Table 2b already speaks against the hypothesis drawn from the modernisation theory that would predict a null or trivial direct effect of social origin in contemporary Spain. A stricter test of modernisation theory, however, requires us to examine the trend of the direct class premium and whether it has declined over time. I have therefore performed two analyses. First, I have studied the variation in the class of origin premium on the first job across various birth cohorts from 1940 to 1978. Second, I have focused on the current or last job, and I have compared the estimates of the class premium based on different mobility surveys from 1988 to 2006.

Table 3 shows the results for the probability of accessing the service class in the first job. The upper panel presents the estimates based on the CIS 2634 survey, while the bottom panel those based on the SD 1991 survey. The main conclusion that can be drawn from Table 3 is that there is no evidence of a decline over time in the advantage of those coming from a service class background in the chances of accessing the service class, net of education. This effect has even increased from 2 per cent to 13 per cent, if one compares the 1941-1950 and the 1970-1978 in the CIS 2634 survey. There is however considerable uncertainty associated with these estimates and the variation is not statistically significant. Also the findings based on SD 1991 survey point to a stability over time, although in this case a statistically significant increase, from 5 per cent to about 10 per cent, is found if one compares the effect associated with having a service class background in the first birth cohort 1930-1939, and those following[11].

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[10] I have also estimated OLS regressions models with a log transformation for income and ordinal probit model with income coded in deciles (Appendix 3.2 and 3.3). A class of origin advantage is also found with these different model specifications on the whole sample of men and women aged 28-66. In both specifications, however, the effects turns out to be statistically insignificant for men and women aged 28-48. One should note that logging the monthly income produces a scale that is far more sensitive to differences when values are small, than when they are large. On the other hand, the quantile regression shows that most of the class of origin advantage is concentrated among those in the top part of the income distribution. This pattern is accentuated among younger respondents. My conclusion is that logging income artificially squeezes the class of origin advantage. Similarly, in the case of the ordered logit there is clear evidence that the proportionality assumption is violated.

[11] One has to stress, that the results of the two surveys are not directly comparable because the definition of the first job varies. In the CIS 2634 the first job is defined as the first job with a duration longer than six months, while no tenure restriction was considered in the SD 1991. This might explain why the estimates of the class premium are larger in the SD 1991. If those with a working class family are more likely to take up occasional

[TABLE 3 ABOUT HERE]

Another important finding, which can be seen in Table 3, is that the relative returns of tertiary education in accessing the service class have declined over time. While in the cohort 1940-49 those with a short university degree had a probability of accessing the service class that was 62 percentage points higher than those with a lower secondary education, in the subsequent birth cohorts this advantage has declined to about 45 percentage points. In the most recent birth cohort 1970-1978 one also finds a decline in the relative returns of a long university degree (including doctoral studies). In the cohort 1940-49 a long university degree secured an advantage of 67 percentage points in accessing the service class, when compared to a lower secondary. This advantage has now gone down to 52 percentage points. All the aforementioned variations are statistically significant (see Appendix, Table 3.4).

Table 4 addresses the same question on variation of time of the direct effect of social origin, but in this case considering cross sectional data with information on the current or last job at different points in time. As explained above, I have employed the most detailed classification for education in each survey. With all due caveats related to possible measurement errors across surveys, the results overall are consistent with those found for the first job, and there is no evidence of a decline in social class of origin premium over time.

[TABLE 4 ABOUT HERE]

Once established that there is a social origin advantage (i.e. a sizeable advantage in LM success for those coming from the service in class), and that it has not declined over time, in Table 5 I investigate whether this social origin advantage is conditional on the level of education achieved. Additionally Table 5 allows us to discover whether the absolute returns on education have changed over time. I focus on this last question first. The effect of cohorts in Table 5 now expresses the variation in the probability of accessing the service class for a given educational level when compared to the birth cohort 1940-49. For instance for someone born between 1970-1978 a short university degree is associated with a probability of finding a first job in the service class that is 21 percentage points lower than for someone born in 1940-1949 with the same level of education. In other words, Table 5 documents that an inflation in the value of short tertiary education has occurred. In other words, that same level of education guarantees lower chances of access to the upper class. A similar inflation is also evident for long university degrees in the most recent cohort. When compared to the cohort 1940-49, long university degrees lose 14 percentage points.

[TABLE 5 ABOUT HERE]

Returning to the question regarding the conditional effect of social origin, there are good reasons to expect that the direct social origin effects should be weaker among those who are highly educated. As discussed in section 2, it has in fact been suggested that the LM for university gradates is more meritocratic and leaves less space for social origin influences in occupational attainment (Hout 1988; Breen and Johnsson 2007). Furthermore the transition into the LM for those who are highly educated takes place at an older age, when the family of origin is less able to exert a direct influence on the individual life-course. Finally a positive selection on unobserved characteristics, such as motivation and ability, which are also highly rewarded in the LM, is likely to be in place for those who achieve higher education from working class origins (Bernardi 2012).

(Contd.)
jobs, for instance while studying, while those from a service class family tend to land directly into the service class, this would result in a larger class premium in the SD 1991.

Although each of these arguments seems plausible, the evidence in Table 5 for the probability of accessing the service class in the first job, is not in line with the hypothesis of a vanishing social class advantage among those with tertiary education. One actually finds that there is no class of origin difference among those with a short university degree. However, a sizeable effect is found among those with a long university degree and those with upper secondary or higher vocational training. These findings seem therefore to point to a U shape pattern that resembles that found for the US by Torche (2011). The picture however becomes more complex when different measures of occupational success associated with current and or last jobs are considered.

Next, I perform a similar analysis for the current or last occupation and I analyse the chances of access to the service class, and of avoiding the working class (Table 6ab). I also examine whether the effect of class of origin on net monthly labour income and ISEI varies by education (Table 6cd).

[TABLE 6 A, B, C, D ABOUT HERE]

A slight decline in the social origin effect is observed for the chances of avoiding the working class and for the ISEI. However this decline mainly seems to be driven by a roof effect. For instance, since already 91 per cent of those with a long university degree coming from a working class background manage to avoid the working class (see the effect of the constant in model 5 Table 6b), there is little space left for the service class origin advantage to materialise.

On the other hand, in the case of income, all social class advantage is concentrated among those with a long university degree[12]. One should note in this respect that in Spain there is a minimum earning's regulation, and that salaries among the unskilled skilled and skilled workers and white collars are largely set by collective agreements; while the top tier of the labour market is less regulated and more market or performance driven. It is therefore common knowledge that the variation in earnings between two managers or lawyers is higher than the variation in earnings between two unskilled or skilled workers. Indeed there is evidence that performance pay incidence is most prevalent among those with a university degree and those employed in high wage categories (De la Rica *et al.* 2010) [13]. One can then speculate that with performance pay there is more space for the family of origin advantage to materialise.

In sum, there is no univocal pattern for the conditional effect of social origin on the level of education achieved. Still, the evidence for Spain does not support the hypothesis that university education is the great equaliser and that social background does not influence success in the LM for those who manage to achieve a university degree. Quite the opposite: in the case of labour income the class of origin makes a difference only among university graduates.

Finally, in the last part of the analysis I tentatively look at various mechanisms that might be underlying the social origin advantage documented so far. First of all I investigate whether the observed direct class of origin effect is due to the choice of different fields of study. It is well known that some fields of study (for instance engineering) lead to higher returns in the LM when compared to others (for instance humanities). The observed class of origin advantage might then simply reflect the choice of different fields of study, so that students from the upper class embark on more demanding fields of studies that give access to better paid occupations. If this is the case, when then the information of field of study is brought into the analysis, the observed class of origin advantage should

[12] The same pattern of results is observed if one restricts the analysis to men aged 28-45 (See Appendix 3, Tables 3.5abcd).

[13] The incidence of performance pay is about 30% among those with a university degree and 14% among those with primary education (own computation based on Table 2a in de la Rica *et al.* 2010). It reaches 50% and 30% among managers and professionals, respectively.

vanish or at least decline. Table 7 however shows that the direct effect of social origin on access to class, income or ISEI does not vary at all when fields of study (whose effects are not shown here) are controlled for. One can also disregard the Spanish case, in line with Mastekaasa's (2001) findings for Norway that the direct effect of social origin on LM success comes about through different choices in fields of study[14].

[TABLE 7 ABOUT HERE]

Table 8 addresses two other possible mechanisms underlying the class of origin advantage on labour income. The observed advantage of those with service class origin might actually reflect class related differences in ability that are not well captured by the level of education. Or it might also be related to class-specific ways of finding a job. In model 2 in Table 8 I add an indicator of performance at school at the end of compulsory education. This indicator is far from optimal since it is based on a retrospective question on school performance, rather than registered grades or test scores. Model 2 shows that performance at school pays off, on the top of the level of education completed. Someone who had a "not good" or a "bad performance" earns on average about 200 euros less than someone who had a very good performance. Still, in model 2 there is hardly any variation in the estimates of the direct social origin effect. This finding casts serious doubts on the idea that the observed class of origin premium might reflect differences in performance at school and indirectly class based differences in ability. This result is also in line with what was found in UK, where the class of origin advantage is robust to the inclusion of an indicator of ability at school (Bukodi and Goldthorpe 2011). Next, Model 3 examines whether class based differences in ways to find a job might account for the observed class premium. In this case one can appreciate some reduction in the class of origin effect once the way to find a job is considered, particularly in the case of those from self-employed families. Indeed those whose parents were self-employed or farmers are more likely to have set up their own business, while those coming from the service class are more likely to have found their job through a public examination (results not shown here). Both methods lead on average to higher earnings than relying on personal contact. Still, the reduction in the class premium from model 1 to model 3 is not large (26 euros for the urban self-employed) and the estimates are not precise enough to make firmer conclusions (i.e. the difference between the class of origin effect in model 1 and 3 are not statistically significant).

[TABLE 8 ABOUT HERE]

Finally, in Table 9 I explore whether the class advantage is conditional on the sector of employment. I distinguish across five sectors: public sector, agriculture, industry, social skills intensive service activities and the remaining service activities where social skills should be more important, and service activities where social skills should be less important. According to Goldthorpe (2000) such skills should be more important and thus more highly rewarded in the service sector than in manufacturing, and particularly so "in the leisure, entertainment, or hospitality industries, [. . .] high-value sales, customer services, or public relations". Mastekaasa (2011) operationalises Goldthorpe's intuition and defines industries in cultural services, hotel and restaurant services and financial services as social skills intensive industries. In the following I use a slightly broader definition to also include real estate services, bookkeeping and consultancy services, public relations, computer services, advertising and market research services and other services to firms [15]. In this way I create two

[14] The analysis has been replicated for cohort and gender subgroups and no variations in the class of origin effect is observed once fields of study are considered (results not reported here).

[15] This corresponds to the industries 70, 71, 72, 73 and 4 in the CNAE 1993. I cannot use a more refined classification because the coding used in CIS 2634 collapses all these industries into a single category. While some of them, such as public relations activities, would certainly fit Goldthorpe's (2000) argument, other such as

segments of the service sector: the first that includes those that I define as social skills intensive, while the second segment includes those remaining, (i.e. retail trade, transport, education, health, activities of membership organisations, personal services). I also separate the public sector.

