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María Fernández Mellizo-Soto
José Saturnino Martínez-García

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Address: Instituto Carlos III – Juan March de Ciencias Sociales
Universidad Carlos III de Madrid
Edificio 18
c/ Madrid 135
28903 Getafe (Madrid)
SPAIN

Web: <http://www.uc3m.es/ic3jm>
Email: secretaria@march.uc3m.es



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Increasing inequalities: Recent School Failure Trends in Spain ¹

María Fernández Mellizo-Soto
Universidad Complutense de Madrid, Spain

José Saturnino Martínez García
Universidad de la Laguna, Spain

Abstract

School failure is substantive in Spain. The percentage of students that do not achieve the compulsory education diploma is around 20%. Students who “fail” cannot continue to post-compulsory education and, sooner or later, have to leave formal education. School failure is usually higher for students from lower socio-economic backgrounds. This article explores the evolution of Inequality of Educational Opportunities (IEO) in compulsory education from the seventies in Spain. Using logit models of estimation to control for socio-demographic factors that may interfere with IEO dynamic, it shows that IEO at this level of education ran parallel with school failure: specifically, it decreased until the late nineties and increased afterwards. In order to explain this (unexpected) increase, we have tested the impact of a Law, known as LOGSE, which was implemented in Spain at the end of the nineties. We provide evidence that this Law, although egalitarian in spirit, in practice could have worked against students from lower socio-economic backgrounds continuing in education; thereby increasing IEO at this transition point.

Key words

Sociology of education; economy of education; social stratification; inequality of educational opportunities; inequality dynamic; school failure.

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Biographical notes

María Fernández Mellizo-Soto is Associate Professor in the Sociology Department, Complutense University, Madrid (Spain). She holds a PhD. in Political Sciences and Sociology from Complutense University and Juan March Institute (Spain). Her Thesis received prizes from several institutions, including the Spanish Association of Political Science and Administration. She has published articles in journals such as the *Journal of Education Policy* and *Revista Española de Investigaciones Sociológicas*. She was *Simon Research Fellowship* in Manchester University (UK) and recently Visiting Research Scholar at Princeton University (USA).

José Saturnino Martínez García is Associate Professor in the Sociology Department, La Laguna University (Spain). He holds a Master in Economics of Education (Carlos III University, Spain) and a PhD. in Sociology (Autonoma University of Madrid). He has published *Estructura Social y Desigualdad en España* (Social Structure and Inequality in Spain), by *La Catarata*, in 2013. He has also published articles in journals such as *Revista de Educación*, *Revista Internacional de Sociología* and *Papers*. He has been a Visiting Research Scholar in Wisconsin University (USA).

1. Introduction

Education systems in developed countries establish a fixed number of years of compulsory schooling. Compulsory schooling is a mechanism that aims to guarantee that every future citizen and worker in a country has a minimum of instruction and knowledge, for the effective functioning of both democracy and the economy. In practical terms, this should mean that children have to enter school at a fixed age, and stay in school at least until they achieve a compulsory education credential. This credential allows them to continue, if so-wished, to post-compulsory education. However this does not always occur in practice. Some educational systems fail to give compulsory education credentials to most students in a given cohort. Students that “fail” cannot continue to post-compulsory education, and so enter the labour market without any diploma. In a world where credentials are often inflated and at the same time where jobs are scarce, the employment possibilities of people without minimum credentials are more limited. Everywhere, they are more likely to be unemployed, work in low-paid jobs and/or suffer poverty and social exclusion. Failing at school has important, and sometimes irreversible, consequences in adulthood. Let’s define school failure precisely as the inability of the education system to give compulsory education credentials to every student, and to make possible the continuation of every student to post-compulsory education. Countries differ

regarding school failure, and Spain is an extreme case of extended school failure.

If school failure is not only a big phenomenon but is also unevenly distributed in society, it also has negative implications for social justice. And if this uneven distribution of those who fail at school increases as time passes, equality of opportunities for succeeding in life also suffers. This article specifically seeks to analyse the impact of socio-economic background on school failure in Spain and the evolution of this influence through time. A number of research questions flow from this objective, and they can be divided into two groups. First, in descriptive terms: Is the evolution of Inequality of Educational Opportunities (IEO) in compulsory education related to the evolution of school failure? When school failure increased in Spain at the end of the past century, did IEO in compulsory education also increase? And second, in relation to mechanisms: Why does the evolution of school failure and IEO in compulsory education go hand in hand? Why when school failure increased at the end of the last century, did IEO also increase? What are the driving factors behind this increase in IEO in compulsory education? Did specific changes in the education system introduced in the mid-nineties that increased school failure also increase IEO in compulsory education?

We show for this period of time that students from higher socio-economic backgrounds are barely affected by the general evolution of school failure; when school failure is high or low, these privileged students have a very high probability of achieving the compulsory education diploma. The opposite happens with students from lower socio-economic backgrounds, their sensitivity to the evolution of general school failure is very high; when school failure is high, the probability of them getting the compulsory education diploma is low, and when school failure is reduced, they have much more chances to achieve the compulsory education diploma. From the seventies onwards, the expansion of (public) education and decreasing selectivity at lower levels of education reduced IEO in compulsory education; however, at the end of last century IEO started to increase again, at least in compulsory education. This paper explores one of

the mechanisms that may explain this upward trend. It is argued here that specific legal changes implemented in the mid-nineties, although inspired by egalitarian goals, in fact increased costs and made compulsory education more selective (i.e. more difficult to continue to post-compulsory education), with the (unintended) consequence of increasing school failure for those in the lower socio-economic strata.

The following section develops the theoretical and analytical framework; the third section describes the data, variables and methodology used in the analysis, and shows the evolution of school failure in Spain; the fourth section presents the evolution of IEO in compulsory education in Spain; the sixth section explores a possible explanation of the increase in IEO in compulsory education from the late-nineties onwards (i.e. a reform of the education system); and finally, the last section concludes.

