

## **The effects of Spanish educational policies on school failure rates at the regional level**

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## **The effects of Spanish educational policies on school failure rates at the regional level**

A number of recent studies have singled out serious problems of the Spanish educational system, especially those related to students' low performance compared to most European Union and OECD countries. Thus, in international comparisons, Spain has higher levels of school failure and school dropout, lower levels of skills and results in tests as well as in graduation in secondary education (OECD, 2004, 2006; MEC, 2006).

In order to improve students' performance governments have approved and implemented a great number of educational laws (we believe that there has been a period of over-legislation with six organic laws since 1985). These reforms from central government (the one with responsibilities on defining the educational system) universalized and expanded the length of compulsory education (from 14 to 16 years old) and reform the educational system to increase its quality. However, effects on students' performance are not satisfactory. In addition, these reforms have been accompanied by an intensive process of decentralization of administrative competences to regional governments (or Autonomous Communities, ACs), which in 2003 administered most of the educational budget (around 90%).

Performance problems are not equally distributed between the 17 ACs (MEC, 2006). Among other factors, observed differences are explained by specific characteristics of each AC (level of economic development, labour market characteristics, rural/urban distribution, rates of immigration, etc.) However, regional governments' educational policy might also have an incidence on educational results.

Therefore, the main goal of the present study is to examine the effects of educational policy instruments on educational performance at a regional level to find out which seem to be more effective. Specifically, we consider the effects of three policy instruments (educational expenditure per pupil, class-size and pupil-teacher ratio) on three educational outcomes related to academic failure: regional dropout rates at the end of compulsory education (at age 16), the percentage of students required to repeat one

academic year or more (at age 15), and the percentage of students who failed the university entrance examinations (at age 18).

As Hanushek (2003) shows, empirical evidence is not conclusive about the effectiveness of educational policies (including the three policies considered in this paper) on student performance. The reasons for this are twofold: first, the results are highly sensitive to the variables considered as well as to the econometric method implemented; second, policy effectiveness depends on local particularities (in terms of legislation, administration, etc.).

It should be stressed that this study is carried out in a period of disruption for Spanish education as, in the first half of 2006, a new law governing the educational system (with the exception of the universities, which are to be reformed during 2007) was passed. As indicated before, this coincided with the publication of international indicators revealing Spain's poor educational standing among fellow European Union and OECD countries with also significant differences between Spain's ACs. This is the first study to examine such data at the regional level in order to analyze the effects of those educational policy instruments on school failure. Likewise, we should highlight the fact that the paper generates a new variable for the regional expenditure per pupil.

In conducting the empirical analysis, a misspecification bias appears when omitting regional characteristics that are related to either educational policies or environmental features. The latter is exacerbated when working with aggregated samples and can produce misleading results because of the aggregation bias (Hanushek, 2003). Our aim is to avoid the omission of key environmental and regional variables and so we estimate panel data fixed effects in order that we might partially capture unobserved heterogeneity. Specifically, we use a generalized linear model as dependent variables range between 0-1. In addition, the analysis takes into consideration the endogeneity problem that may arise between educational outcomes and instruments.

Our results show to the presence of small statistically significant effects of increasing regional expenditure in education on reducing dropout at secondary or university entrance exams; however, rather relevant significant effects arise from reducing class-size or pupil-teacher ratio on diminishing dropout rates at secondary education.

However, these two instruments also increase repetition rates. The consequences for policymakers are quite simple: educational policies addressed to give further attention on pupils (reducing class-size or the pupil-teacher ratio) have higher effects on dropout and repetition rates than educational expenditure. In addition, none of the instruments considered was observed to be useful to reduce the dropout gender gap (that is lower for women).