[TABLE 9 ABOUT HERE]

Model 1 in Table 9 shows that, controlling for own education and gender, the sector of employment does affect earning. In particular, those employed in "other services" and those employed in agriculture earn on average less than those employed in the social skills intensive segment of the service sector. The direct effect of social origin is not however affected by the inclusion of the sector of employment (compare with model 1 Table 7), thus suggesting that the advantage conferred by the class of origin does not come about by the placement in a given sector of activity. Model 2 includes interaction between class of origin and sector of employment. The constitutive term for social class of origin in model 2 now refers to those employed in the social skills intensive sector. For those with a service class and self-employed family of origin the class premium raises to 347 and 455 euros on average, respectively. On the other hand the interaction terms for these two aforementioned class of origins and the remaining sectors have a negative sign. The level of uncertainty associated with these estimates is high, as the ample confidence intervals show. Still, this pattern of findings is in line with the social skills hypothesis since almost all the observed advantage in terms of income for those coming from the service class and from self-employed parents is concentrated among those who are employed in the social skills intensive service sector.

There is however an important caveat to make in this respect. The social skills intensive service sector also turns out to be the sector with the largest income dispersion (see Table 6 in the Appendix). While in this sector the average income is slightly smaller than in the public sector (1,346 euros compared to 1,427 euros) the standard deviation is 1.5 times higher (1026/675). It might therefore be the case that the observed class premium is due to the largest income dispersion in the sector and not to class based social skills that are more highly rewarded in that sector. For whatever reasons besides class based social skills, those from the service class and self-employed families might be better equipped to profit from the larger variability of income in this sector. In order to grasp the mechanism underlying the findings of model 2 one would then need a more fine grained analysis within the occupations of each sector

7. Conclusions

7.1 Conclusions: summary of the results for Spain

The empirical analyses commented on above have addressed multiple questions related to the direct advantage of class of origin on LM success, over and above the indirect effect that it guarantees through educational achievement. To recap, this paper has analysed variation in the direct class of origin advantage over time and across level of education. The parallel question on variation in absolute and relative returns to education has also been touched on. Finally, I have presented some tentative suggestions on various mechanisms that possibly underlie the persistent direct intergenerational transmission of inequality. Table 10 summarises the main findings of the statistical *tour de force* across the various empirical analyses presented above.

[TABLE 10 ABOUT HERE]

(Contd.)
computing are more questionable. Since the sample size is too small to keep these categories apart, I have preferred to include them in the social skills segment.

Moving right from the first column of Table 10, I find a social origin advantage over and above own education. Those from the service class have 13% more chances of achieving service class when compared to someone from the working class with the same level of education. This class advantage rises to 23% among male respondents aged 28-45. They can also expect to earn on average 213€ more than those with working class origin with the same level of education. The size of these effects is substantial. To benchmark these findings, it is worth noting that the "ethnic penalty" in avoiding the unskilled occupation for a first generation man from Morocco living in Spain, in the period 2002-2007 was 27 percentage points. In other words, taking into account the level of education and time spent in the Spanish labour market the chances of being employed in skilled occupation were 27 percentage lower for a Moroccan male worker than a Spanish worker (Bernardi *et al.* 2011, Table 11). The ethnic penalty for other ethnic groups was also about 30%. If one then compares the chances of avoiding unskilled occupation for two people, with the same level of education but different class of origin, the class penalty for those with a working class background is 23% (Table 2a, model 2). Therefore the size of the "class of origin penalty" is close to the "ethnic penalty" for first generation immigrant workers.

Second, contrary to the expectation of modernisation theory there is no evidence of a decline of this class advantage over time. If anything, there are even some hints of an increase in the most recent cohorts, when compared to the cohort of birth 1940-1949 (see Table 3). Parallel to this, both relative and absolute returns on education have declined (see Table 4 and 5). The reduction in the absolute returns on education is particularly notable. This means that in recent years the same level of education guarantees lower chances of accessing the upper class when compared to the past. A short university degree is now associated with a probability of finding a first job in the service class that is 21 percentage points lower than the same probability for someone born in the 1940-1949 cohort with the same level of education. Not too surprisingly the decline in both the absolute and relative advantage associated with university education has occurred when the supply of university graduates has outstripped their demand (Table 1).

Fourth, various arguments suggest that the class premium would reduce for people with higher levels of education. This should occur if the LM for the highly educated is more meritocratic and/or the class effect is reduced for those who enter the LM at older ages. It could also be the case that the upper class might actively try to influence their offspring occupational attainment particularly in case of a failure in the educational system and/or those from working class background who achieve higher education are particularly bright and motivated (i.e. they are positively selected on unobserved characteristics that are also rewarded in the LM). Contrary to the shared prediction of these arguments, no reduction in the class premium is found for higher levels education in Spain. In the case of income, the class of origin advantage is actually only found for those who are highly educated. In this respect one should note that the variability in the income distribution is highest among those who are highly educated (the standard deviation for the income distribution of those with a long university degree is almost double that for for those with a higher secondary education). This result begs the question of whether higher income variability among university graduates is exogenous to the class of origin effect. I will come back to this issue below in the section "open questions". For the time being it is sufficient to point out that in this case the results for Spain differ from those for Norway, where a reduction of the direct parental influence for university graduates has been found, and from those for the US, where direct parental influence is strong among those with low educational attainment; and it disappears or substantially weakens among bachelor degree-holders but re-emerges among advanced degree-holders, so that a U shape pattern is observed (Torche 2011; Mastekaasa 2011).

A tentative analysis on possible mechanisms shows that there is no mediating effect of field of study, confirming previous results by Mastekaasa (2011), nor of grades at school (although the measure is far from optimal) - nor of the modes used for finding the job. On the other hand, the class advantage appears to be stronger in the segment of the service sector where social skills are presumably more

important. This last finding mirrors previous results for Norway and is in line with Goldthorpe's (2000) claim that the social class of origin effect should appear more clearly for those employed in sectors where social skills play a more important role. Incidentally, however, it turns out that income dispersion is also higher in this segment of the service sector, where the direct parental influence is stronger. Therefore this finding matches the previous result that pointed to stronger parental influence among university graduates who have larger income dispersion.

7.2 Conclusions: open questions

This paper is a good example of how research can be seen as perennial endeavour where the answer to a question leads to more fine grained questions.

First, there is solid evidence that the class of origin is more important in determining LM success for men than for women. This result is in line with what has been established in the past, when social mobility and class maintenance for women was predominantly guaranteed through marriage. But why is this the case nowadays? Gender equality has made giant (or at least large) steps forward, even in Spain. Furthermore the divorce rate is rising in all OECD countries, and Spain is not an exception in this respect (Bernardi and Martínez-Pastor 2011). It does not seem a fully rationale strategy nowadays to invest in one's own daughters' marriage as a social mobility strategy. One alternative explanation for the weaker class of origin effect for women is that of a stronger self-selection process into female employment. Only those who are most motivated, or who have the most favourable unobserved characteristics among women with a working class background, are employed. 'Therefore one would expect that the estimated direct social background effect for women would be underestimated. If however the observed gender effect is not due to self-selection, one should first come to grips with the actual mechanism that underlies the direct parental influence, and then try to identify its gendered nature.

Second, a stronger direct parental influence is associated with greater income dispersion. This finding is consistent with what we know from an introductory course on regression, so that the larger the variance on the dependent variable, the larger the beta coefficients for the independent variable; in this case the class of origin. Far from simply being a regression artefact, this rule has a clear substantive implication for the problem under analysis: the greater the labour income inequality, the stronger the direct parental influence. In other words, when there are possibilities to earn more, those who come from a privileged background seem to be better equipped to take advantage of them. This interpretation rests on the assumption that the income distribution is exogenous to the influence of the class of origin. But the class background effect might be responsible for the observed dispersion in income. This explanation would be compatible with the idea that distribution of social skills varies according to the class of origin. In particular, those from the service class possess more social skills that make them more productive (and thus worth being more highly rewarded) especially in specific economic sectors. The question whether the observed pattern is due to a polarisation in unobserved characteristics across social classes, or to differing income producing wage settings across sectors or segments of the labour force might boil down to a trivial chicken-egg question. On the one hand, in a situation of perfect income equality, no background effect would be observed by definition. Or to put it differently, the more variability the more potential for class of origin based inequality. On the other hand, class of origin might on its own have a disequalising effect on the income distribution. If social classes become increasingly different with regard to some characteristics that are related to productivity, the larger income dispersion would simply reflect more skill polarisation across social classes. Both supply and demand mechanisms might well be at play simultaneously. Nevertheless, the in-depth exploration of the stronger effect of class background where the income variations is larger might pay-off theoretically. It would in fact address the core of the relationship between income inequality and income mobility, a topic largely ignored by sociologists (Björklund and Jäntti 2008).

A third, final question that arises from the previous results is what happens next or, to be more precise, now Social mobility studies have usually a five to ten year lag with respect to the society they

analyse[16]. This study is no exception since it is largely based on a mobility survey undertaken in 2006. This is usually not a major problem given the slow pace of social change. However the financial crisis in 2008 might represent a discontinuity with the past. If one does not want to make a contribution to the understanding of past, the question on the consequences of the financial crisis on social mobility then becomes a pressing one. Do the findings for the younger cohort 1970-1980 in this study hold today? Although the long term effect on social mobility patterns will become evident only over time, once the mobility trajectories of current generations have completely unfolded, one can still speculate on the direct parental influence in the new scenario of economic and fiscal crisis. In times of economic hardship one can expect social background to become more relevant. In Spain, as in other countries, the economic crisis has brought the unemployment rates to unprecedented high levels. In 2011 the youth unemployment level is about 40%. One might argue that in a situation of high unemployment, the direct advantage conferred by the class of origin is displaced by the chances of having, or not having, a job.

7.3 Conclusions: Preliminary hypothesis for a comparative research study

As the saying goes "The third conclusion is the lucky one". As a way to confirm this saying, I have merely sketched some general hypotheses for a comparative research project based on the conclusions of this study. First of all, one would expect a larger effect of the class of origin on income in those countries with larger income inequality. This would be a generalisation of the specific pattern observed for university graduates and for those employed in the social skills intensive service sector in Spain. Second, one would expect a larger effect of the class of origin on the probability of access to the service class in those countries with a smaller service class. In this case one can foresee fiercer competition to guarantee class maintenance over generations. Third, the variation in the relative and absolute returns on higher education will depend on the supply demand ratios for the highly educated (such as the ratio presented in Table 1). Four, smaller direct effects of the class of origin should be observed in country with highly stratified educational systems such as Germany and Denmark if the intergenerational reproduction of inequality takes place mainly through the educational system. Conversely a large class effect should be observed in a country with a comprehensive educational system (such as in the case of Spain or Italy) that conveys less clear signals on school leavers' productivity in the labour market, and leaves more space to the family of origin to exert an influence (Bernardi *et al.* 2004). Fifth, a more gender neutral effect of parental influence should be observed in countries with more gender equality.

Addressing these preliminary hypotheses (and others that might emerge along the way) requires a truly comparative set of results for different countries. One would then be in a privileged position to scrutinise the pivotal role of education and class of origins in structuring inequality across generations and countries. This would be the great pay-off of a comparative study along the guidelines established in this paper.

[16] Thus, the analyses in Erikson and Goldthorpe (1992) arrive to the 1980s, while those in Breen (2004) to the 1990s.