2. Theoretical and Analytical Framework: school failure and the increase in IEO in compulsory education

The relationship between socio-economic background and educational attainment has been explored in two bodies of literature²: on the one hand, the literature on Inequality of Educational Opportunities; on the other hand,

the literature on the demand for education and school dropouts. Coming from different perspectives, both contribute to the analysis of school failure and IEO in compulsory education, although both have shortcomings for the analysis done in this paper. After a revision of both literatures, a discussion of the analytical framework proposed to study the in-

² We only refer to the literature that uses quantitative data and a relatively sophisticated statistical methodology.

crease in IEO at lower levels of education (in fact, in compulsory education) is presented.

2.1. The evolution of Inequality of Educational Opportunities: the point of view of stratification sociologists

The book published by Shavit and Blossfeld in 1993, *Persistent Inequality*, contained evidence from thirteen countries that demonstrated that educational expansion did not equalise study opportunities (in fact, equalisation only took place in two of the countries under analysis). As education expanded, the mean level of education of children grew, including that attained by the offspring of the less well off. But the probabilities of studying for children from higher socio-economic strata remained above those for children from lower socio-economic strata. Since the publication of this book, subsequent country specific analyses began to show evidence in favour of equalisation; that is, data for several countries pointed to a decline in IEO. More recently, Breen et al. (2009), comparing data from eight European countries, contested the argument of “persisting inequality” (in fact, their article is entitled *Nonpersistent inequality...*); by providing evidence of a widespread decline in educational inequality among students from different social origins. Although the debate about the consequences in IEO of post-war educational expansion is still open (Breen and Jonsson 2005; Breen 2010), mainstream sociologists argue that, at the least, there is no con-

clusive evidence of increasing educational inequalities to date (Goldthorpe (2007)).

Unfortunately, Spain has not taken part in the comparative projects of IEO. In fact the authors are aware of only one analysis of the Spanish evolution of IEO in an international journal, and that is in comparison with the Italian case. Ballarino et al. (2009) show how IEO decreased in Spain for the period studied due, they argued, to a reduction in the risks (of failure) associated with continuing education after compulsory schooling; a development which benefited the lower classes. These risks were reduced as a consequence of decreasing school selectivity (the percentage of students that failed in higher secondary education fell) and increasing parental employment security. There are other analyses of Spanish IEO published in national books and journals (some study IEO in general, such as Di Paolo 2012; Martínez 2002; Carabaña 1999; others concentrate on one or two transitions, such as Carabaña 2013; Martínez García and Merino 2011)³. While agreeing on the expansion of education in Spain to the seventies, the scholars reach different conclusions as regards the evolution of IEO, even when they draw on the same data. They use different methodological designs and most do not try to explain why IEO persists or changes through time.

³ See Fdez. Mellizo-Soto (2013), for a systematic review of the studies about the evolution of IEO in Spain.

In sum, stratification sociologists, while not specifically focusing on the compulsory level of education or on school failure, have profoundly studied the evolution of IEO. However, in spite of their rich databases and sophisticated methodologies, they have not been able to agree on the evolution of IEO: some defend persistence and others a reduction in IEO. The same applies for the few studies undertaken on Spain.

2.2. The study of the demand for education and school drop-outs: the point of view of economists

From the late seventies onwards, economists started to realise that, contrary to classical human capital theory, the demand for education was greater among those who came from more economically privileged family backgrounds. Therefore, equality of educational opportunity was found to be a distant ideal that had not led to increased social mobility. In recent decades numerous studies have been conducted on the role of socio-economic background on educational attainment and the school drop-out rate (Maani and Kalb 2007). Nevertheless, economists have not paid much attention to the evolution of the influence of family background on educational demand, and to the dynamics involved in school drop-outs⁴.

In Spain, economists have dominated the debate on educational demand and

school dropouts⁵. Specifically the impact of socio-economic background on the demand for education and on school dropouts has been extensively explored (Choi and Calero 2011; Petrongolo and San Segundo 2002; Peraita and Pastor 2000); although from a static point of view. Few studies introduce dynamics, and when introduced almost none reach significant conclusions about the evolution of IEO, with the possible exception of Fernández-Macías et al. (2013). These authors show how children with poorly educated mothers had less probabilities of leaving school in 2007 than in 2000 (that is, there was an indication of a possible decrease in IEO from 2000 to 2007).

In sum, economists have concentrated more on educational demand and, in particular, on dropping-out, and have extensively studied the impact of socio-economic variables, but have rarely studied the dynamics involved in school failure.

2.3. Increasing educational inequalities in compulsory education: the role of the institutional structure of the education system

Stratification sociologists have found persistence or decline in IEO in most countries that they have studied. There are exceptions to this pattern, but always under very particular economic or political situations: such as higher sec-

⁴ There are exceptions: Carneiro and Heckman (2002); Smyth (1999).

⁵ There are exceptions from sociology (Enguita et al. 2010; Bernardi 2012) and from psychology (Marchesi 2003).

ondary education in post-Soviet Russia in the early nineties (Gerber 2000), and China (Zhou et al 1998) in two periods of time (in 1960-65 and in the post-Mao era) ⁶. For Spain, also under unusual circumstances, Carabaña (1999), and Peruga and Torres Mora (1997), found that IEO increased in the thirties. Carneiro and Heckman (2002), from an economic perspective, also show increasing educational inequalities in the USA; in this case under “normal” circumstances.

For most cases in which IEO increases, explanations are not related to the institutional structure of the education system (the only possible exception may be the introduction of tracking in East Germany after reunification). Other explanations such as enrolments contraction (for Russia), special political circumstances (abandonment of the “recommendation only” policy ⁷ for China, and the Civil War for Spain), as well as increasing differences in children’s home environments (for the USA), have been put forward.

Following Erikson and Jonsson (1996), the institutional structure of the educational system is another factor that may favour or impede lower classes in their progression to higher levels of education (or academic tracks) and, therefore, have an impact on IEO. The authors describe five characteristics of the institutional structure of the educational sys-

tem related to IEO, and explain how they can affect IEO based on a model of educational choice that stresses costs, benefits and the probability of success of studying. In first place, the length of education (and of different school tracks): the longer the study period, the greater the costs (i.e. both the actual and opportunity costs) of studying. In second place, barriers and opportunities to study: including both financial and organisational barriers (tracking or “dead ends” may increase IEO). In third place, the size of the education system: the bigger the size, the lower IEO, although the authors recognise that this is not a sufficient condition. In fourth place, principles for transferring students from one education level to another: objective criteria lower IEO. Finally, private education and school fees increase costs of education and IEO.

