Chapter 10
Early School Dropout in Spain: Evolution During the Great Recession

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10.1 Introduction

There is a general consensus among labour economists regarding the growing importance of skills and competencies in modern economies (OECD 2015), a situation that can be attributed to such factors as technology shifts, openness to trade and changes in the production structure (Abrassart 2015). Various channels are available for acquiring the skills demanded by the labour market, but formal education is probably the most important.[1]

Although workers with low educational endowments had poor labour market prospects before the Great Recession, their situation is now even more precarious, as low-skilled workers find themselves among the worst affected by the crisis (Anghel et al. 2014). In this context, reducing early school dropout rates is crucial for enhancing economic growth and social cohesion.[2]

One of the Europe 2020 Strategy headline indicators monitors the evolution of early school dropout rates and sets itself the target of reducing them to below 10% (European Commission 2014). Although the mean EU-28 dropout rate fell from 13.9 to 11% between 2010 and 2015, there is considerable variation across Europe. Thus, while the percentage of early school and training leavers in 2015 was already below 10% in 17 EU countries, the rate was still above 19% in such countries as

[1] However, the importance of the signalling role and the human capital theory of education are not easily disentangled here (Calero and Choi 2017).

[2] This chapter focuses specifically on monetary returns to education. However, nonmonetary returns to education, such as higher participation in democracy, better use of public services, lower reliance on social benefits, etc., may well surpass the former (Hanushek and Kimko 2000; Oreopoulos and Salvanes 2011). Gili et al. (2012), for example, show that more highly educated individuals were at less risk of mental health problems during the economic crisis.

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Romania and Malta. However, it was Spain that led this ranking: 20% of their 18- to 24-year-old population had completed at most lower secondary education and were not in education or training. Against a backdrop of economic crisis and high youth unemployment, early school leaving is arguably the most critical problem faced by the education systems of countries such as Spain.

Spain provides us therefore with a prime case for understanding the links between the educational attainment, competencies and labour market conditions of young, low-skilled workers. An analysis of the evolution, causes and consequences of early school leaving in Spain should enable us to identify the reforms needed in the education system and in the labour market to address this situation. However, the effectiveness of these policy reforms will be conditioned by the evolution of a set of labour demand factors and, as such, policymakers cannot simply consider early school leaving as being entirely attributable to the weaknesses of the education system. In this chapter we provide a descriptive analysis of a set of factors behind the high Spanish early school dropout rates.

The rest of this chapter is structured as follows: Sect. 10.2 provides an overview of the evolution of early school leaving in Spain and its determinants. The labour market situation of Spain's early school leavers is analysed in Sects. 10.3 and 10.4 discussing different policies aiming at tackling the problem.

10.2 Early School Dropout in Spain

In recent decades, the educational endowment of the Spanish population has increased at a rapid pace. Between 1970 and 2014, the average number of years of schooling[3] in Spain rose from 4.7 to 9.8 and the number of individuals with tertiary education is also high – Spain meets the EU-2020 target for tertiary education attainment. However, in 2015, the share of the population that had completed at most lower secondary education was still above 50%. While here there is a clear generation gap (the figure stands at around 70% for people over the age of 55), the proportion of the population aged 18–24 with at most lower secondary education and not in further education or training is still high (Fig. 10.1).

The high early school leaving rates recorded during the last decade led the European Commission to establish a higher specific threshold for Spain (15%) and, in relation to that threshold, there has been a marked reduction since 2008. Indeed, since the beginning of the century, the early school leaving rates in Spain seem to have followed a procyclical pattern: the number of early leavers increasing during periods of economic growth and falling during periods of economic depression (Petrongolo and San Segundo 2002; Guio et al. 2016). Figure 10.1 also shows a

[3] Figures retrieved from the UNESCO Institute of Statistics and referring to the mean number of years of schooling at primary school level or higher for the population over the age of 25. Years spent repeating an academic year are not considered in these figures.