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Tables

Table 1: Educational Attainment and Access to the Service Class in the First Job by Cohort of Birth; Spain

CIS 2634 (2006)

	1931-40	1941-50	1951-60	1961-70	1971-80
Level of education					
Primary or less	79.4	57.9	29.9	11.0	4.5
lower seconday	7.4	18.3	28.7	34.7	28.1
lower vocational	1.6	3.8	5.6	9.0	8.4
Upper secondary	3.8	6.8	13.6	11.6	13.7
Upper vocational	2.4	2.6	4.9	10.1	15.6
University short	3.1	5.1	8.4	9.5	13.7
University long	2.2	5.5	8.9	14.1	16.0
	100.0	100.0	100.0	100.0	100.0
N=	863	977	1059	1394	1371
Class of first job (EGP)					
Service class	6.5	12.0	14.8	18.4	20.6
White Collars	9.1	14.5	20.2	21.0	26.1
Self-employed	6.7	6.5	6.8	5.8	4.5
Farmers	9.7	4.6	2.9	2.3	1.2
Urban working class	56.1	56.1	51.5	48.0	44.3
Agric. working class	11.8	6.4	3.7	4.5	3.4
	100.0	100.0	100.0	100.0	100.0
N=	626	849	988	1334	1342
Ratio university (short+long) / class I-II					
	0.8	0.9	1.2	1.3	1.4

Source: CIS 2634

Table2a: Class of Origin Effect on the Probability of Access into the service class (P(Y)), ISEI and on Income, Controlling for Own Education; OLS Regression with Robust StandardE; 95% Confidence Intervals in Brackets. Linear Probability for P(Y) Models and OLS for ISEI and Income.

	(1)	(2)	(3)	(4)	(5)	(6)
	P(access service class)			P(avoiding the unskilled working class)		
	All	Men aged 28-45	Women aged 28-45	All	Men aged 28-45	Women aged 28-45
Gender (male=1)	0.01			0.02		
	[-0.01,0.03]			[-0.01,0.04]		
Education						
Primary or less	-0.01	-0.01	0.01	-0.05*	-0.01	-0.04
	[-0.03,0.01]	[-0.04,0.01]	[-0.03,0.05]	[-0.09,-0.00]	[-0.11,0.09]	[-0.14,0.05]
Lower secondary. (ref.)	0.00	0.00	0.00	0.00	0.00	0.00
Lower voc. training	0.04*	-0.00	0.12**	0.11**	0.06	0.19**
	[0.01,0.07]	[-0.04,0.04]	[0.04,0.19]	[0.04,0.17]	[-0.04,0.16]	[0.07,0.30]
Upper sec.	0.08**	0.08*	0.04+	0.26**	0.20**	0.27**
	[0.05,0.12]	[0.02,0.14]	[-0.01,0.09]	[0.21,0.32]	[0.10,0.30]	[0.17,0.37]
Upper voc. training	0.14**	0.14**	0.14**	0.19**	0.12*	0.28**
	[0.10,0.19]	[0.07,0.21]	[0.07,0.20]	[0.13,0.25]	[0.03,0.21]	[0.18,0.38]
University short	0.57**	0.55**	0.52**	0.54**	0.51**	0.60**
	[0.51,0.62]	[0.46,0.65]	[0.43,0.61]	[0.49,0.59]	[0.42,0.59]	[0.51,0.68]
University long	0.67**	0.63**	0.70**	0.59**	0.54**	0.69**
	[0.62,0.71]	[0.56,0.71]	[0.62,0.77]	[0.55,0.63]	[0.47,0.61]	[0.62,0.75]
Class of origin						
Service class	0.13**	0.23**	0.09+	0.16**	0.23**	0.11**
	[0.08,0.18]	[0.14,0.31]	[-0.00,0.18]	[0.11,0.21]	[0.15,0.31]	[0.03,0.19]
White collars	0.05	0.07	0.07	0.15**	0.23**	0.08
	[-0.01,0.10]	[-0.03,0.16]	[-0.02,0.17]	[0.09,0.21]	[0.13,0.33]	[-0.02,0.19]
Self-employed	0.01	0.02	0.02	0.15**	0.19**	0.10**
	[-0.02,0.04]	[-0.03,0.07]	[-0.04,0.08]	[0.11,0.19]	[0.12,0.27]	[0.03,0.18]
Farmers	0.01	-0.01	0.03	0.15**	0.20**	0.12*
	[-0.02,0.04]	[-0.06,0.05]	[-0.03,0.10]	[0.10,0.20]	[0.10,0.30]	[0.02,0.22]
Urban working class (Ref.)	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural working class	-0.01	0.01	0.00	-0.05*	-0.06	0.04
	[-0.03,0.01]	[-0.04,0.06]	[-0.06,0.07]	[-0.09,-0.00]	[-0.15,0.03]	[-0.06,0.15]
Constant	0.04*	0.02	0.01	0.26**	0.23**	0.18**
	[0.01,0.07]	[-0.01,0.05]	[-0.01,0.03]	[0.21,0.31]	[0.18,0.28]	[0.13,0.23]
N	3768	1133	1026	3768	1133	1026

Source: CIS 2006 + p<0.10, * p<0.05, ** p<0.01

Table2b: Class of Origin Effect on the Probability of Access into the Service Class (P(Y)), ISEI and on Income, Controlling for Own Education; OLS Regression with Robust Standard Errors; 95% Confidence Intervals in Brackets. Linear Probability for P(Y) Models and OLS for ISEI and Income.

	(1) Income All	(2) Men aged 28-45	(3) Women aged 28-45	(4) ISEI All	(5) Men aged 28-45	(6) Women aged 28-45
Gender (male=1)	460**		460**	2**		
	[403,518]		[403,518]	[1,2]		
Education						
Primary or less	-192**	4	-88	-3**	-2	-2
	[-291,-93]	[-332,339]	[-233,56]	[-4,-1]	[-4,0]	[-5,1]
Lower secondary. (ref.)	0	0	0	0	0	0
Lower vocational training	72	38	45	3**	3*	5**
	[-42,185]	[-159,236]	[-89,178]	[2,5]	[0,5]	[1,8]
Upper secondary	174**	120	123+	9**	7**	10**
	[88,260]	[-27,267]	[-12,259]	[8,11]	[5,10]	[7,13]
Upper vocational training	205**	187*	120	9**	7**	10**
	[113,297]	[32,341]	[-24,264]	[7,10]	[5,9]	[7,13]
University short	366**	266**	411**	21**	22**	21**
	[278,453]	[103,428]	[273,549]	[19,22]	[19,25]	[18,23]
University long	821**	672**	630**	29**	28**	30**
	[695,947]	[464,879]	[480,780]	[27,30]	[25,30]	[28,33]
Class of origin						
Service class	145*	213+	90	5**	8**	3+
	[28,262]	[-13,438]	[-59,240]	[4,7]	[5,11]	[-0,6]
White collars	-55	-135+	107	2+	3*	2
	[-160,50]	[-294,24]	[-57,272]	[-0,4]	[1,6]	[-1,6]
Self-employed	152**	193*	93	2**	3**	2*
	[53,251]	[7,379]	[-25,211]	[1,4]	[1,5]	[0,5]
Farmers	-42	-27	-18	-1	-3*	2
	[-129,46]	[-199,145]	[-128,93]	[-2,1]	[-5,-0]	[-1,5]
Urban working class (Ref.)	0	0	0	0	0	0
Agricultural working class	-98*	-59	-83	-3**	-1	-2
	[-174,-22]	[-225,108]	[-188,22]	[-4,-1]	[-4,1]	[-5,1]
Constant	950**	1245**	794**	33**	33**	31**
	[817,1082]	[1138,1353]	[675,913]	[32,35]	[32,35]	[30,33]
N	2211	859	638	3768	1134	1028

Source: CIS 2006 + p<0.10, * p<0.05, ** p<0.01

Table 3: Class of Origin Effect on the Probability that the First Job is in the Service Class, by Birth Cohort. Linear probability models; Panel a uses CIS 2634 (2006), panel b uses SD (1991)

Panel a CIS 2634 (2006)	(1)	(2)	(3)	(4)	(5)
	1930-39	1940-49	1950-69	1960-69	1970-78
Education					
Primary or less	-0.03	-0.01	-0.01	-0.03**	0.03
	[-0.08,0.02]	[-0.05,0.02]	[-0.03,0.02]	[-0.05,-0.01]	[-0.03,0.09]
Lower secondary. (ref.)	0.00	0.00	0.00	0.00	0.00
Lower vocational training	0.06	0.04	0.02	0.01	0.03
	[-0.13,0.24]	[-0.05,0.13]	[-0.04,0.08]	[-0.03,0.06]	[-0.02,0.08]
Upper secondary	0.07	0.13*	0.10**	0.04	0.04
	[-0.06,0.20]	[0.01,0.24]	[0.03,0.16]	[-0.01,0.09]	[-0.01,0.09]
Upper vocational training	0.16	0.16+	0.10*	0.10**	0.15**
	[-0.08,0.40]	[-0.01,0.34]	[0.00,0.21]	[0.04,0.17]	[0.09,0.21]
University short	0.69**	0.62**	0.47**	**0.41****	**0.45****
	[0.49,0.90]	[0.47,0.77]	[0.36,0.59]	[0.31,0.50]	[0.36,0.54]
University long	0.43**	0.67**	0.64**	0.61**	**0.53****
	[0.15,0.71]	[0.53,0.81]	[0.53,0.75]	[0.53,0.69]	[0.44,0.62]
Class of origin					
Service class	0.10	0.02	0.04	0.08+	0.13*
	[-0.09,0.29]	[-0.11,0.14]	[-0.07,0.16]	[-0.01,0.18]	[0.03,0.23]
White collars	0.10	0.07	-0.08	0.02	0.09+
	[-0.12,0.33]	[-0.11,0.24]	[-0.20,0.03]	[-0.06,0.10]	[-0.01,0.19]
Self-employed	0.02	0.02	-0.03	-0.00	0.04
	[-0.04,0.07]	[-0.04,0.08]	[-0.08,0.03]	[-0.05,0.05]	[-0.02,0.10]
Farmers	0.01	-0.01	-0.01	-0.01	-0.01
	[-0.03,0.04]	[-0.04,0.03]	[-0.05,0.04]	[-0.06,0.04]	[-0.08,0.06]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00
Agricultural working class	0.00	-0.02	0.00	-0.02	0.04
	[-0.02,0.03]	[-0.06,0.02]	[-0.04,0.05]	[-0.08,0.03]	[-0.03,0.10]
Constant	0.03	0.04+	0.00	0.02	-0.01
	[-0.03,0.09]	[-0.00,0.09]	[-0.03,0.04]	[-0.01,0.06]	[-0.04,0.03]
N	573	740	868	1179	970

Panel b SD (1991)	(1)	(2)	(3)	(4)
	1930-39	1940-49	1950-59	1960-66
Education				
Primary or less	-0.02*	-0.04**	**-0.02****	**-0.01****
	[-0.05,-0.00]	[-0.06,-0.03]	[-0.03,-0.01]	[-0.01,-0.00]
Lower secondary. (ref.)	0.00	0.00	0.00	0.00
Lower vocational training	0.06**	0.04*	0.01	0.03**
	[0.02,0.10]	[0.00,0.07]	[-0.01,0.03]	[0.01,0.05]
Upper secondary	0.09**	0.07**	0.05**	0.06**
	[0.05,0.13]	[0.04,0.10]	[0.03,0.07]	[0.04,0.07]
Upper vocational training	**0.09****	0.17**	**0.10****	0.13**
	[0.03,0.16]	[0.11,0.24]	[0.07,0.13]	[0.09,0.16]
University short	0.57**	0.62**	0.59**	**0.50****