⁶ Another exceptional case where IEO increased may be East Germany, after reunification (see next article from Below et al 2013).

⁷ Recruitment on the basis of working-class background and ‘revolutionary merits.

3. Data, variables and methodology: the evolution of school failure in Spain

This section explains the data used for the analysis as well as the methodological design implemented, and offers a detailed account of the dependent variable: school failure.

3.1. Data

The data used for the analysis comes from the Spanish labour force surveys (LFS) from 1977 to 2012 (Spanish Statistical Institute). The Spanish labour force surveys are undertaken quarterly. We employ the data for the second quarter, which are the least vulnerable to monthly variations. Labour force surveys apply to households. We select, for each survey, the 19-20 year old population, because they will have completed compulsory education, but will frequently still be

living with their parents (so we can analyse parental characteristics). In total, 211,266 cases were therefore included in the study.

The population included in the analysis has studied under three different education systems, each of them characterised by a different educational law. The *Ley Moyano* (LM), approved in 1857 although amended in the fifties, shaped the first education system. The *Ley General de Educación* (LGE), enacted in 1970, configured the second education system. Finally, the *Ley de Ordenación General del Sistema Educativo* (LOGSE), passed in 1990, structured the third education system. Table 1 shows the correspondence between the different educational systems, birth year and the different surveys.

Table 1. Correspondence between education system, birth year and LFS

Education System	Birth year	LFS
LM*	1960 or before	1977-1980
LGE**	1961 to 1979	1981-1999
Transition between LGE and LOGSE	1980 to 1984	2001-2004
LOGSE***	1985 and after	2005-2011

*LM: *Ley Moyano*

**LGE: *Ley General de Educación*

***LOGSE: *Ley de Ordenación General del Sistema Educativo*

In the data analysis, we have sought to make population cohorts as homogeneous as possible with regard to the education system under which they have studied. So, for the period studied we have divided the population into eight cohorts: one cohort under the LM system (1957-60); four cohorts under the LGE system (1961-65; 1966-70; 1971-75; 1976-79); one cohort for the transition between LGE and LOGSE (1980-84); and two cohorts under the LOGSE system (1985-88; 1989-93). Additionally, this classification of cohorts by education system will allow us to test the impact of LOGSE on IEO.

3.2. Dependent variable: the evolution of school failure in Spain

Our dependent variable is school failure, defined as not having the certificate of compulsory education that is required to continue to post compulsory education, by the age 19-20 (Martínez García 2009). In Spain, the comparison of educational diplomas from three different education systems can be quite complicated and misleading. Under our definition, not having the certificate of compulsory education in any of the systems always impedes continuation to post-compulsory education: under LM, school failure means not finishing primary education; under LGE it means not getting the *Graduado Escolar* (that implies having passed compulsory primary education) or the certificate of *Formación Profesional I* (the first level of Vocational Education); under

LOGSE it means not attaining the *Graduado en Educación Secundaria Obligatoria* (that is issued only after having succeeded in compulsory secondary education).

We have opted for this variable, and not other indicators of dropping-out or school leaving, with two considerations in mind. Firstly, other indicators of school leaving (for example, those used by the OECD or EUROSTAT) include very heterogeneous educational trajectories: school leavers may have completed compulsory education or not, and those without the compulsory education diploma but still in education or training, even if non-formal, are not counted as leaving the system. Secondly, we know from other studies that although school failure is high in Spain (Enguita et al 2010; Martínez García 2009), it is a much less explored phenomenon than school leaving or dropping-out.

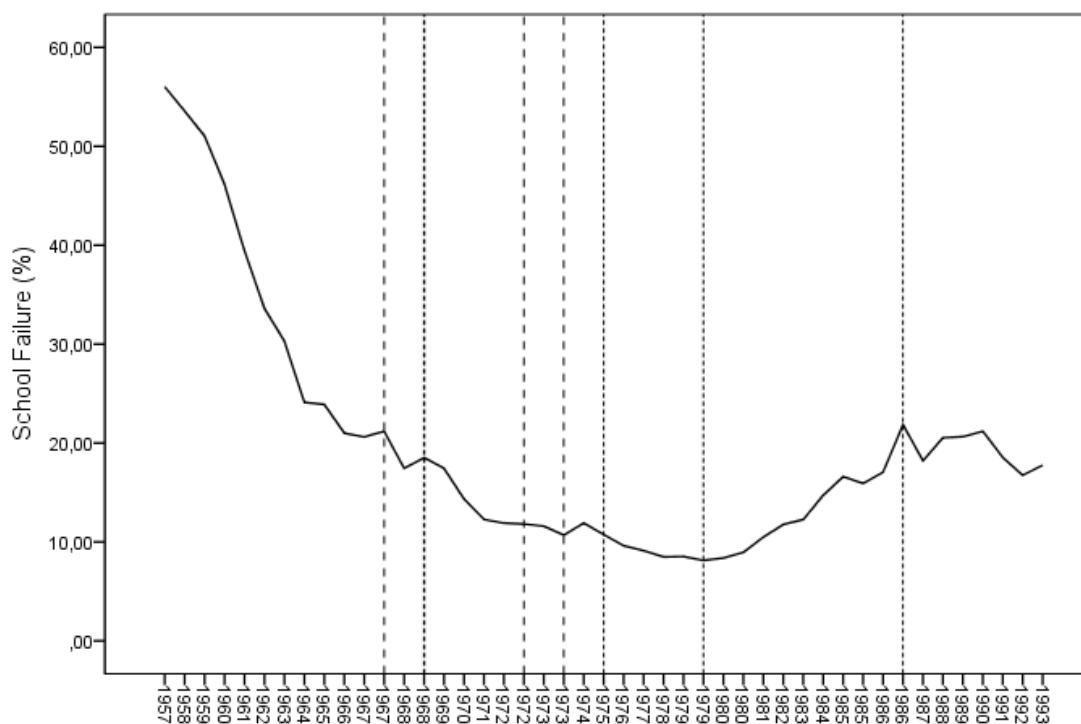
Using data from the Spanish LFS from 1977 to 2012, we have calculated the percentage of 19-20 year olds (at the time the survey was completed⁸) that do not have the certificate of compulsory education. School failure for Spain is 17.6% in 2012. Graph 1 shows how school failure in Spain decreased dramatically from the seventies, but also how it increased at the end of twentieth Century (and how this tendency was reversed again in 2009). By year of birth, school failure decreased spectacularly for cohorts born between the late

⁸ For those born before 1987 this only includes the age, and not the year of birth.

fifties and late seventies and increased for cohorts born in the eighties (for

people born in the nineties, again school failure decreased).