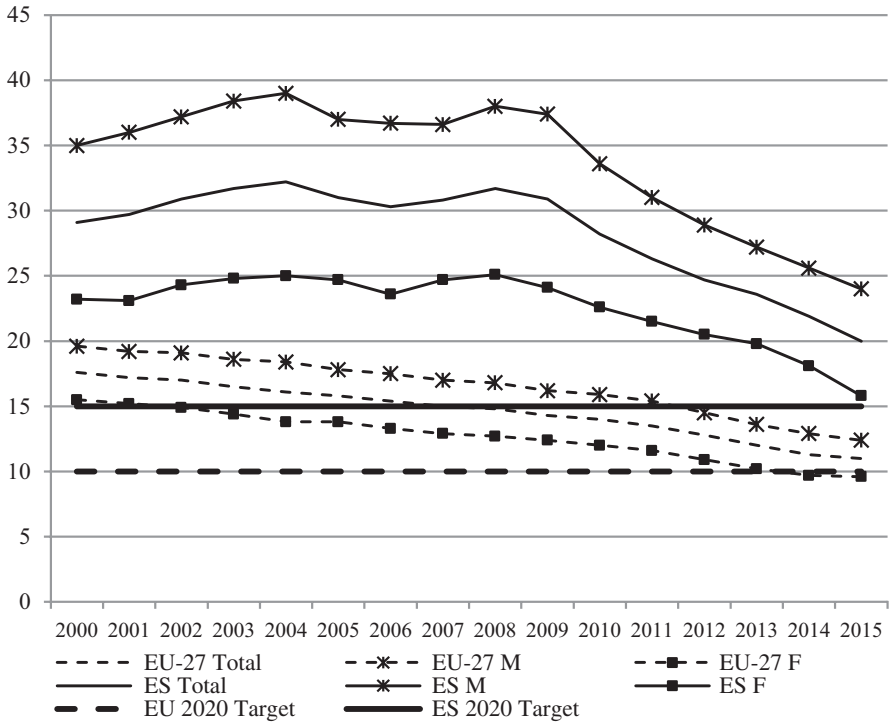

Fig. 10.1 Early education and training leavers by sex in Spain and EU-27 (%) between 2000 and 2015 (Source: Eurostat)

remarkable gender gap in the early school leaving rates, with the rates for men being consistently higher than those for women throughout the period.

Likewise, there are marked differences across Spain's regions (*Comunidades Autónomas*).[4] In 2015, the early school leaving rates were above the national average in all the Mediterranean Arch regions (most notably in Andalusia and the Balearic Islands – over 25%), where the tourism sector is especially important. In contrast, some of the northern regions, such as Asturias, recorded rates below 10%. Despite some fluctuation in these figures, regional differences have been largely maintained over the last two decades. These patterns would seem to strengthen the plausibility of the labour demand hypothesis, that is, that students drop out of education because of the relative ease of finding low-skilled jobs, given that the weight

[4] Spain is divided into 17 *Comunidades Autónomas*. Apart from other differences, these regions are heterogeneous in size (ranging from 4,992 to 94,000 km^2 – Balearic Islands and Castille-León, respectively), population (over 8 million in Andalusia, less than 320,000 in La Rioja), population density (809 inhabitants per km^2 in Madrid, 26.4 in Castille-La Mancha), GDP per capita (over 31,000 euros in Madrid, below 16,000 in Extremadura) and economic structure. All the figures refer to year 2016. The educational system has also been decentralised at the regional level.

of the tourism and construction sectors in relation to total activity is higher in the *Comunidades Autónomas* where early school leaving rates are highest.

The lack of longitudinal data limits our possibilities of analysing directly the causes of early school leaving in Spain. However, various studies have described the determinants of the risk of school failure and of early school dropout in Spain by drawing on international assessments (Choi and Calero 2013a). These analyses distinguish between individual, household and school level factors that affect the risk of early school dropout. Among the individual factors, they report that boys, students with learning difficulties – especially those who have repeated at least one school year – and first-generation immigrants are at greater risk of dropping out of school. Pre-school education seems to lower this risk. Additionally, students belonging to certain ethnic minorities (O'Hanlon 2016) and students with disabilities (Choi and Calero 2013b) are also at greater risk of dropping out.