Panel b SD (1991)	(1)	(2)	(3)	(4)
	1930-39	1940-49	1950-59	1960-66
	[0.51,0.63]	[0.58,0.66]	[0.56,0.62]	[0.46,0.55]
University long	0.69**	0.68**	0.68**	0.65**
	[0.62,0.75]	[0.64,0.72]	[0.65,0.70]	[0.61,0.69]
Class of origin				
Service class	**0.05****	0.10**	0.10**	0.12**
	[0.02,0.09]	[0.08,0.13]	[0.07,0.12]	[0.09,0.16]
White collars	0.02	0.03*	0.03*	0.07**
	[-0.03,0.07]	[0.00,0.07]	[0.01,0.05]	[0.04,0.11]
Self-employed	0.00	0.01	0.03**	0.02+
	[-0.01,0.02]	[-0.01,0.02]	[0.02,0.04]	[-0.00,0.04]
Farmers	-0.00	0.00	0.00	-0.00
	[-0.01,0.00]	[-0.01,0.01]	[-0.01,0.01]	[-0.02,0.01]
Urban working class (ref.)	0.00	0.00	0.00	0.00
Agricultural working class	-0.00	-0.00	-0.00	-0.00
	[-0.01,0.01]	[-0.01,0.01]	[-0.01,0.00]	[-0.01,0.01]
Constant	0.03*	0.05**	0.03**	0.02**
	[0.01,0.05]	[0.03,0.06]	[0.02,0.04]	[0.01,0.03]
N	15088	14540	22443	12283

Note:
95% confidence intervals in brackets
Bold if change over time is statistically significant when compared to cohort 1941-1950
+ p<0.10, * p<0.05, ** p<0.01

Table 4: Change Over Time of the Class of Origin Effect on the Probability of Access into the Service Class; People Age 28-45 in Different Years; 95% Confidence Intervals in Brackets; Pooled Cross-Sectional Analysis of Different Social Mobility Surveys. Linear Probability Models

	(1)	(2)	(3)	(4)	(5)	(6)
Years	1988	1989	1991 (SD)	1998-9	2005 (SILC)	2006
(Cohort of birth)	(1943-60)	(1944-61)	(1946-63)	(1953-71)	(1960-77)	(1961-78)
Class of origin						
Service class	0.14**	0.13**	0.08**	0.08**	0.14**	0.16**
	[0.08,0.20]	[0.07,0.18]	[0.06,**0.09**]	[0.04,0.12]	[**0.09**,0.19]	[**0.09**,0.22]
White collars	0.05	0.04	0.05**	0.03	0.06**	0.07*
	[-0.02,0.11]	[-0.01,0.08]	[0.03,0.07]	[-0.01,0.07]	[0.02,0.10]	[0.00,0.14]
Self-employed	0.01	0.00	0.01*	0.00	0.02	0.02
	[-0.03,0.04]	[-0.03,0.03]	[0.00,0.02]	[-0.03,0.03]	[-0.01,0.05]	[-0.02,0.06]
Farmers	-0.02+	0.00	-0.01**	-0.01	0.01	0.01
	[-0.04,0.00]	[-0.02,0.02]	[-0.02,-0.01]	[-0.03,0.01]	[-0.02,0.04]	[-0.03,0.06]
Urban working class (ref.)	0	0	0	0	0	0
Agricultural working class	-0.01	-0.02*	-0.02**	0.00	-0.03**	0.01
	[-0.03,0.01]	[-0.03,-0.00]	[-0.03,-0.01]	[-0.02,0.02]	[-0.05,-0.01]	[-0.03,0.05]
N	6447	6159	37959	5102	7859	2159

Note: Controlling for gender and the most detailed classification for education in each survey
95% confidence intervals in brackets
+ p<0.10, * p<0.05, ** p<0.01

Table 5: Cohort and Class of Origin Effect on the Probability that the First Job is in the Service Class by Level of Education, CIS 2634 (2006).

	(1) Primary	(2) Low sec. /Low Voc.	(3) Upper sec. /Upper Voc.	(4) University short	(5) University Long	(6) University (short and long)
Cohort						
1930-39	-0.01	0.01	-0.04	0.06	-0.20	-0.05
	[-0.02,0.01]	[-0.05,0.08]	[-0.18,0.11]	[-0.18,0.30]	[-0.50,0.10]	[-0.24,0.13]
1940-49t	0.00	0.00	0.00	0.00	0.00	0.00
1950-59	0.01	-0.02	-0.07	-0.20*	-0.06	-0.12+
	[-0.01,0.03]	[-0.05,0.02]	[-0.18,0.04]	[-0.38,-0.01]	[-0.23,0.10]	[-0.25,0.00]
1960-69	-0.01*	-0.01	-0.08	-0.23**	-0.06	-0.12*
	[-0.03,-0.00]	[-0.04,0.03]	[-0.18,0.02]	[-0.40,-0.06]	[-0.21,0.09]	[-0.23,-0.01]
1970-78	0.04	-0.02	-0.06	-0.21*	-0.14+	-0.16**
	[-0.02,0.11]	[-0.05,0.01]	[-0.16,0.04]	[-0.37,-0.04]	[-0.29,0.02]	[-0.27,-0.05]
Class of origin						
Service class	0.05	0.05	0.11*	0.01	0.13*	0.10*
	[-0.05,0.15]	[-0.05,0.14]	[0.02,0.21]	[-0.13,0.14]	[0.02,0.25]	[0.01,0.18]
White collars	0.11	-0.00	0.07	-0.05	0.09	0.03
	[-0.04,0.26]	[-0.05,0.05]	[-0.02,0.16]	[-0.21,0.12]	[-0.06,0.23]	[-0.08,0.14]
Self-employed	0.02+	-0.01	0.00	-0.01	0.08	0.04
	[-0.00,0.05]	[-0.04,0.01]	[-0.05,0.06]	[-0.15,0.13]	[-0.05,0.20]	[-0.05,0.13]
Farmers	0.02*	-0.03*	-0.04	-0.01	0.05	0.04
	[0.00,0.04]	[-0.05,-0.00]	[-0.11,0.02]	[-0.20,0.18]	[-0.13,0.23]	[-0.09,0.17]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural working class	0.01	-0.01	0.04	-0.31**	0.08	-0.19+
	[-0.01,0.02]	[-0.04,0.02]	[-0.08,0.16]	[-0.52,-0.09]	[-0.29,0.44]	[-0.40,0.02]
Constant	0.00	0.05**	0.17**	0.74**	0.68**	0.69**
	[-0.01,0.02]	[0.02,0.09]	[0.07,0.27]	[0.57,0.92]	[0.51,0.85]	[0.57,0.82]
N	1299	1471	853	399	506	905

Note:
Controlling for gender
95% confidence intervals in brackets
+ p<0.10, * p<0.05, ** p<0.01

Table 6a: Class of Origin Effect on the Chances of Access to the Service Class, Avoiding the Working Class, income and ISEI, Conditional to the Level of Education, CIS 2634 (2006); Controlling for Age and Gender

Panel A: **access to the service class**	(2)	(3)	(4)	(5)	
Linear probability models	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	0.08+	0.16**	0.13+	0.13*	0.15**
	[-0.01,0.17]	[0.04,0.27]	[-0.01,0.27]	[0.03,0.24]	[0.07,0.23]
White collars	0.03	0.10*	0.01	0.01	0.02
	[-0.03,0.10]	[0.00,0.20]	[-0.16,0.18]	[-0.13,0.16]	[-0.09,0.13]
Self-employed	0.00	0.01	0.02	0.01	0.02
	[-0.02,0.03]	[-0.05,0.07]	[-0.12,0.17]	[-0.12,0.14]	[-0.07,0.12]
Farmers	0.00	0.02	-0.08	0.12	0.04
	[-0.02,0.02]	[-0.07,0.11]	[-0.29,0.14]	[-0.04,0.29]	[-0.09,0.18]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00
Agricultural working class	-0.01	0.02	-0.22	0.02	-0.15
	[-0.03,0.01]	[-0.10,0.15]	[-0.48,0.05]	[-0.34,0.38]	[-0.38,0.07]
Constant	0.03**	0.11*	0.69**	0.71**	0.69**
	[0.01,0.05]	[0.01,0.21]	[0.52,0.86]	[0.54,0.88]	[0.57,0.81]
N	2198	754	350	466	816

Panel B: **avoiding working class**	(2)	(3)	(4)	(5)	
Linear probability models	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	0.13+	0.19**	0.13**	0.07*	0.10**
	[-0.01,0.28]	[0.07,0.31]	[0.04,0.22]	[0.01,0.13]	[0.05,0.15]
White collars	0.23**	0.13+	0.12*	-0.00	0.06+
	[0.10,0.36]	[-0.00,0.25]	[0.02,0.21]	[-0.09,0.09]	[-0.01,0.13]
Self-employed	0.20**	0.14**	0.06	0.03	0.05+
	[0.14,0.26]	[0.04,0.23]	[-0.04,0.16]	[-0.04,0.10]	[-0.01,0.11]
Farmers	0.19**	0.07	-0.10	0.05	-0.01
	[0.13,0.25]	[-0.05,0.19]	[-0.28,0.09]	[-0.03,0.13]	[-0.11,0.09]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00
Agricultural working class	-0.04+	-0.11	-0.05	-0.07	-0.07
	[-0.09,0.01]	[-0.29,0.06]	[-0.28,0.18]	[-0.36,0.22]	[-0.25,0.11]
Constant	0.19**	0.67**	0.86**	0.91**	0.88**
	[0.15,0.24]	[0.55,0.80]	[0.75,0.97]	[0.81,1.01]	[0.80,0.95]
N	2198	754	350	466	816

Panel C: **Income**	(2)	(3)	(4)	(5)	
OLS	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	87	81	-18	325*	292**
	[-81,255]	[-112,273]	[-163,128]	[65,584]	[107,477]
White collars	21	-44	28	-84	-31
	[-162,204]	[-225,137]	[-152,209]	[-340,172]	[-202,140]
Self-employed	125+	95	132	342+	253*
	[-12,261]	[-48,237]	[-127,391]	[-14,697]	[17,490]
Farmers	-40	-105	29	-140	-7
	[-144,63]	[-268,57]	[-177,234]	[-568,288]	[-291,276]
Urban working class (ref.)	0	0	0	0	0
Agricultural working class	-131**	-30	-61	-236	-277*
	[-213,-50]	[-321,261]	[-371,248]	[-543,71]	[-518,-36]
Constant	710**	1127**	1685**	2247**	2013**
	[617,803]	[893,1360]	[1377,1993]	[1551,2943]	[1579,2446]
N	1126	495	249	341	590

Panel D: **ISEI**	(2)	(3)	(4)	(5)	
OLS	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	7**	7**	5**	3+	5**
	[3,11]	[3,10]	[1,9]	[-0,6]	[3,8]
White collars	4*	2	2	-1	1
	[0,7]	[-1,5]	[-2,6]	[-6,3]	[-2,4]
Self-employed	3**	3*	2	-0	2
	[1,5]	[0,5]	[-2,6]	[-4,4]	[-1,4]
Farmers	-1+	-0	-4	4	1
	[-3,0]	[-4,3]	[-11,4]	[-1,9]	[-4,6]
Urban working class (ref.)	0	0	0	0	0
Agricultural working class	-3**	-2	-5	-4	-6
	[-4,-2]	[-7,3]	[-14,5]	[-16,8]	[-14,2]
Constant	32**	45**	55**	63**	58**
	[30,33]	[42,48]	[50,60]	[57,68]	[54,61]
N	2197	755	350	466	816

Table 7: Class of Origin Effect on the Access to the Service Class, Net Monthly Income and ISEI. The Model Controls also for Level of Education by Field of Study (83 categories), Gender and Cohort of Birth; CIS 2634 (2006)