Graph 1. Evolution of school failure* (%) in Spain from 1977 to 2012 (people born from 1957 to 1993)**



* People of 19-20 years old, by year of birth (from 1987), and without the certificate of compulsory education.

** Dotted lines mark methodological changes in LFS (short lines indicate changes in the procedures for gathering information, such as sampling procedures, and long ones show changes in the way the levels of education are measured).

Source: Spanish Labour Force Surveys, second quarter (1977-2012).

We have found several changes in the methodology of the Spanish LFS⁹, in terms of procedures for gathering information and also in the way the levels of education are measured. In order to avoid possible interferences of these

methodological changes, we show in the previous Graph that their impact on the evolution of school failure (our dependent variable) does not exceed 2%.

⁹ For an explanation of these methodological changes see:

<http://www.ine.es/epa02/meto2002.htm>

3.3. Independent variables and methodology: the impact of social class on school failure

In order to analyse the impact of socio-economic background on school failure and the evolution of this influence through time, we use as the main independent variable the social class of the person of reference in the household (PRH), in line with mainstream social stratification sociologists. We follow the EGP (Erikson-Goldthorpe-Portocarero) schema that divides society into different classes depending on their occupation and education level¹⁰, while making some adjustments to adapt it to the Spanish case (Martínez García 2002).

In order to analyse the evolution of IEO in compulsory education in Spain, multivariate models have been estimated following the standard procedure in the literature. We use logit regressions as the method of estimating parameters; taking into account the fact that the dependent variable in these kinds of studies is the logarithm of the *odds ratio* (double ratio). We have estimated different models for men and women, as previous studies for Spain and for other countries have shown significant differences in the evolution of school failure and IEO dynamics of men and women (Fernández-Macías et al 2013; Breen et al 2010; Martínez García 2007).

¹⁰ For an explanation of this class schema and its operationalisation in social mobility studies see Erikson and Goldthorpe (1992).

We use as control variables: immigrant status (born in Spain and having both parents born in Spain vs. the rest), family type (whether two parent family or one parent family –in this latter case making a distinction between those cases resulting from the death of one parent and the rest) and gender of the PRH. These variables allow us to control for socio-demographic changes that have taken place in Spain in recent decades; factors that may have had an impact on school failure and interfere in IEO dynamic (Fernández-Macías et al 2013). It is well known how immigration in Spain enormously increased at the turn of the Century and that there is a negative association between immigrant status and educational achievement. Moreover, Spanish families have changed, as there are more one-parent families, and female-led households are nowadays a widespread reality. Also, in this period of time divorce has risen and there are increasingly more children with divorced parents. There is a negative association between one-parent families and educational achievement that has to be controlled for (Martínez García 2002). These family changes as well as the increase in women's participation in the labour market has increased households with a female reference person, with two consequences in terms of educational achievement. On the one hand, women generally have worse labour market conditions than men with obvious negative consequences for the education of children; on the other, there is a positive effect of labour market participation of women on

the educational achievement of girls, which is sufficient to compensate for the previous negative impact ([Mar-

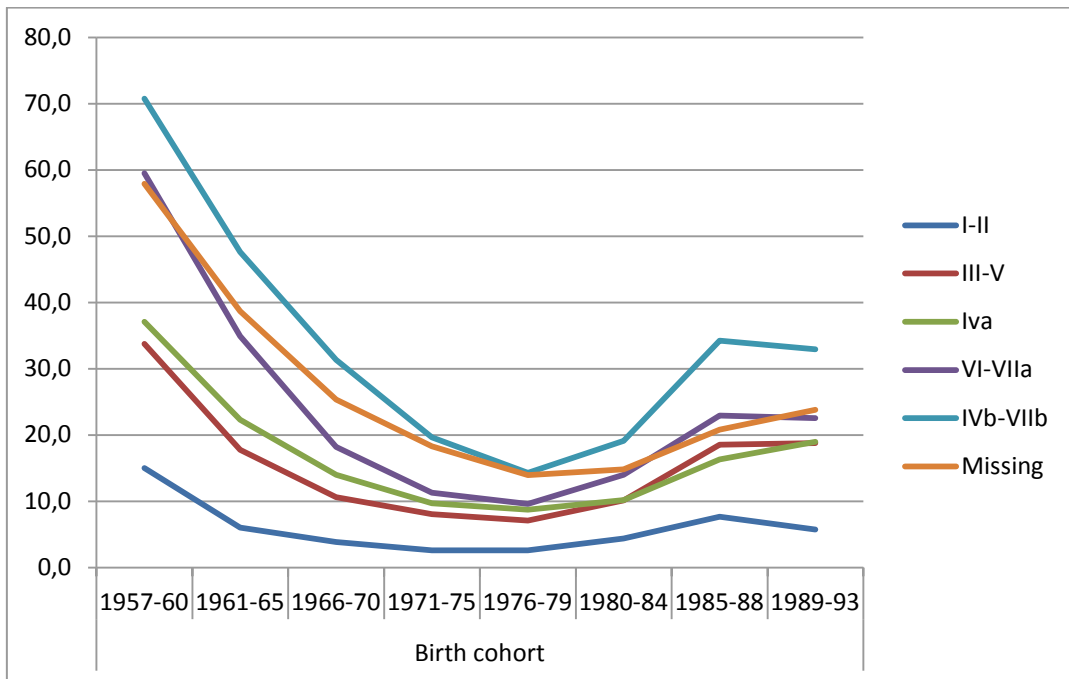
tínez García 2002; Martínez García and Córdoba 2013).

4. The evolution of Inequality of Educational Opportunities in Compulsory Education in Spain

We now turn to the evolution of Inequality of Educational Opportunities in compulsory education. As can be seen in Graph 2, for each category of social class the evolution in school failure follows the same path as for the whole population. It is a kind of “wave effect” of what was shown in Graph 1: school

failure decreases for every category of social class until those born at the end of the seventies, and afterwards it increases also for all categories. Nevertheless, changes are greater for lower social classes (especially for those working in agriculture) than for higher ones.