Among the household level factors, the educational attainment of parents and the family's socio-economic and cultural environment are among the stronger determinants of early school dropout. The labour market situation of parents and their socio-professional category are also linked to the risk of dropout. This risk is also greater for children from monoparental families.

Some studies, including Guio and Choi (2014), highlight the importance of peer characteristics on the risk of early school dropout. In most analyses conducted in Spain, school ownership ceases to be a relevant determinant of academic achievement once the socio-economic background of the schools is taken into account (Cordero et al. 2013). Most of these studies do not identify a school's material resources as being a strong determinant of early school leaving.

Certain institutional characteristics of Spain's education system may also hinder a reduction in early school leaving rates. First, Spanish students can only access post-compulsory educational programmes – vocational or academic – if they obtain a lower secondary education (ESO) certificate. This requirement in itself creates something of an impasse in the education system, as students have to pass virtually all the subjects[5] in year 10 (compulsory education in Spain comprises 6 years of primary school and four of lower secondary education) in order to be able to continue studying. In practice, students who do not pass the required number of subjects are obliged to repeat the year. This rigidity means that students who might otherwise continue their education in the vocational track of the system are retained in the academic track. As a result, some inevitably dropout altogether. In an attempt to increase the system's flexibility, Spain's latest Education Act – passed in 2013 – advanced tracking between the vocational and academic paths by a year (from the age of 16 to 15).

Second, grade retention is widely applied in Spain. In 2014, 36.4% of Spanish students had repeated at least one school year by the age of 15. Recent studies stress the ineffectiveness and negative impact of grade retention on academic achievement and on students remaining in education (Allen et al. 2009).

[5] Students may fail up to two subjects in order to obtain their certificate.

Third, a final characteristic of Spain's education system that has been identified as a possible cause of early school leaving is its relative difficulty in academic terms (see Martínez 2009), given that there is something of an imbalance between the percentage of Spanish students who fail to complete ESO by the age of 16, and the percentage of Spanish low performers on the OECD's Programme for International Student Assessment (PISA) tests (taken at ages 15/16). This argument is controversial, however, and while it seemed appealing in 2009 when 23.7% of Spanish students scored below level 2[6] on the PISA-2009 mathematical competencies assessment but around 27.9% of students left ESO without obtaining their certificate, the respective percentages in year 2012 were 23.6 and 22%. These results seem to highlight the fact that changes in educational decisions may well be linked to factors that are external to the education system (note that the competencies of Spanish students – as measured by PISA – remained relatively constant across the period), such as shifts in labour market conditions, which sharply reduce the opportunity costs of staying on at school.

10.3 Early School Dropout and Labour Market Conditions in Spain

The most distinctive features of the educational structure of the Spanish population are the large number of individuals that have completed at most lower secondary education and the small number of workers that have completed at most upper secondary education or post-compulsory non-tertiary education[7] (Table 10.1). In 2015, the percentage of 25- to 64-year-olds in Spain that had completed at most lower secondary education nearly doubled that of the OECD average. More worrying was that these figures remained constant for the 25- to 34-year-old cohort across the period 2005–2015. Indeed, the educational structure of the youngest cohort included in Table 10.1 (25- to 34-year-olds) showed little change in Spain across the decade, in stark contrast to the changes experienced at the OECD level.

Two principal findings need to be highlighted at the next level of education: first, there is a 17-percentage point gap between the proportion of young Spanish individuals completing at most upper secondary education or post-compulsory non-tertiary education and the OECD average. Second, according to the OECD (2016), the distribution by programme orientation is different in Spain, where only 45% of 25- to 34-year-olds that finished at most upper secondary education followed a vocational programme (vs. 59% on average for the OECD).

The changes experienced by the labour market since the beginning of the Great Recession have had an especially negative impact on the labour market access of the

[6] PISA level 2 is usually considered to correspond to the degree of mathematical competencies needed to participate effectively in life as a citizen and worker. A score below level 2 has been associated with a higher risk of early school dropout (Schleicher 2007).

[7] This pattern is commonly referred to as an "hourglass structure".

