Available online at www.sciencedirect.com

ScienceDirect

Research in Social Stratification and Mobility 30 (2012) 159–174

Research in Social Stratification and Mobility

http://elsevier.com/locate/rssm

Unequal transitions: Selection bias and the compensatory effect of social background in educational careers

Fabrizio Bernardi *

SPS Department, EUI, Via dei Roccettini 9, 50014 Fiesole (Fi), Italy

Received 17 December 2010; received in revised form 19 April 2011; accepted 29 May 2011

Abstract

Previous studies have shown that social background inequality differs among educational transitions and it is stronger for those transitions that involve a higher risk of social demotion. This paper focuses on two processes that may account for part of the observed differences in social background inequality across educational transitions. First, it studies how the family of origin might compensate for a 'false step' in the early stage of young people's educational careers. This compensatory effect of social background can be described as the likelihood of having 'a second chance' for unsuccessful educational transitions. Second, it focuses on two unobserved factors that might potentially bias the effect of social background across educational transitions. These are the students' unobserved cognitive and non-cognitive skills and their unobserved anticipated choices of dropping out of the education system. Two issues – the compensatory effect of social background and selection bias in educational transitions – are addressed by estimating a probit model with sample selection for the transition to post-compulsory education in Spain.

Keywords: Educational transitions; Selection bias; Anticipated choice; Social class

1. Introduction

Previous studies have shown that social background inequality differs among educational transitions and that it is stronger for those transitions that involve a higher risk of social demotion (Breen & Jonsson, 2000). This article focuses on two processes that may account for the observed differences in social background inequality across educational transitions. First, it examines how the family of origin might take action in order to compensate for a 'false step' in the early stage of young people's educational careers. This compensatory effect of social background can be described as the likelihood of having 'a second chance' for further educational attainment in the case of a problematic situation. Problematic situations might include, for instance, the failure to complete a given educational level on time, early placement in non-academic tracks or, more generally, the attainment of poor grades. Second, from a methodological point of view, the article explicitly addresses the issue of selection bias in educational transition models by estimating a probit model with sample selection and providing a formal explanation of the results (Cameron & Heckman, 1998; Holm & Jaeger 2011). In this respect, it investigates two unobserved factors that might potentially bias the effect of social background across educational transitions. These unobserved factors are the students'

* Corresponding author. Tel.: +39 055 4685 316; fax: +39 055 4685 201.
E-mail address: fabrizio.bernardi@eui.eu

0276-5624/$ – see front matter © 2011 International Sociological Association Research Committee 28 on Social Stratification and Mobility. Published by Elsevier Ltd. All rights reserved.
doi:10.1016/j.rssm.2011.05.005

cognitive and non-cognitive skills and their anticipated choices of dropping out of the education system (Erikson & Jonsson, 1996).

The empirical part of this article is based on an analysis of the transition to post-compulsory education (henceforth CE) in Spain, a country in which failure at the level of compulsory education is common. Only half of the students of a given birth cohort manage to complete the four years of compulsory lower secondary education on time, while the other half fail at least one course. This peculiar feature of the Spanish education system enables us to study both the compensatory effect of social background and possible selection biases in educational transitions. More precisely, it allows us to examine how students from different social origins respond to a previous failure and, in particular, whether one observes class differences in the likelihood of dropping out instead of having a second chance and staying in school to complete CE after the age of compulsory education has been reached. Besides these general mechanisms, the analysis of the transition to post-compulsory education can also shed light on the mechanisms underlying the exceptionally high rate of early school leavers in Spain. Currently in Spain the proportion of early school leavers (population aged 18–24 with only secondary education or less) is above 30%, three times higher than the recommended benchmarks set by the EU Commission. Previous research on Spain has also highlighted that although the inequality in educational outcome by social background has declined over time, the transition to post-compulsory education is still a critical threshold for the intergenerational transmission of inequality and those who stop at compulsory education are most likely to be unemployed or employed in unskilled occupations in the future (Ballarino, Bernardi, Schadee, & Requena, 2009; Bernardi & Garrido, 2008).

The structure of the paper is as follows. In the next section, the setting and logic of the empirical analysis is explained in more detail. Section 3 discusses the theoretical arguments relevant to the central concerns of the paper. In Section 4, variables and statistical models are presented. Section 5 presents the empirical results and Section 6 contains the conclusions.

2. The Spanish education system and the process under analysis

For the purpose of this paper three key characteristics of the Spanish education system are relevant.[1] First, children start primary education in the year when they turn six years old, irrespective of their month of birth, and they are not allowed to skip a class. Therefore, the analysis of the educational attainment of a given birth cohort in a given year give us precise information on the educational progression of that cohort. Second, education is compulsory until age sixteen, but at that age a student might not have finished compulsory lower education. This is because at the end of each year at CE level, if a student does not pass three subjects, s/he must, in principle, retake the corresponding course.[2] The incidence of retaking is very high and about half of the students of a given birth cohort fail to complete one or more stages of CE on time. However, although the formal criteria for having to retake a course are set at national level, the application of the law differs from one Autonomous Community to the next. This is because the organization of the education system is decentralized and corresponds to the seventeen Autonomous Communities that make up the Spanish state. Some Autonomous Communities, notably Catalonia and the Basque country, have put in place special regulations to facilitate progression and to reduce the number of failures.[3] As a result, there is huge geographical variation in retaking rates. The incidence of failure ranges from 29 per cent in the Basque country to almost double that figure (56 per cent) in Extremadura (see Table B.1 in Appendix B). These differences in retaking rates do not to reflect differences in students' average academic ability across Autonomous Communities, as measured in the PISA 2006 test (Carabaña, 2010).

[1] For a more in-depth description of the Spanish education system and educational reforms in Spain since the 1970s, see Calero (2005).

[2] This criterion for retaking was established by Ley Organica de Calidad de la Enseñanza (Organic Law of the Quality of Education; LOCE) issued by the Popular Party in 2002. When the Socialist Party came to power in 2004 it retained the criterion for retaking. A new reform of the education system was then promoted by the Socialist government in 2006. The new law (*Ley Orgánica de Educación*; LOE) partly relaxes the criterion for retaking since now if a student fails three subject s/he can still move onto the next course if his/her teachers agree. These new rules have come into effect in the academic year 2007–2008 which is not considered in the present analysis.

[3] It is illustrative that, in 2008, five Autonomous Communities – Aragon, Asturias, Cantabria, Catalonia and Galicia – had special regulations that counted multiple failures in the same subject in different years as a single failure. For instance, if a student failed Math in the first year and Math and Spanish in the second year, this would count for two failures only (one combined failure in Math and one in Spanish); the student could then be allowed to move on to the next year. In other Autonomous Communities this same case would be counted as three failures (first year Math, second year Math and second year Spanish); the student would have to retake. In the five more permissive Autonomous Communities during the years under analysis, the proportion of students failing to complete CE on time is below the national average.