Graph 2. School failure* (%) in Spain by social class of PRH (different cohorts)



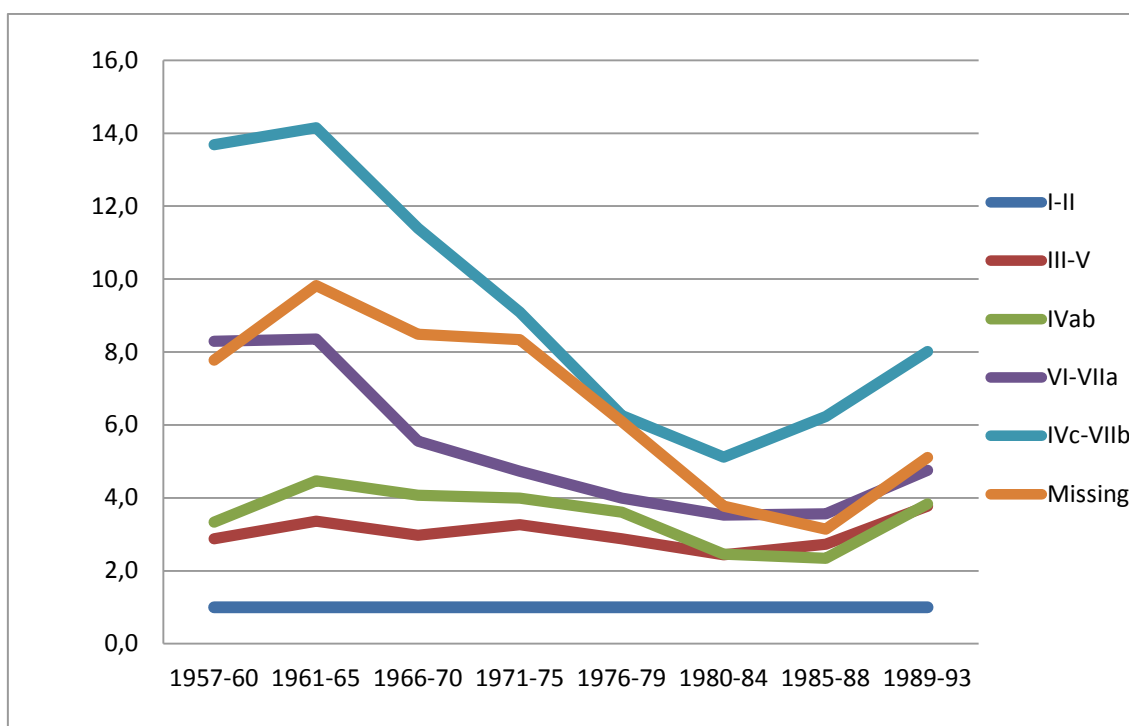
*Population aged 19-20, by year of birth (from 1987), and without the certificate of compulsory education.

Source: Spanish LFS, second quarter (1977-2012)

Although the measurement of IEO is far from obvious, the literature from Mare (1980; 1981) onwards shows some agreement that IEO should be measured with double ratios (*odds ratio*). For our dependent variable, this means the proportion of school failure relative to the

proportion of completion of compulsory education for one category of social class compared to a similar ratio for the reference category of social class. Graph 3 shows the evolution of IEO measured in this way, using service class as a reference category.

Graph 3. Odds ratios* by social class of PRH (service class as reference)



* The proportion of school failure relative to the proportion of completion of compulsory education for one category of social class compared to a similar ratio for the reference category of social class (service class).

Source: Spanish LFS second quarter (1977-2012).

As can be seen in the previous Graph, the evolution of IEO in compulsory education is similar to the evolution of school failure: downwards until those born in late seventies, and upwards for those born later on.

In order to control for socio-demographic variables, we have estimated logit regressions with school failure as a dependent variable (with value 1= school failure –not having the certificate of compulsory education- and value 0=school success –having the

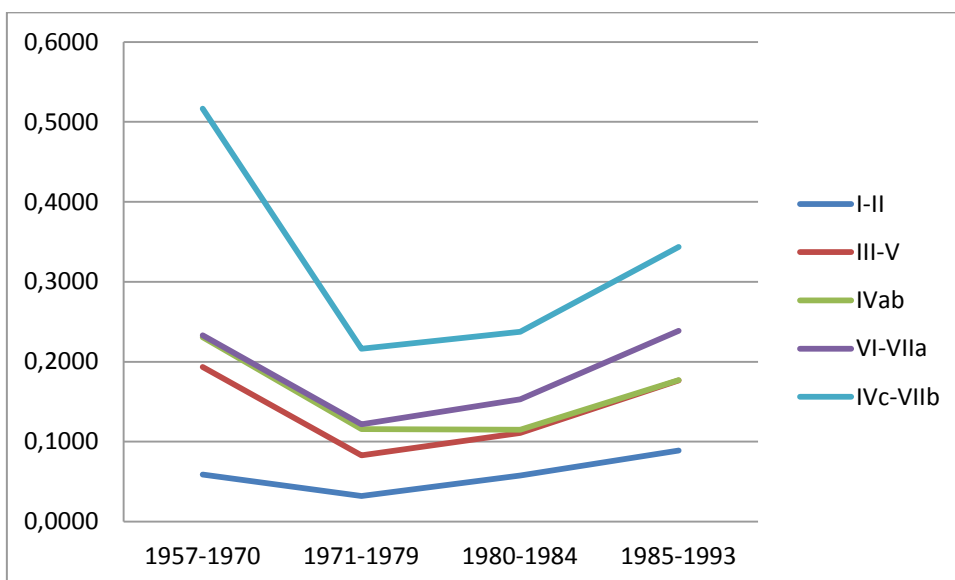
certificate of compulsory education). For the models, we have grouped cohorts into four categories, making the analysis more parsimonious without losing analytical power: 1975-70, 1971-79, 1980-84 and 1985-1993. The main independent variable, social class, has been introduced in six categories (five plus no information about class). As control variables immigrant status, family type and gender of the PRH have been included, as described above. Different models for men and women have been estimated, and without constant to avoid multicollinearity problems and to simplify the results.