Table 10.1 Trends in educational attainment between 2005 and 2015 in Spain and the OECD, by age group

	Age group	25–64		25–34		55–64	
		2005 (%)	2015 (%)	2005 (%)	2015 (%)	2005 (%)	2015 (%)
Spain	Below upper secondary	51	43	35	34	74	59
	Upper secondary or post-secondary non-tertiary	21	22	24	25	11	18
	Tertiary education	29	35	41	41	14	23
OECD	Below upper secondary	29	23	21	16	43	32
	Upper secondary or post-secondary non-tertiary	45	43	48	42	38	42
	Tertiary education	27	35	32	42	20	26

Source: Based on OECD data

Table 10.2 Trends in employment rates between 2005 and 2015 in Spain and the OECD, by age groups and educational attainment

	Age group	25–64		25–34		55–64	
		2005 (%)	2015 (%)	2005 (%)	2015 (%)	2005 (%)	2015 (%)
Spain	Below upper secondary	59	52	72	56	38	37
	Upper secondary or post-secondary non-tertiary	75	68	78	66	51	55
	Tertiary education	83	79	82	75	65	66
OECD	Below upper secondary	56	56	61	58	38	43
	Upper secondary or post-secondary non-tertiary	75	74	77	76	50	57
	Tertiary education	84	84	84	83	65	71

Source: Based on OECD data. Employment rate: percentage of employed adults among all adults in the same age group

least educated workers (see Table 10.2). Employment rates in Spain in 2015 were below the OECD average for all education levels, whereas this had not been the case in 2005. The largest drop was observed for those with the lowest levels of education. Indeed, the slump in employment rates between 2005 and 2015 was especially marked among young, low-skilled workers (where rates fell from 72% – well above the OECD average – in 2005 to 56% in 2015). Moreover, the probability of a low-educated Spaniard being a full-time, year-round earner was especially low: in 2015, the probability was barely half that of 25- to 64-year-olds that had completed tertiary education (33% vs. 63%). Finally, Spain is one of the European countries with the highest in-work at-risk-of-poverty rates (13% in 2014), that is, workers whose income does not provide them with sufficient revenue to escape the risk of poverty (European Commission 2016). Inevitably, the incidence of in-work at-risk-of-poverty is higher among the low educated. All in all, the risk of poverty and social exclusion among the low educated has increased during the crisis.

A further factor for understanding the position of low-educated individuals in the labour market is their lower skill levels (Hanushek et al. 2015). The OECD's Programme for the International Assessment of Adult Competencies (PIAAC) shows that low levels of education are strongly correlated with low levels of numeracy, literacy and problem-solving skills. Not surprisingly, in the 24 countries assessed in the first round of PIAAC (conducted in 2011 and 2012), the employment rates and salaries of high-skilled workers were consistently higher. Although the degree of correspondence between education and skills is not homogeneous across countries (Calero and Choi 2017), recent evidence seems to support the view that education not only improves labour market conditions through its signalling function but also through its role as a channel for acquiring skills. These skills can be acquired via different channels: at home, in formal and informal education, or at work. Thus, achieving only a low level of education should not necessarily condemn an individual to a low level of skills. However, low-educated workers have fewer labour market opportunities and are usually employed in jobs that involve the performance of simple tasks and, consequently, the acquisition of new skills is difficult. Eurostat data consistently report that highly educated workers, apart from enjoying enhanced access to the labour market – which prevents or delays the loss of skills – receive more on-the-job training than is received by low-educated workers. This situation progressively increases the skill gap by level of education.

Apart from higher levels of skills and productivity and the signalling role of education, the relatively better position enjoyed by highly educated workers during and after the Great Recession in Spain can be attributed to the combination of, at least, two phenomena. On the one hand, and as discussed in the next section, the destruction of jobs for low-educated workers was especially intense, above all in the construction sector; on the other hand, the incidence of overeducation is high in Spain and varies across occupations (Pascual Sáez et al. 2016). During the 2009–2012 period, the largest shares of overeducated workers were found among those engaged in elementary occupations and among service workers and shop and market sales workers. Indeed, Nieto and Ramos (in press) show that Spain is among the countries with the highest rates of overeducation and report that the wage penalty of overeducation is, in part, linked to the lower skills levels of overeducated workers.