	Access to service class		Income		ISEI	
	(1)	(2) + field of study	(3)	(4) + field of study	(5)	(6) + field of study
Class of origin						
Service class	0.13**	0.12**	145*	143*	5**	5**
	[0.08,0.18]	[0.07,0.17]	[28,262]	[23,263]	[4,7]	[4,7]
White collars	0.05	0.07*	-53	-43	2+	3**
	[-0.01,0.10]	[0.01,0.12]	[-158,52]	[-158,72]	[-0,4]	[1,5]
Self-employed	0.01	0.02	151**	140**	2**	3**
	[-0.02,0.04]	[-0.01,0.04]	[52,249]	[40,239]	[1,4]	[1,4]
Farmers	0.01	0.01	-36	-32	-1	-1
	[-0.02,0.04]	[-0.01,0.04]	[-123,51]	[-122,57]	[-2,1]	[-2,1]
Urban working class (ref.)	0.00	0.00	0	0	0	0
Agricultural working class	-0.01	-0.01	-90*	-101*	-2**	-3**
	[-0.04,0.01]	[-0.03,0.01]	[-166,-14]	[-178,-23]	[-4,-1]	[-4,-1]
N	3768	3768	2211	2211	3768	3768

95% confidence intervals in brackets
+ p<0.10, * p<0.05, ** p<0.01

Table 8: Class of Origin Advantage in Net Monthly Income, Controlling also for Performance at School and Way to Find the Current Job

	(1)	(2) + grades at school	(3) + way to find the current job
Class of origin			
Service class	145*	142*	138*
	[28,262]	[25,259]	[22,255]
White collars	-55	-54	-64
	[-160,50]	[-159,51]	[-167,38]
Self-employed	152**	148**	126*
	[53,251]	[50,246]	[28,224]
Farmers	-42	-47	-89+
	[-129,46]	[-135,40]	[-180,1]
Urban working class (ref.)	0	0	0
Agrica.ltural working class	-98*	-97*	-107**
	[-174,-22]	[-172,-21]	[-184,-31]
Grades at school			
Very good		0	
		[0,0]	
Good		-171**	
		[-299,-43]	
Not good		-249**	
		[-380,-119]	
Bad		-185*	
		[-348,-23]	
Very bad		20	

	(1)	(2)	(3)
		+ grades at school	+ way to find the current job
Class of origin			
		[-378,418]	
Missing		-281+	
		[-568,6]	
Way to find last job			
Personal contacts (ref.)			0
Application to job announcement			18
			[-57,93]
Employment office			64
			[-24,152]
Public examination			206**
			[118,293]
Job is the family business			97
			[-35,230]
Started his/her own business			254**
			[111,396]
Other			2
			[-104,108]
Missing			-157
			[-457,143]
_cons	950**	1159**	886**
	[817,1082]	[1004,1313]	[753,1019]
N	2211	2211	2211
pseudo R^2	0.26	0.27	0.27

Controlling for education and gender

95% confidence intervals in brackets; + p<0.10, * p<0.05, ** p<0.01

Table 9: Class of Origin Effect Conditional to the Sector of Employment

	(1) income		(2) income	
Class of origin				
Service class	144*	[28,260]	347*	[0,693]
White collars	-55	[-159,49]	-143	[-393,106]
Self-employed	169**	[71,267]	455*	[67,843]
Farmers	-27	[-116,63]	234	[-157,625]
Working class	0	[0,0]	0	[0,0]
Agricultural laborers	144*	[28,260]	347*	[0,693]
Sector				
Public sector (1)	-12	[-134,109]	82	[-29,193]
Agricultural (2)	-209**	[-359,-59]	-37	[-252,179]
Manufactory (3)	-10	[-145,124]	181*	[31,330]
Social skills intensive service sector (4) ref.	0	[0,0]	0	[0,0]
Other services (5)	-180**	[-310,-50]	-33	[-173,107]
Interactions				
Service class * sector (1)			-120	[-498,257]
Service class * sector (2)			-577**	[-1015,-140]
Service class * sector (3)			-221	[-695,254]
Service class * sector (5)			-429+	[-864,6]
White collars * sector (1)			195	[-86,476]
White collars * sector (2)			-275	[-723,174]
White collars * sector (3)			-7	[-378,364]
White collars * sector (5)			42	[-331,415]
Self-employed * sector (1)			-305	[-714,104]
Self-employed * sector (2)			-668**	[-1138,-198]
Self-employed * sector (3)			-401+	[-842,40]
Self-employed * sector (5)			-285	[-734,163]
Farmers * sector (1)			-149	[-570,272]
Farmers * sector (2)			-330	[-788,128]
Farmers * sector (3)			-467*	[-892,-41]
Farmers * sector (5)			-374+	[-797,50]
Agric. Laborers * sector (1)			-239	[-682,204]
Agric. Laborers * sector (2)			-112	[-613,390]
Agric. Laborers * sector (3)			-355	[-811,102]
Agric. Laborers * sector (5)			-98	[-553,357]
_cons	1044**	[883,1205]	924**	[760,1088]
N	2189		2189	
pseudo R^2				

Controlling for education and gender
95% confidence intervals in brackets
+ p<0.10, * p<0.05, ** p<0.01

Table 10: Summary of Main Results

	Direct effect of class of origin?	Does it decline over time	Smaller effect for university graduates?	Trends in returns to education		Mechanisms			
				Relative	absolute	Field of study	Grades	Modes of finding a job	Conditional effect by sector
Short Answer	Yes	No, if something it increases	No, higher effect for income	Decline	Decline	No	No	No	Yes
Effect size									
Access to service class:									
All	13%		13%						
Men 25-48	23%								
Income:									
All	145 €		325€						
Men 25-48	213 €								
Reference to table	Table 2aB, models 1 and 2	Table 3 and 4	Table 5 and 6abcd	Table 3	Table 5	Table 7	Table 8	Table 8	Table 8

Appendix 1 descriptive statistics

Appendix Table 1 shows the distributions by class of origins, education and class of destination for the analytical sample of people aged 28-65 in 2006 based on the CIS 2634 survey. It also presents descriptive statistics for the ISEI and net monthly labour earnings.

App. Table 1 Descriptive statistics for class of origin, class of destination and education, people age 28-65 in 2006 (CIS 2634)

Class (current or last job)EGP codes		
Service class (I-II)	20.0	
White collars (IIIa)	17.6	
Self-employed (IVab)	14.1	
Farmers (IVc)	2.7	
Working class (V-VI-VIIa and IIIb)	42.8	
Agricultural workers	2.8	
	N=(4,283)	100.0
Class of origin		
Service class (I-II)	8.6	
White collars (IIIa)	6.0	
Self-employed (IVab)	16.8	
Farmers (IVc)	14.7	
Urban working class (V-VI-VIIa and IIIb)	42.0	
Agricultural workers	11.9	
	(N=4,318)	100.0
Education most detailed classification		
Illiterate	0.9	
Able to read and write, no schooling	3.1	
Uncompleted Primary	2.2	
Primary	17.9	
Lower secondary	28.3	
Upper secondary	11.4	
Lower vocational training	6.9	
Higher vocational training	8.6	
Tertiary education, short degree	9.2	
Tertiary education, long degree	10.5	
Tertiary masters and doctoral studies	1.0	
	(N=4,553)	100.0
ISEI (average/s.d.)	41.2 / 16.8	
Net monthly labour earnings (average)	1282.3 / 775.7	

The information on field of study is available for those who have completed lower or higher vocational training and for tertiary education graduates. The survey distinguishes across 21 field of studies that combined with the different levels of vocational training (low and high) and tertiary education (short, long, master and doctoral studies) make for 79 valid combinations of level and field of studies. Appendix table 2 presents the distribution of the new variable level of education by level of study (where the distinction by field of study applies).

App. Table 2: level of education and field of study, people age 28-65 in 2006 (CIS 2634)

Level of education and field of study		
Illiterate	33	0.7
writing and reading, no school	141	3.1
Uncompleted primary	100	2.2
Primary	813	17.9
lower secondary	1,287	28.3
Upper secondary	520	11.4
Low vocational training education	3	0.1
political science	2	0.0
business	66	1.5
biology	4	0.1
computer science	3	0.1
mechanics	53	1.2
buildings	4	0.1
Agriculture	4	0.1
medicine	29	0.6
Social work	2	0.0
Personal services	14	0.3
No field of study	131	2.9
High vocational training education		
Education	1	0.0
Arts	6	0.1
humanities	1	0.0
Social sciences	1	0.0
journalism	1	0.0
Business	102	2.2
biology	11	0.2
computer science	7	0.2
Engenering	3	0.1
Mechanical engeneering	93	2.0
Architecture	2	0.0
Agriculture	1	0.0
Medice	19	0.4
Social work	2	0.0
Personal services	2	0.0
No field of study	141	3.1
University short degree		
education	99	2.2
Arts	6	0.1
Humanities	9	0.2
Social Sciences	23	0.5
journalism	3	0.1
business	56	1.2
Law	8	0.2
Biology	4	0.1
Phisics	1	0.0
mathematics	1	0.0
computer science	6	0.1
Engeneering	45	1.0
Mechanical engeneering	6	0.1

Level of education and field of study		
Architecture	12	0.3
Agriculture	1	0.0
medicine	40	0.9
Social work	14	0.3
no field of study	85	1.9
University long degree		
education	26	0.6
Arts	16	0.4
Humanities	58	1.3
Social Sciences	33	0.7
journalism	22	0.5
business	55	1.2
Law	58	1.3
Biology	33	0.7
Phisics	10	0.2
mathematics	12	0.3
computer science	6	0.1
Engeneering	32	0.7
Mechanical engeneering	1	0.0
Architecture	9	0.2
Agriculture	1	0.0
veterinary	4	0.1
medicine	15	0.3
Social work	2	0.0
no field of study	85	1.9
University master/phd		
education	3	0.1
Arts	2	0.0
Humanities	6	0.1
Social Sciences	2	0.0
business	5	0.1
Law	4	0.1
Biology	4	0.1
Phisics	1	0.0
mathematics	1	0.0
Engeneering	4	0.1
Architecture	2	0.0
Agriculture	1	0.0
medicine	5	0.1
no field of study	6	0.1
	4,553	100.0

Information on performance at school was collected by means of a retrospective question, so the respondants were asked about their grades at school when they were 16 or so (or before, if you had already dropped out). The precoded answer included five categories: very good, good, not good, bad or very bad. App. Table 3 shows the distribution of this variable.

App. Table 3: grades at school when respondent was about 16 years old

Grades were…		
Very good	10.3	
Good	39.5	
not good	34.6	
Bad	6.9	
very bad	1.2	
no answer	1.5	
Total	(N=4553)	100.0

Those who are employed were also asked about how they found their current job. Seven alternatives were conceived: through personal contacts, applying to a publicly advertised vacancy, through an employment agency, public competition for the public administration, the job is in a family business, she created her own firm/job, other. App. Table 4 presents the distribution for this variable

App. Table 4: modality for finding the current job; people age 28-65 in 2006 (CIS 2634)

Way in which the job was found	
through personal contacts	38.2
Applying to a publicly advertised vacancy	14.6
through an employment agency	4.7
public competition for the public administration	17.1
the job is in a family business	6.0
she created her own firm/job	15.1
Other	3.8
don't know	0.1
now answer	0.4
Total (N=2976)	100.0

Finally the sector of employment is recorded using a national classification that distinguishes among 32 sectors. The main interest lies in identifying those sectors where social and communicative skills might play a more important role in occupational attainment. Following the coding used in Mastekaasa (2001) I have thus where social skills are likely to be more important as cultural activities, hotels, financial services, consulting, advertisement and other services to firms. I have then recoded the original variable in 5 categories: public sector, agriculture, industry, services with high demand for social skills and other services (education, social services, retail, personal services). App. Table 5 presents the distribution for the variable sector of employment.