Results are shown in the Appendix (Table 2 for men and Table 3 for women). Four different models have been estimated: the first model only includes social class categories and cohorts, as first order effects; the second also includes the interactions between social class categories and cohorts; the third additionally includes some control variables; while the last adjusts the control variables by their level of significance of model 3. The reference category in model 1 is cohort 1970-79, and in the

other models it is the interaction between cohort 1970-79 and social class VI-VIIa (manual workers). The results should be interpreted in relation to the reference category. For both men and women, the logit model with best fit (using both BIC and AIC) is model 4: it includes both first order and second order effects (both principal variables and interactions), as well as adjusted control variables. As expected, immigrants and those living in single parent families, for both men and women, have more probability of failing in school, especially if this situation has been the result of divorce or separation of parents. In the case of women, having their mother as PRH diminishes the probability of failure; a finding that does not occur for men.

In order to better interpret the substantive results for IEO contained in model 4, we have estimated the net probability of school failure, for every social class category and cohort. For estimating net probability, control variables are set to 0. Graphs 4 and 5 show the net estimated probability of school failure, both for men and women.

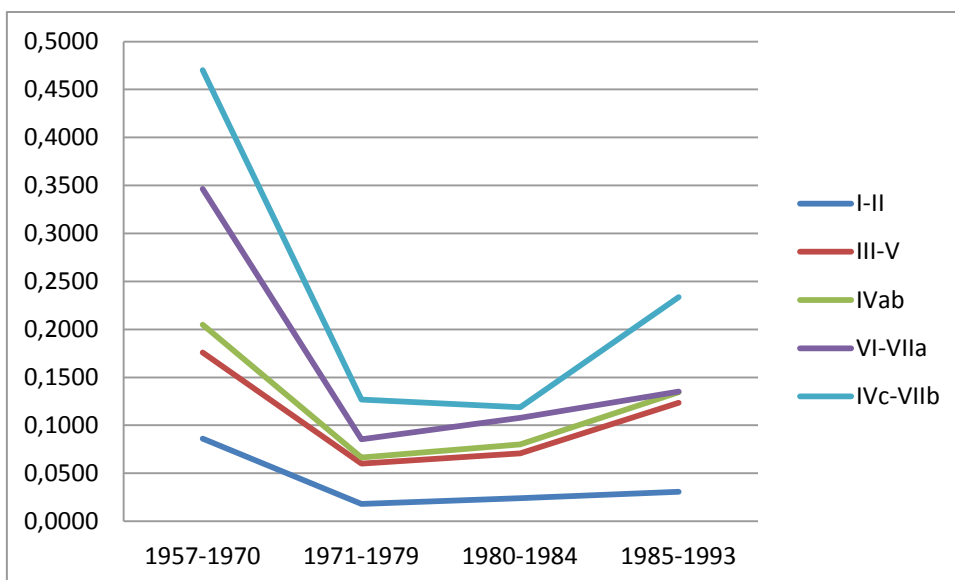
Graph 4: Net estimated probability of school failure by social class (men)



Note: All variables in model are set at 0, except for those of social class and birth cohort.

Source: Spanish LFS second quarter (1977-2012).

Graph 5: Net estimated probability of school failure by social class (women)



Note: All variables in model are set at 0, except for those of social class and birth cohort.

Source: Spanish LFS second quarter (1977-2012).

Net estimated probability graphs are similar to those presented in the bivariate analysis; that is, controlling for changes in immigration and family types, IEO tendencies are maintained:

IEO decreases until the late seventies and then increases afterwards¹¹. The tendency is very similar for men and women, although women's tendency is slightly more pronounced than for men.

5. Explaining the (recent) increase in IEO in compulsory education: the role of the institutional structure of the education system

The next step in our analysis is to explain the evolution of IEO in compulsory education in Spain, in particular the increase detected in those born at the beginning of eighties. In this section, the role of the changing institutional structure of the education system is tested.

The declining tendency in IEO in compulsory education observed from the seventies is in some ways expected if we take into account the fact that public education expanded, and selectivity progressively decreased at lower levels of education during this period; selective examinations and tracking was progressively postponed to post-compulsory (Fdez. Mellizo-Soto 2003 describes these changes in more detail). This tendency has been described and analysed in previous assessments of IEO in Spain (Ballarino et al 2009). What needs further explanation is the (unexpected) increase in IEO in compulsory education from the late nineties onwards.

The institutional structure of the education system may have had a role in this increase in IEO for recent cohorts. In the late nineties, a Law known as LOGSE, that changed this structure, was implemented and may have altered the progression of students of different social classes through compulsory education. This new regulation extended compulsory education by two years, from 14 to 16, thereby increasing both the actual costs of education (not the fees but the costs in terms of school books and material), and, more importantly, the opportunity costs of education (the wage foregone in the labour market). Additionally, this Law may have increased the actual costs of education (mainly travel costs) from 12 years old until the end of compulsory education for students living in rural areas. Before LOGSE, students were transferred to *Institutos* (secondary education schools) for post-compulsory education (at the age of 14). After LOGSE, students had to attend *Institutos* at 12 years old and remain there at least until the end of compulsory education (16 years old). In rural areas, primary schools are almost everywhere,

¹¹ The same occurs if using odds ratios (not presented here for reasons of space).

even in remote areas; however, *Institutos* are only located in populated areas and many students have to travel to them from their home villages¹². Finally, LOGSE created a “dead end” for students that failed in compulsory education. One consequence of the LOGSE design was that Spanish children had limited access to upper secondary education, in contrast with students in most European countries (Lamb et al. 2011). Only those that passed lower secondary education (ESO) and obtained a certificate were permitted to continue to upper secondary education, whether it be academic or vocational. Previously, a certificate (*Graduado Escolar*; that implied having passed compulsory primary education, known as EGB) was required to continue to post-compulsory academic secondary education, but not to study in the vocational branch of this level of education (where the *Certificado de Escolaridad* was awarded, precisely for students who did not obtain the certificate to continue to the post-compulsory academic track). Specifically due to the perceived low level and image of vocational education, and the explicit objective to increase quality of vocational education, the certificate of lower secondary education was required not only for the academic track but also for the vocational (Martínez García and Merino 2011). The unintended consequence of this legal change was that students who failed to obtain this certificate could not continue in (formal) education, even if they wished to do so. Second chances to

¹² A hypothesis to test in the future is whether IEO increased more in rural areas, due to the higher costs of education.

get the certificate of compulsory education after an examination, such as “*Programas de Garantía Social*”, were a failure, and those that failed ended up dropping-out of education¹³.