Thus, in Spain, tertiary education has operated as an insurance against exclusion from the labour market, resulting in a socially suboptimal situation in which individuals choose to obtain a university degree, even when there is no demand for the specific programme they follow, as a strategy for reducing the risk of unemployment. This situation can be analysed in the framework of the prisoner's dilemma, in which rational individual decisions lead to a suboptimal social equilibrium, provided there is no consistent recovery in labour demand.

Naturally, this combination of weak labour market demand, a large stock of highly educated workers and the occupation of highly educated workers in low-skilled jobs has depressed the economic returns to education in Spain, which are below those of the OECD average (OECD 2016). If we focus solely on low-educated, full-time workers, their wage gap with full-time workers with upper secondary education increased during the 2004–2013 period. Here, in order to obtain a

complete picture of the negative situation in which low-educated workers find themselves in the labour market, we should not forget their limited probabilities of actually obtaining full-time employment. This situation is even more acute for women, given that the gender wage gap in Spain is greater among the low educated.

In the light of the negative labour market situation in Spain for those who choose to quit the education system before finishing their post-compulsory studies, the critical question is what makes them take this decision. Two non-exclusive answers may be a lack of information among Spanish families and the high costs of education, including in this case the direct, indirect and opportunity costs of education.

The lack of information hypothesis may indeed apply to the Spanish case. Choi and Calero (2013a) and Guio and Choi (2014) have shown that the socio-economic characteristics of a student's household have a marked influence on the risk of his or her dropping out. These characteristics – especially, the parents' educational level – may operate through their ability to offer a better understanding of the long-term effects of education. Should this be the case, then there is a need for the introduction of better family and student educational orientation programmes. However, family background may also affect a student's educational choices via the costs of education.

Education in Spain is compulsory until the age of 16. The direct costs of education, i.e. those linked strictly to educational services are relatively low, given that they are provided free of charge at public and public-funded, private schools. During their compulsory schooling, students are usually enrolled in schools close to their home and so any indirect costs are low.[8] However, educational costs become relevant in post-compulsory levels. Upper secondary education – academic or vocational – is free in public institutions, but indirect costs may increase. However, the main cost that has to be computed at this stage is that of the opportunity cost, that is, the cost associated with remaining in education. This cost may be of greater significance to households with a low socio-economic background and, indeed, it was especially high in Spain during the period 2000–2007 when the total number of workplaces increased by a third (Table 10.3). Around 55% of these new workplaces were represented by associate professionals, service and sales workers and elementary occupations, and they were linked to the Spanish real estate bubble. For a decade, these exceptional economic circumstances helped mask the trend occurring in the rest of the developed world, namely, the gradual destruction of low value-added employment affecting low-skilled workers.

Panel B in Table 10.3 shows a decline in the demand for low-skilled workers. This fall in demand is clearly sharper than that for skilled workers across all occupations – with the exception of service and sales workers – since the beginning of the Great Recession. More than 2 million workplaces occupied by low-educated workers in 2000 had been destroyed by 2015. It might be argued that, as the economic recovery gathers pace, some overeducated workers will quit their current jobs and

[8] In practice, many public-funded, private schools charge fees. Indirect costs also vary widely across schools.

Table 10.3 Growth rates of employment by occupation and educational level in Spain (%) between 2000 and 2015

	A. Total					B. ISCED 0–2				
				2000–2015					2000–2015	
Occupation	00–07%	08–12%	13–15%	%	×1.000	00–07%	08–12%	13–15%	%	×1.000
1	25.1	−44.8	−3.6	−36.1	−437.1	−5.2	−71.6	−4.2	−76.5	−468.6
2	45.3	14.0	3.1	75.3	1338.7	27.3	−57.5	261.1	−6.5	−0.9
3	67.0	−23.5	6.5	33.8	500.6	19.6	−16.0	−0.9	−17.8	−52
4	26.7	−3.5	7.3	20.8	315.8	13.1	−34.4	4.9	−29.5	−120.5
5	44.0	17.9	4.5	83.2	1833	19.5	14.0	−2.7	35.1	447.6
6	−27.2	−7.8	−2.8	−37.1	−258.4	−36.9	−16.9	−4.5	−50.7	−312.9
7	28.6	−36.9	6.2	−23.9	−625.4	11.8	−44.4	4.0	−44.7	−864.9
8	15.3	−29.3	4.4	−19.4	−318	−1.0	−28.8	0.2	−35.6	−440.0
9	38.2	−23.3	3.7	3.1	67.7	17.8	−25.5	2.5	−16.4	−301.1
10	10.0	0.0	3.0	11.3	9.1	53.1	−3.7	−0.4	25.1	4.5
Total	33.3	−13.9	4.2	15.7	2425.8	8.0	−25.9	0.5	−25.6	−2108.8