App. Table 5: sector of employment, current or last occupation;
people age 28-65 in 2006 (CIS 2634)

Sector of employment	
Public sector	36.5
agriculture	5.8
Industry	20.1
Social skills sector	12.6

Other services	25.0
Total (N=4302)	100.0

Finally appendix table 6 presents the distribution of average net montly labour income and its standard deviation by sector of employment

App. Table 6: average net monthly income and standard deviation by sector of employment, employed people age 28-65 in 2006 (CIS 2634)

Sector of employment	*Mean*	*SD*	*N*
Public sector	1437	675	1003
agriculture	956	537	142
Industry	1309	718	442
Social skills sector	1346	1026	292
Other services	1059	823	573

Appendix 2
Description of the social mobility surveys

Appendix Table 2.1 presents an overview of the mobility surveys used in the analysis of change over time of the direct effect of social origin.

Appendix Table 2.1: description of Spanish mobility surveys

	N	**Class**	**Education**	**Class of origin**
CIS 1737 1988	27,377	3 digits national classification 1979, roughly equivalent to ISCO 68	No category for vocational training	3 digits national classification 1979, roughly equivalent to ISCO 68 Father's occupation only; when the respondent was about 16 years
CIS 1789 1989	27,287	3 digits national classification 1979, roughly equivalent to ISCO 68	No distinction between primary and primary not completed	3 digits national classification 1979, roughly equivalent to ISCO 68 Father's occupation only; no reference to age
SD 1991	157,100	3 digits national classification made ad hoc for this survey	There might be some mess between categories at lower education.	3 digits national classification made ad hoc for this survey Father's occupation when the respondent was 16; if father is missing than mother's

				occupation
ASEP 1990-1996	62,398	26 categories; only for those employed at the time of the survey		26 categories Father's occupation. No reference to age.
ASEP 1996-1999	38,839	26 categories	It is not clear where EGB goes (it seems that part of EGB goes into primary)	26 categories Father's occupation. No reference to age.
EU-SILC 2005	28,829	2 digits ISCO	No distinction between primary and primary not completed Vocational training is divided between lower secondary and upper secondary	Father's occupation when respondent was 12-16 years old.
CIS2634 2006	7,671	3 digits CNO-94, roughly equivalent to ISCO 88		Father's occupation when the respondent was 16. If father missing than the mother or other head of the household

The table makes clear that the original coding of own and father's occupation and own education vary from one survey to another. This variability raises the issue of whether it is legitimate to compare the direct effect of class of origin on occupational success over and above the effect of education, across surveys. Can we exclude that the observed variations in the direct effect of class of origin simply reflect measurement differences across surveys?

In order to address this question, I have compared the distribution of the class of origin for the same birth cohort across surveys. In principle since the class of origin is fixed the distribution of the class of origin for the same cohort should not vary across cohort. I have also repeated the same exercise for the distribution of own achieved education and of own class, although in this case the distribution might change due to adult education and intragenerational mobility, respectively. App. Table 2 reports the results of the exercise for the class of origin distribution for the cohort of birth 1940-1949.

App. Table2.2: class of origin distribution for the cohort of birth 1940-1949 in different surveys

	year2							
clorig6	CIS 1988	CIS 1989	ASEP1990-96	SD1991	ASEP1996-99	EUSILC2005	CIS2006	Total
i-ii	266.71508	234.47565	495.75054	1,181.589	270.491417	146.83013	45.482366	2,641.334
	6.26	5.57	6.09	6.48	5.89	4.66	5.28	6.08
iiiab	204.39569	242.66897	378.60194	646.25033	169.34254	219.55369	25.3689482	1,886.1821
	4.80	5.77	4.65	3.54	3.69	6.97	2.94	4.34
ivab	604.98446	627.4412	904.59211	2,613.565	500.26231	371.308	136.67588	5,758.829
	14.21	14.91	11.12	14.34	10.90	11.79	15.85	13.26
ivc	991.09311	995.37019	1,969.181	4,417.302	1,004.351	662.90179	214.22627	10,254.43
	23.28	23.65	24.20	24.23	21.88	21.05	24.85	23.61
v-viia	1,527.202	1,366.2389	3,134.112	6,375.818	1,808.034	1,096.991	290.104337	15,598.5
	35.87	32.46	38.51	34.97	39.39	34.83	33.65	35.91

viib	663.08164	742.72603	1,255.713	2,995.634	837.38421	651.907317	150.28356	7,296.73
	15.57	17.65	15.43	16.43	18.24	20.70	17.43	16.80
Total	4,257.472	4,208.921	8,137.952	18,230.16	4,589.865	3,149.492	862.14137	43,436
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The distribution for CIS 2006 and the SD 1991 but also for CIS 1988 and CIS 1989 are almost identical, while the ASEP surveys and EU-SILD tend to underestimate the small employers. Overall, however, the degree of similarity of the distribution is high and reassuring. Next, Appendix table 2.3 presents the same exercise but for the respondent's level of education. In this case the differences across surveys are larger, especially for the first and last survey. The differences however mostly refer to the lower educational levels, while for the higher educational level, in particular for tertiary education, the distributions are similar. For the 1988 CIS part of the lower level vocational training is coded within lower secondary education and this explains the higher percentages of primary and lower secondary educated in that survey. In the most recent 2006 the lower percentage of those with uncompleted primary education can probably be explained if some of those with no primary education at the beginning of the 90s have attended some adult education course and completed it over the following 15 years.

App. Table 2.3: level of education for the cohort of birth 1940-1949 in various surveys

	year2					
edua	CIS1988	ASEP1990-96	SD1991	ASEP1996-99	CIS2006	Total
<PrimUn+Ill	1,045.583	2,348.19	4,678.253	1,139.6767	148.014445	9,359.718
	25.15	27.38	25.12	22.66	16.66	25.11
Prim+LowSec	2,503.295	4,505.816	10,262.55	2,837.51	527.1387	20,636.31
	60.22	52.54	55.11	56.43	59.33	55.37
UpSec+VT	227.28645	855.456938	1,966.56	585.13069	118.39384	3,752.828
	5.47	9.97	10.56	11.64	13.33	10.07
UniShort	241.613753	453.19201	904.00005	218.32844	44.636113	1,861.77
	5.81	5.28	4.85	4.34	5.02	4.99
UniLong	139.05323	414.0051	810.98529	248.0642	50.269697	1,662.378
	3.35	4.83	4.35	4.93	5.66	4.46
Total	4,156.832	8,576.66	18,622.346	5,028.71	888.45279	37,273
	100.00	100.00	100.00	100.00	100.00	100.00

App. Table 2.4 compares the percentages of those who are employed in the service class for the cohort 1940-49 in various years. There are some differences across surveys, in particular the size of the service class seems to be overestimated in EU-SILC. However, the differences do not seem so large to prevent a comparison across surveys. Again, the differences between the SD and the CIS 2006 are negligible suggesting that the firmer and safer comparison should build on these two surveys only.

App. Table 2.4: percentage of those employed in the service class (current or last occupation) for the cohort 1940-1949 in various surveys

Yn	CIS1988	CIS1989	SD1991	ASEP1996-99	EUSILC2005	CIS2006	Total
else	2,935.751	2,636.547	14,300.9	3,627.1	2,380.672	681.79173	30,237.19
	89.05	89.31	86.68	89.02	83.05	86.84	86.75
I-II	360.83977	315.62745	2,196.909	447.19594	485.892324	103.33197	4,617.8123
	10.95	10.69	13.32	10.98	16.95	13.16	13.25
Total	3,296.591	2,952.174	4,382.438	16,497.81	4,074.296	2,866.564	785.1237	34,855
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Finally App. Table 2.5 is the same as Table 2.4 but only for those who are employed at the time of the survey. With this selection it is also possible to consider the ASEP surveys 1990-1996 that provides consistent estimates with the other surveys.

App. Table 2.5: percentage of those employed in the service class (current occupation) for the cohort 1940-1949 in various surveys

Yn	year2							
	CIS 1988	CIS 1989	ASEP1990-96	SD1991	ASEP1996-99	EUSILC2005	CIS2006	Total
else	1,899.535	1,868.066	3,734.494	9,528.002	1,975.31	1,196.286	253.713864	20,455.41
	85.76	87.14	83.84	82.53	84.34	78.38	83.52	83.39
I-II	315.49035	275.66959	719.59118	2,017.071	366.79849	329.92694	50.044453	4,074.592
	14.24	12.86	16.16	17.47	15.66	21.62	16.48	16.61
Total	2,215.026	2,143.736	4,454.085	11,545.07	2,342.108	1,526.213	303.758317	24,530
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The main conclusions of these checks is that, with the exception of EU-SILC, the measurement of occupational class and education is fairly consistent across surveys. This is particularly true for the SD 1991 and CIS 2006 surveys. It seems therefore legitimate to interpret variations across surveys in the direct effect of social origin as truly reflecting change over time in the effect of interest and not simply variations in its measurement.