So, although LOGSE had an explicit egalitarian objective, its design in reality increased costs (both actual, including travel cost for students from rural areas, and opportunity costs) and made education more selective (to continue to post-compulsory education), through the introduction of a “dead end” for those that failed in compulsory education. This design acted against students from lower socio-economic backgrounds, pushing IEO in compulsory education upwards¹⁴.

We have considered alternative explanations for changes in IEO in compulsory education in Spain from the mid-nineties, as shown in Table 2. Some of these explanations predicted a downward trend; others continuity. From those that predicted an upward trend, one did not apply to compulsory education and the other occurred after IEO started to increase. The only possible explanations for the increase in IEO through this period of time are related to LOGSE and the Spanish housing boom (1997-2007).

¹³ From 2006, new regulations tried to mitigate this “dead end”.

¹⁴ Some authors have already argued that LOGSE may have increased school leaving among men (Felgueroso et al (2013) or school failure (Martínez García (2009), although none has explicitly analysed its effects on IEO.

Table 2. Factors for continuity and change in IEO in compulsory education in Spain from the mid-nineties

Factors that may affect IEO in compulsory education	Predicted evolution of IEO in compulsory education
<p>Parental education more equally distributed (LFS data)</p> <p>Pre-kindergarten education increased (Education Department data)</p> <p>Wage inequality declined (Pijoan-Mas and Sánchez-Marcos 2010; Bonhomme and Hospido 2012)</p> <p>Different tracks were more equal (LOGSE)</p> <p>First educational decision postponed, extension of comprehensiveness (LOGSE)</p>	Downwards
<p>Compulsory education continued to be free</p> <p>The proportion of private education remained very low (Instituto de Evaluación data)</p> <p>Expenditure on grants was constant, with minor ups and downs (<i>Estadística del Gasto Público</i>, Education Department data)</p>	Constant
<p><i>Educational expansion was stopped, and university and higher education diplomas contracted (Lacuesta et al 2012), but access to compulsory education is universal and higher social classes continued to be “saturated” at this level of education even when IEO started to increase</i></p> <p><i>Hardening of promotion rules (from 2002), but only after a big increase in IEO</i></p> <p>Extending compulsory education from 14 to 16 years old (LOGSE)</p> <p>Transferring students to <i>Institutos</i> (secondary education schools) at 12 years old (LOGSE)</p> <p>“Dead end” for students that failed (LOGSE)</p> <p>Increasing wages for unqualified work (housing boom)</p>	Upwards

In fact, labour market incentives to study may have evolved in Spain in such a way that attracted more young people from lower socio-economic backgrounds than from advantaged families. Lacuesta et al (2012) show that the response of students with low educated parents to increases in low-skilled wages was greater than for students with highly educated parents. Bernardi (2012) also shows for Spain how students from lower social classes are more sensitive to low-skilled employment, and he suggests that school failure in fact may hinder a previous decision to leave school and enter the labour market (that is, the student first decides to leave school to go to work, then waits until the legal age to work, and, consequently, fails in school and does not attain the compulsory education diploma). So, labour market (dis)incentives during the housing boom may have increased the opportunity costs of students (above all for students from lower socio-economic backgrounds). However, a systematic test of this explanation based on labour market dynamics is out of the scope of this paper¹⁵.

LOGSE and the housing boom can be thought of as rival explanations, but they can also be considered complementary. As they occurred simultaneously, they may have fuelled at the same time not only school failure but

IEO in compulsory education as well. In this economic context, the effect of LOGSE may have resulted in even more opportunity costs for students from lower socio-economic backgrounds. Extending compulsory education, and thereby increasing the opportunity costs of studying, in an economy that offered relatively good salaries in the construction sector for low-skilled workers, may have produced both powerful push and pull factors for students from disadvantaged origins.

¹⁵ There are some studies that show that school leaving may have increased due to the housing boom, as a consequence of the increase in low-skilled wages for men (Aparicio 2012; Lacuesta et al 2012). Others have shown how youth unemployment in these years decreased more for people without qualifications, especially among men (Martínez García 2013).

6. Conclusion

School failure is high in Spain. Not having the certificate of compulsory education does not allow a student to continue to post-compulsory education and has negative consequences for their participation in the labour market (Instituto de Evaluación 2011; García 2011). The objectives of this article have been: to study who fails and who does not fail, if the probability of failing is related to social origin and how this relationship evolves in time. Logit regressions have been estimated to control for several socio-demographic changes that have taken place in Spain and that may interfere with the dynamics of IEO in compulsory education: immigration and single parent families (most of them resulting from divorce) have grown exponentially, and women have increased their participation in the labour market. Net estimated probabilities from the model that better fits the data have been compared, and the results showed that, for both men and women, IEO decreased until the late nineties and then increased afterwards. In terms of cohorts, IEO decreased until those born in the late seventies, and increased from those born in the early eighties.

However, previous studies of IEO in Spain, not only related to compulsory education, had detected a declining tendency, at least until those born in the late sixties. This decline can be explained as a result of the big expansion of public education and a progressive reduction of selectivity in compulsory education, which postponed selec-

tive examinations and tracking to the later stages of education. Nevertheless, none of the studies of the Spanish case had detected an increase in IEO in compulsory education afterwards¹⁶. The explanation we offer for this increase is related to the implementation of a new Law, LOGSE, at the end of the nineties. Although this Law had an egalitarian spirit and aim, in reality it increased the costs of education for students (both actual, including travel, and opportunity costs). It also increased selectivity in compulsory education to continue to post-compulsory education (creating a “dead end” for those that “failed” at compulsory education). The unintended consequence of this new regulation was that students from lower socio-economic backgrounds had, in relative terms, more probabilities of failure than before. At the same time, the economic boom, fuelled by a housing bubble, increased the opportunity costs of education further, as youth unemployment decreased and wages went up. Furthermore, unemployment fell more quickly for low-skilled labour while wages for unqualified jobs increased more rapidly, acting as a dis-incentive for students from lower socio-economic origins to obtain the compulsory education diploma.