Appendix 3
Additional tables and sensitivity checks

Appendix Table 3.1: quantile regression on income by gender, education (e), class of origin (c) and cohort of birth (b). Note: c1 service class, c2=white collars, c3=self-employed, c4=farmers c5=urban working class (ref. category), c6=agricultural labourers; e1=primary education, 2=lower secondary (ref.category), e3=lower vocational training, e4=upper secondary, e5=upper vocational training, e6=short university, e7=long university; b2=cohort 1940-49 (ref. category), b3=1950-59, b4=60-69, b5=1970-79

```
Simultaneous quantile regression                    Number of obs =      2211
```

```
  bootstrap(100) SEs                                .10 Pseudo R2 =    0.1534
                                                    .25 Pseudo R2 =    0.1640
                                                    .50 Pseudo R2 =    0.1933
                                                    .75 Pseudo R2 =    0.1894
                                                    .90 Pseudo R2 =    0.2074

------------------------------------------------------------------------------
             |               Bootstrap
      income |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
q10          |
         sex |         375   28.11571    13.34   0.000     319.8638    430.1362
          e1 |        -150   43.46148    -3.45   0.001    -235.2299   -64.77007
          e3 |          50    48.2751     1.04   0.300    -44.66965    144.6697
          e4 |         100   46.64215     2.14   0.032     8.532634    191.4674
          e5 |         125   36.60107     3.42   0.001     53.22365    196.7764
          e6 |         225   38.18124     5.89   0.000     150.1249    299.8751
          e7 |         350   65.75476     5.32   0.000     221.0519    478.9481
          c1 |          25   63.26851     0.40   0.693    -99.07242    149.0724
          c2 |         -50   68.03202    -0.73   0.462    -183.4139    83.41387
          c3 |   9.40e-13    40.5045     0.00   1.000    -79.43116    79.43116
          c4 |         -75   36.40361    -2.06   0.039    -146.3891   -3.610863
          c6 |         -25   28.49386    -0.88   0.380    -80.87775    30.87775
          b3 |         -50   53.48617    -0.93   0.350    -154.8888     54.8888
          b4 |        -100   54.81682    -1.82   0.068    -207.4983    7.498275
          b5 |        -125   57.04038    -2.19   0.029    -236.8588   -13.14124
       _cons |         500   55.79341     8.96   0.000     390.5866    609.4134
-------------+----------------------------------------------------------------
q25          |
         sex |         330   24.12155    13.68   0.000     282.6966    377.3034
          e1 |        -127   32.52576    -3.90   0.000    -190.7845   -63.21551
          e3 |          90   33.56774     2.68   0.007     24.17215    155.8279
          e4 |         123   37.93134     3.24   0.001     48.61493    197.3851
          e5 |         140   31.70508     4.42   0.000      77.8249    202.1751
          e6 |         320    48.7244     6.57   0.000     224.4492    415.5508
          e7 |         520      40.38    12.88   0.000      440.813     599.187
          c1 |          50   49.57101     1.01   0.313    -47.21101     147.211
          c2 |         -30   61.50575    -0.49   0.626    -150.6156    90.61556
          c3 |          50   31.10562     1.61   0.108    -10.99953    110.9995
          c4 |         -60   31.79115    -1.89   0.059    -122.3439    2.343883
          c6 |         -60   29.75483    -2.02   0.044    -118.3506   -1.649421
          b3 |         -40    44.6397    -0.90   0.370    -127.5405    47.54047
          b4 |         -77   43.18679    -1.78   0.075    -161.6912    7.691246
          b5 |        -147   42.60134    -3.45   0.001    -230.5432   -63.45684
       _cons |         677   44.38475    15.25   0.000     589.9595    764.0405
-------------+----------------------------------------------------------------
q50          |
         sex |         375   21.99529    17.05   0.000     331.8662    418.1338
          e1 |        -125   28.35164    -4.41   0.000    -180.5988   -69.40116
          e3 |         100    43.5954     2.29   0.022     14.50745    185.4925
          e4 |         250   36.11537     6.92   0.000     179.1761    320.8239
          e5 |         225    41.3399     5.44   0.000     143.9306    306.0694
```

```
          e6 |        425   39.73816    10.70   0.000     347.0717    502.9283
          e7 |        775   36.57525    21.19   0.000     703.2743    846.7257
          c1 |         75    41.2104     1.82   0.069    -5.815459    155.8155
          c2 |        -75   48.68915    -1.54   0.124    -170.4816    20.48163
          c3 |         50   30.06575     1.66   0.096    -8.960289    108.9603
          c4 |        -50   27.58887    -1.81   0.070     -104.103    4.103027
          c6 |        -75   33.27933    -2.25   0.024    -140.2623   -9.737716
          b3 |        -50   34.35662    -1.46   0.146    -117.3749    17.37489
          b4 |       -100   38.13773    -2.62   0.009    -174.7898   -25.21019
          b5 |       -225   36.99467    -6.08   0.000    -297.5482   -152.4518
       _cons |        875   41.53995    21.06   0.000     793.5383    956.4617
-------------+----------------------------------------------------------------
q75          |
         sex |        480   27.84954    17.24   0.000     425.3858    534.6142
          e1 |       -225   46.37529    -4.85   0.000     -315.944    -134.056
          e3 |         25   41.05471     0.61   0.543    -55.51015    105.5102
          e4 |        220   58.17113     3.78   0.000     105.9238    334.0762
          e5 |        220   48.52236     4.53   0.000     124.8455    315.1545
          e6 |        520   52.34212     9.93   0.000     417.3547    622.6453
          e7 |        925   98.24886     9.41   0.000     732.3295     1117.67
          c1 |        160   70.28853     2.28   0.023       22.161     297.839
          c2 |   8.31e-12   78.92538     0.00   1.000    -154.7762    154.7762
          c3 |        175   49.92443     3.51   0.000     77.09593    272.9041
          c4 |        -20   35.04787    -0.57   0.568    -88.73046    48.73046
          c6 |        -65   44.84664    -1.45   0.147    -152.9463     22.9463
          b3 |        -45   65.39925    -0.69   0.491    -173.2509    83.25089
          b4 |        -85   63.31523    -1.34   0.180     -209.164    39.16404
          b5 |       -285   62.29945    -4.57   0.000    -407.1721   -162.8279
       _cons |       1085   62.57073    17.34   0.000      962.296    1207.704
-------------+----------------------------------------------------------------
q90          |
         sex |        600   54.91882    10.93   0.000     492.3017    707.6983
          e1 |       -200   87.47669    -2.29   0.022    -371.5458   -28.45425
          e3 |  -8.61e-12   97.05865    -0.00   1.000    -190.3364    190.3364
          e4 |        225   117.1177     1.92   0.055    -4.673163    454.6732
          e5 |        225   101.6091     2.21   0.027     25.73987    424.2601
          e6 |        500   78.46847     6.37   0.000     346.1198    653.8802
          e7 |       1300   192.1385     6.77   0.000     923.2076    1676.792
          c1 |        400    158.539     2.52   0.012     89.09778    710.9022
          c2 |         48   115.6764     0.41   0.678    -178.8467    274.8467
          c3 |        325   119.5418     2.72   0.007      90.5732    559.4268
          c4 |        -75   74.77361    -1.00   0.316    -221.6344    71.63445
          c6 |       -100   71.79566    -1.39   0.164    -240.7945    40.79455
          b3 |        -25   131.7318    -0.19   0.849    -283.3319    233.3319
          b4 |       -100   118.0911    -0.85   0.397     -331.582     131.582
          b5 |       -375   122.6781    -3.06   0.002    -615.5773   -134.4227
       _cons |       1375   133.1356    10.33   0.000     1113.915    1636.085
------------------------------------------------------------------------------
```

Appendix 3.2: class of origin effect on log(income); controlling also for cohort birth

	(1) All	(3) Men 28-45	(4) Women 28-45
Gender (male=1)	0.41**		
	(0.02)		
Education			
Primary or less	-0.20**	-0.11	-0.12
	(0.04)	(0.08)	(0.10)
Lower secondary. (ref.)	0.00	0.00	0.00
Lower vocational training	0.10**	0.02	0.15*
	(0.04)	(0.05)	(0.07)
Upper secondary	0.17**	0.10+	0.21**
	(0.03)	(0.05)	(0.07)
Upper vocational training	0.19**	0.16**	0.20**
	(0.03)	(0.05)	(0.06)
University short	0.36**	0.22**	0.52**
	(0.03)	(0.05)	(0.06)
University long	0.56**	0.40**	0.63**
	(0.03)	(0.05)	(0.06)
Class of origin			
Service class	0.08*	0.06	0.08
	(0.04)	(0.06)	(0.07)
White collars	-0.02	-0.07	0.10
	(0.04)	(0.05)	(0.07)
Self-employed	0.08*	0.08+	0.09
	(0.03)	(0.05)	(0.06)
Farmers	-0.03	-0.03	0.03
	(0.03)	(0.05)	(0.06)
Urban working class (Ref.)	0.00	0.00	0.00
Agricultural working class	-0.05+	-0.06	-0.01
	(0.03)	(0.06)	(0.06)
Constant	6.71**	7.05**	6.51**
	(0.04)	(0.03)	(0.05)
N	2211	859	638
pseudo R^2	0.33	0.13	0.24

Standard errors in parentheses
+ p<0.10, * p<0.05, ** p<0.01

App. Tab. 3.3: ordered logit on 10 ordered categories of income, controlling for gender and cohort model (1)

	(1) All	(2) Men 28-45	(3) Women 28-45
Education			
Primary or less	-0.73**	-0.58*	-0.25
	(0.13)	(0.26)	(0.32)
Lower secondary. (ref.)	0.00	0.00	0.00
Lower vocational training	0.44**	0.17	0.71**
	(0.15)	(0.21)	(0.25)
Upper secondary	0.83**	0.75**	0.93**
	(0.13)	(0.23)	(0.25)
Upper vocational training	0.84**	0.84**	0.77**
	(0.14)	(0.21)	(0.24)
University short	1.70**	1.23**	2.18**
	(0.14)	(0.22)	(0.26)
University long	2.61**	1.94**	2.83**
	(0.14)	(0.22)	(0.28)
Class of origin			
Service class	0.42**	0.33	0.30
	(0.14)	(0.24)	(0.25)
White collars	-0.12	-0.33	0.36
	(0.16)	(0.22)	(0.29)
Self-employed	0.38**	0.42*	0.41+
	(0.11)	(0.17)	(0.23)
Farmers	-0.14	-0.19	0.10
	(0.12)	(0.24)	(0.22)
Urban working class (Ref.)	0.00	0.00	0.00
Agricultural working class	-0.27*	-0.18	-0.14
	(0.14)	(0.25)	(0.23)
cut1			
_cons	-2.96**	-4.39**	-2.12**
	(0.20)	(0.39)	(0.23)
cut2			
_cons	-1.23**	-2.91**	-0.33+
	(0.17)	(0.21)	(0.18)
cut3			
_cons	0.38*	-1.00**	1.23**
	(0.17)	(0.13)	(0.19)
cut4			
_cons	1.94**	0.66**	2.59**
	(0.17)	(0.13)	(0.21)
cut5			
_cons	3.73**	2.38**	4.47**
	(0.18)	(0.16)	(0.29)
cut6			
_cons	4.81**	3.34**	5.38**
	(0.20)	(0.19)	(0.33)
cut7			
_cons	5.83**	4.22**	6.84**

	(0.22)	(0.23)	(0.53)
cut8			
_cons	7.05**	5.51**	7.79**
	(0.29)	(0.37)	(0.80)
cut9			
_cons	7.94**	6.11**	8.36**
	(0.40)	(0.48)	(1.08)
N	2211	859	638
pseudo R^2	0.124	0.055	0.097

Standard errors in parentheses; + p<0.10, * p<0.05, ** p<0.01
CIS (2006)

Appendix Table 3.4: probability of accessing the service class in the first job, interactions between education and cohort and class of origin and cohort CIS2634

	(1) All	(2) Men	(3) Women
Gender	0.00		
	[-0.00,0.01]		
Cohort of birth			
1.cohort (1930-39)	-0.00	-0.01	0.04
	[-0.07,0.06]	[-0.10,0.07]	[-0.06,0.13]
2.cohort (1940-49)	0.00	0.00	0.00
	[0.00,0.00]	[0.00,0.00]	[0.00,0.00]
3.cohort (1950-59)	-0.00	-0.04	0.02
	[-0.05,0.04]	[-0.09,0.02]	[-0.02,0.07]
4.cohort (1960-69)	0.00	-0.01	0.01
	[-0.04,0.04]	[-0.07,0.05]	[-0.02,0.05]
5.cohort (1970-79)	-0.03	-0.04	0.02
	[-0.07,0.01]	[-0.10,0.01]	[-0.02,0.06]
Education			
1.edu7 (primary)	-0.01	-0.03	0.01
	[-0.05,0.02]	[-0.09,0.02]	[-0.02,0.04]
2b.edu7 (lower sec.)	0.00	0.00	0.00
	[0.00,0.00]	[0.00,0.00]	[0.00,0.00]
3.edu7 (lower voc.)	0.04	-0.00	0.09
	[-0.05,0.13]	[-0.12,0.11]	[-0.05,0.23]
4.edu7 (upper sec.)	0.13*	0.16+	0.08
	[0.01,0.24]	[-0.01,0.33]	[-0.05,0.21]
5.edu7 (upper voc.)	0.17+	0.20+	-0.01
	[-0.00,0.34]	[-0.01,0.40]	[-0.04,0.02]
6.edu7 (short univ.)	0.62**	0.61**	0.63**
	[0.47,0.77]	[0.41,0.81]	[0.41,0.86]
7.edu7 (long univ.)	0.68**	0.61**	0.82**
	[0.54,0.82]	[0.45,0.77]	[0.54,1.10]
*Cohort*education*			
1.cohort#1.edu7	-0.02	0.01	-0.04
	[-0.08,0.05]	[-0.08,0.09]	[-0.14,0.06]
1.cohort#3.edu7	0.02	-0.03	0.06
	[-0.19,0.22]	[-0.16,0.10]	[-0.33,0.46]