¹⁶ In fact, Fdez. Macías et al (2013) show a declining tendency for school leaving. Only Martínez García and Merino (2011) show an increase in IEO, but for vocational education, and Martínez García (2013) contains only preliminary evidence that IEO in compulsory education may have increased.

The fact that the trend in both school failure and IEO in compulsory education reversed in an abrupt way (rapidly moving from decline to increase) points to a legislative change such as that of LOGSE. Nevertheless, further research is needed to analyse labour market dynamics more in-depth and

their interrelation with IEO during this period of time. Additionally, more research should be undertaken to analyse IEO for other transition points in this period, in order to obtain a more accurate picture of recent trends in educational opportunities by social origin.

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APPENDIX

Table 1. Logit models for school failure (cohort effects). Men

School failure (value 1)	Model 1	Model 2	Model 3	Model 4
I-II Service	-3.43***	-3.38***	-3.41***	-3.41***
II-V Intermediate	-2.35***	-2.34***	-2.40***	-2.40***
IVab Self-employed & small employers	-2.24***	-2.01***	-2.04***	-2.03***
VI-VIIa Manual workers	-1.79***	-1.96***	-1.98***	-1.97***
IVc-VIIb Agriculture	-1.13***	-1.27***	-1.29***	-1.29***
No information about class	-1.58***	-1.43***	-1.51***	-1.51***
1957-70 cohort	1.14***	1.38***	1.38***	1.38***
1980-84 cohort	0.22***	0.32***	0.26***	0.26***
1985-93 cohort	0.81***	1.00***	0.82***	0.82***
I-II Service*1957-70		-0.75***	-0.74***	-0.74***
I-II Service*1980-84		0.33***	0.35**	0.35**
I-II Service*1985-93		0.16	0.27*	0.27*
III-V Intermediate*1957-70		-0.42***	-0.41***	-0.40***
III-V Intermediate*1980-84		0.04	0.06	0.06
III-V Intermediate*1985-93		0.04	0.05	0.05
IVab Self-employed & small employers*1957-70		-0.55***	-0.55***	-0.55***
IVab Self-employed & small employers*1980-84		-0.30***	-0.27***	-0.27*
IVab Self-employed & small employers*1985-93		-0.39***	-0.32***	-0.32**
IVc-VIIb Agriculture*1957-70		-0.03	-0.02	-0.02
IVc-VIIb Agriculture*1980-84		-0.15	-0.14	-0.14
IVc-VIIb Agriculture*1985-93		-0.19	-0.17	-0.18
No information about class*1957-70		-0.34***	-0.34***	-0.34***
No information about class*1980-84		-0.37***	-0.35***	-0.35***
No information about class*1985-93		-0.63***	-0.51***	-0.52***
Immigrant status			0.13	
Single-headed family (death)			0.27***	0.25***
Single-headed family (other)			0.37***	0.36***
Missing family			-0.37	
Women PRH			-0.02	
Immigrant*1980-93			0.43***	0.55***
N	109,757	109,757	109,757	109,757
LL	-53424.58	-53224.29	-53038.95	-53040.02
AIC	106867.16	106496.58	106137.89	106134.05
BIC	106953.62	106727.13	106426.07	106393.41

Note: Models are estimated without constant, in order to control for the dummies and interactions.

* p<.1; ** p<.05; *** p<.01. Robust standard errors.

Source: Spanish LFS, second quarter (1977-2012).

Table 2. Logit models for school failure (cohort effects). Women

School failure (value 1)	Model 1	Model 2	Model 3	Model 4
I-II Service	-3.87***	-3.95***	- 4.00***	-3.99***
III-V Intermediate	-2.77***	-2.68***	-2.77***	-2.75***
IVab Self-employed & small employers	-2.73***	-2.61***	-2.65***	-2.64***
VI-VIIa Manual workers	-2.16***	-2.34***	-2.38***	-2.37***
IVac-VIIb Agriculture	-1.65***	-1.91***	-1.93***	-1.93***
No information about class	-2.09***	-1.87***	-1.99***	-1.96***
1957-70 cohort	1.48***	1.72***	1.74***	1.73***
1980-84 cohort	0.13***	0.34***	0.27***	0.26***
1985-93 cohort	0.78***	0.82***	0.54***	0.51***
I-II Service*1957-70		-0.11	-0.10	-0.10
I-II Service*1980-84		-0.00	0.03	0.03
I-II Service*1985-93		-0.19	-0.01	0.03
III-V Intermediate*1957-70		-0.54***	-0.52***	-0.53***
III-V Intermediate*1980-84		-0.08	0.09	-0.08
III-V Intermediate*1985-93		0.20*	0.23*	0.28**
IVab Self-employed & small employers*1957-70		-0.44***	-0.44***	-0.45***
IVab Self-employed & small employers*1980-84		-0.13	-0.06	-0.06
IVab Self-employed & small employers*1985-93		0.07	0.24	0.27
IVc-VIIb Agriculture*1957-70		0.08	0.07	0.08
IVc-VIIb Agriculture*1980-84		-0.33***	-0.33***	-0.33**
IVc-VIIb Agriculture*1985-93		-0.16	0.20	0.23
No information about class*1957-70		-0.46***	-0.48***	-0.48***
No information about class*1980-84		-0.55***	-0.53***	-0.52***
No information about class*1985-93		-0.40***	-0.26***	-0.20*
Immigrant status			0.83***	0.47***
Single-headed family (death)			0.28***	0.39***
Single-headed family (other)			0.37***	0.45***
Missing family			-0.49	0.48
Women PRH				-0.15***
Immigrant*1980-93				0.41**
N	103,322	103,322	103,322	103,322
LL	-44302.75	-44173.30	-43905.43	-43890.39
AIC	88623.50	88394.61	87866.86	87840.78
BIC	88709.41	88623.70	88134.13	88127.15

Note: Models are estimated without constant, in order to control for the dummies and interactions.

* $p < .1$; ** $p < .05$; *** $p < .01$. Robust standard errors.

Source: Spanish LFS, second quarter (1977-2012).