1.cohort#4.edu7	-0.06	-0.09	-0.01
	[-0.23,0.11]	[-0.32,0.14]	[-0.29,0.28]
1.cohort#5.edu7	-0.01	-0.05	0.20
	[-0.30,0.29]	[-0.39,0.29]	[-0.25,0.65]
1.cohort#6.edu7	0.07	0.01	0.18
	[-0.18,0.32]	[-0.33,0.35]	[-0.15,0.51]
1.cohort#7.edu7	-0.24	-0.09	-0.92**
	[-0.56,0.07]	[-0.41,0.23]	[-1.22,-0.62]
3.cohort#1.edu7	0.01	0.05	-0.03
	[-0.03,0.05]	[-0.02,0.11]	[-0.08,0.02]
3.cohort#3.edu7	-0.02	-0.01	-0.04
	[-0.13,0.09]	[-0.12,0.10]	[-0.22,0.14]
3.cohort#4.edu7	-0.03	-0.10	0.02
	[-0.16,0.10]	[-0.28,0.09]	[-0.14,0.19]
3.cohort#5.edu7	-0.07	-0.10	0.08
	[-0.27,0.13]	[-0.34,0.15]	[-0.08,0.24]
3.cohort#6.edu7	-0.15	-0.26+	-0.08
	[-0.34,0.04]	[-0.52,0.00]	[-0.36,0.19]
3.cohort#7.edu7	-0.04	-0.01	-0.19
	[-0.22,0.14]	[-0.21,0.19]	[-0.52,0.14]
4.cohort#1.edu7	-0.02	-0.00	-0.03+
	[-0.05,0.02]	[-0.06,0.06]	[-0.07,0.01]
4.cohort#3.edu7	-0.02	-0.02	-0.03
	[-0.13,0.08]	[-0.14,0.10]	[-0.19,0.13]
4.cohort#4.edu7	-0.09	-0.12	-0.05
	[-0.22,0.04]	[-0.30,0.06]	[-0.20,0.10]
4.cohort#5.edu7	-0.07	-0.09	0.10*
	[-0.26,0.11]	[-0.32,0.14]	[0.00,0.20]
4.cohort#6.edu7	-0.22*	-0.24*	-0.19
	[-0.40,-0.04]	[-0.48,-0.00]	[-0.44,0.07]
4.cohort#7.edu7	-0.07	-0.08	-0.12
	[-0.23,0.09]	[-0.26,0.11]	[-0.42,0.18]
5.cohort#1.edu7	0.04	0.02	0.07
	[-0.02,0.11]	[-0.04,0.08]	[-0.08,0.21]
5.cohort#3.edu7	-0.00	0.04	-0.06
	[-0.11,0.10]	[-0.09,0.16]	[-0.22,0.10]
5.cohort#4.edu7	-0.09	-0.10	-0.06
	[-0.22,0.03]	[-0.28,0.08]	[-0.20,0.09]
5.cohort#5.edu7	-0.02	-0.06	0.17**
	[-0.21,0.16]	[-0.29,0.16]	[0.07,0.27]
5.cohort#6.edu7	-0.17+	-0.18	-0.15
	[-0.35,0.00]	[-0.42,0.06]	[-0.41,0.10]
5.cohort#7.edu7	-0.15+	-0.02	-0.31*
	[-0.31,0.02]	[-0.21,0.17]	[-0.61,-0.01]
Class of origin			
1.clorig6 (service class)	0.01	0.11**	0.05
	[-0.11,0.13]	[0.04,0.18]	[-0.02,0.13]
2.clorig6 (white collars)	0.07	0.02	0.05
	[-0.11,0.24]	[-0.06,0.09]	[-0.02,0.12]
3.clorig6 (small employers)	0.02	0.01	0.01
	[-0.05,0.08]	[-0.02,0.05]	[-0.03,0.04]
4.clorig6 (farmers)	-0.01	-0.01	-0.00

	[-0.05,0.03]	[-0.03,0.02]	[-0.03,0.03]
5.clorig6 (working class) Ref. Cat.	0.00	0.00	0.00
	[0.00,0.00]	[0.00,0.00]	[0.00,0.00]
6.clorig6 (agric. labourers)	-0.02	-0.00	-0.01
	[-0.06,0.02]	[-0.03,0.03]	[-0.04,0.02]
*Cohort * class of origin*			
1.cohort#1.clorig6	0.09		
	[-0.13,0.31]		
1.cohort#2.clorig6	0.03		
	[-0.25,0.32]		
1.cohort#3.clorig6	0.00		
	[-0.09,0.09]		
1.cohort#4.clorig6	0.01		
	[-0.04,0.06]		
1.cohort#6.clorig6	0.03		
	[-0.02,0.07]		
3.cohort#1.clorig6	0.03		
	[-0.13,0.20]		
3.cohort#2.clorig6	-0.15		
	[-0.36,0.06]		
3.cohort#3.clorig6	-0.04		
	[-0.13,0.04]		
3.cohort#4.clorig6	-0.00		
	[-0.06,0.06]		
3.cohort#6.clorig6	0.02		
	[-0.04,0.08]		
4.cohort#1.clorig6	0.07		
	[-0.08,0.22]		
4.cohort#2.clorig6	-0.04		
	[-0.24,0.15]		
4.cohort#3.clorig6	-0.02		
	[-0.10,0.06]		
4.cohort#4.clorig6	-0.00		
	[-0.07,0.06]		
4.cohort#6.clorig6	-0.00		
	[-0.07,0.06]		
5.cohort#1.clorig6	0.12		
	[-0.04,0.27]		
5.cohort#2.clorig6	0.02		
	[-0.18,0.22]		
5.cohort#3.clorig6	0.02		
	[-0.06,0.11]		
5.cohort#4.clorig6	-0.00		
	[-0.08,0.08]		
5.cohort#6.clorig6	0.06		
	[-0.02,0.13]		
_cons	0.02	0.05+	0.01
	[-0.01,0.06]	[-0.00,0.10]	[-0.02,0.04]
N	4330	2313	2017

95% confidence intervals in brackets

+ p<0.10, * p<0.05, ** p<0.01

Appendix 3.5 abcd: class of origin effect on the **chances of access to he service class**, avoiding the working class, income and ISEI, conditional to the level of education, men aged 28-45; CIS 2634 (2006);

Panel A: Access to the service class	(2)	(3)	(4)	(5)	
Linear probability model	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	0.25+	0.25**	0.23+	0.14+	0.20**
	[-0.01,0.51]	[0.06,0.43]	[-0.02,0.47]	[-0.02,0.30]	[0.08,0.33]
White collars	0.06	0.17+	0.09	-0.14	-0.04
	[-0.05,0.17]	[-0.00,0.35]	[-0.24,0.41]	[-0.38,0.11]	[-0.23,0.16]
Self-employed	0.00	0.06	0.11	-0.11	-0.01
	[-0.03,0.04]	[-0.05,0.16]	[-0.15,0.36]	[-0.32,0.10]	[-0.17,0.15]
Farmers	0.02	-0.01	-0.32	-0.11	-0.16
	[-0.02,0.07]	[-0.14,0.12]	[-0.79,0.15]	[-0.48,0.25]	[-0.46,0.15]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00
Agricultural working class	-0.01	0.10	-0.07	0.26**	-0.05
	[-0.03,0.02]	[-0.11,0.32]	[-0.61,0.47]	[0.13,0.39]	[-0.49,0.40]
Constant	0.02*	0.10**	0.57**	0.74**	0.66**
	[0.00,0.03]	[0.05,0.16]	[0.42,0.72]	[0.61,0.87]	[0.56,0.75]
N	571	284	105	173	278
	(2)	(3)	(4)	(5)	
Panel B: avoiding working class					
Linear probability model	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	0.29+	0.28**	0.22**	0.05	0.13**
	[-0.00,0.58]	[0.08,0.48]	[0.09,0.35]	[-0.05,0.15]	[0.04,0.21]
White collars	0.21*	0.40**	0.13	0.02	0.08
	[0.01,0.41]	[0.22,0.58]	[-0.08,0.35]	[-0.12,0.15]	[-0.04,0.19]
Self-employed	0.23**	0.26**	0.13	-0.03	0.05
	[0.12,0.35]	[0.11,0.41]	[-0.04,0.31]	[-0.17,0.11]	[-0.06,0.16]
Farmers	0.27**	0.09	-0.03	-0.04	-0.01
	[0.15,0.39]	[-0.13,0.31]	[-0.49,0.43]	[-0.29,0.21]	[-0.24,0.21]
Urban working class (ref.)	0.00	0.00	0.00	0.00	0.00
Agricultural working class	-0.06	0.04	-0.28	0.09*	-0.24
	[-0.15,0.04]	[-0.22,0.30]	[-0.81,0.25]	[0.00,0.17]	[-0.68,0.21]
Constant	0.22**	0.35**	0.78**	0.91**	0.85**
	[0.17,0.27]	[0.26,0.44]	[0.65,0.91]	[0.83,1.00]	[0.77,0.92]
N	571	284	105	173	278
	(2)	(3)	(4)	(5)	
Panel C: Income					
OLS	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	-62	-0	-2	582*	477*
	[-346,221]	[-301,301]	[-291,288]	[65,1099]	[93,860]

White collars	43	-86	-255+	-343*	-281**
	[-251,337]	[-348,176]	[-512,1]	[-649,-37]	[-488,-74]
Self-employed	151	103	224	451	374+
	[-132,435]	[-128,333]	[-295,742]	[-160,1062]	[-38,785]
Farmers	-9	24	198	-422+	-172
	[-248,231]	[-270,318]	[-158,555]	[-920,76]	[-530,186]
Urban working class (ref.)	0	0	0	0	0
Agricultural working class	-118	167	-288	103	-261
	[-302,66]	[-340,674]	[-661,84]	[-93,299]	[-631,110]
Constant	1263**	1418**	1552**	1797**	1672**
	[1149,1377]	[1301,1536]	[1379,1724]	[1601,1993]	[1542,1802]
N	427	210	93	129	222
	(2)	(3)	(4)	(5)	
Panel D: ISEI					
OLS	Primary/ Low sec. /Low Voc.	Upper sec. /Upper Voc.	University short	University Long	University
Class of origin					
Service class	7+	11**	10**	4+	8**
	[-0,14]	[6,17]	[3,16]	[-1,9]	[4,12]
White collars	2	7**	8*	-3	2
	[-3,7]	[3,12]	[1,15]	[-10,4]	[-3,7]
Self-employed	3*	5**	6	-1	2
	[0,5]	[1,9]	[-1,13]	[-8,5]	[-3,7]
Farmers	-3**	-1	-11	-2	-3
	[-5,-1]	[-6,4]	[-29,8]	[-15,11]	[-15,8]
Working class (ref.)	0	0	0	0	0
Agricultural working class	-3*	4	-7	7**	-7
	[-5,-0]	[-4,11]	[-31,16]	[3,11]	[-27,13]
Constant	34**	39**	54**	64**	59**
	[33,35]	[37,41]	[50,59]	[60,68]	[56,62]
N	571	285	105	173	278

95% confidence intervals in brackets
+ p<0.10, * p<0.05, ** p<0.01


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