(continued)

Table 10.3 (continued)

	C. ISCED 3–4					D. ISCED 5–8				
				2000–2015					2000–2015	
Occupation	00–07%	08–12%	13–15%	%	×1.000	00–07%	08–12%	13–15%	%	×1.000
				−43.7	−121.2				47.7	152.8
2	19.4	8.7	9.3	5.5	2.9	46.3	14.5	2.7	78.1	1336.7
3	55.4	−24.5	9.8	22.4	105.6	93.9	−24.7	6.5	62.4	446.9
4	22.3	−7.0	2.8	1.6	9.2	41.6	19.0	10.9	78.7	427.1
5	77.4	14.8	7.0	128.4	779.8	78.3	35.0	16.4	189.0	605.7
6	39.5	14.3	−1.2	53.5	29.7	64.8	46.8	5.8	100.4	24.8
7	92.9	−29.1	13.8	37.8	140.7	55.9	−16.0	3.3	31.8	98.8
8	69.5	−28.9	10.6	31.5	80.4	58.0	−32.4	13.4	28.3	41.5
9	156.5	−19.3	6.6	114.2	283.6	95.9	−15.1	5.8	62.9	85.0
10	10.1	2.3	19.0	21.8	6.5	−13.3	1.2	−9.1	−5.8	−1.9
Total	64.9	−14.1	7.0	44.9	1317.2	60.4	1.3	5.9	75.5	3217.5

Source: Based on Eurostat data

Note: The last column for each educational subgroup indicates the absolute number of workplaces created/destroyed during the period 2000–2015. Occupation codes: (1) managers; (2) professionals; (3) technicians and associate professionals; (4) clerical support workers; (5) service and sales workers; (6) skilled agricultural, forestry and fishery workers; (7) craft and related trades workers; (8) plant and machine operators and assemblers; (9) elementary occupations; (10) armed forces occupations

allow unemployed, low-skilled workers to take their places. However, technology change, processes of labour mechanisation and the improbability of a new real estate bubble occurring in the next decade mean that many of the low-skilled jobs existing before 2008 are unlikely to be regenerated. Indeed, in addition to high unemployment rates, there has been a concentration of the occupations in which Spain's low-skilled workers are able to find employment. In 2015, 71% of low-skilled workers in Spain were employed in one of the following three occupational groups: service and sales workers, craft and related trades workers and elementary occupations. The comparable figure in 2000 was 10 points lower at 61%. As explained in the previous section, the early school dropout rates remained constant throughout the period 2000–2007 but fell in the following years, given the high rates of unemployment – above all among young people with a low educational endowment.

10.4 Tackling Early School Dropout in a Changing Environment

Spain faces two challenges if it hopes to address its historically high early school leaving rates: first, reducing the number of teenagers that drop out without completing at least post-compulsory secondary education; and, second, improving the labour market situation of a high proportion of low-skilled adults. The main aim, in both cases, is raising the skills attainment of the low-skilled, either through formal education, informal education or on-the-job training. Below we consider a range of measures addressed to tackling just these problems.

In facing up to the first challenge, educational reforms may be effective in reducing the early school leaving rates. An immediate measure required is that of increasing the flexibility of the educational system so that students are not caught between educational levels. The 2013 reform made some progress in that direction by advancing the choice that has to be made between following an academic or vocational path by one school year and by eliminating the need to obtaining a lower secondary school certificate before enrolling on vocational study courses. Closely related to this is the replacement of the current grade retention system with alternative, more individualised measures. If designed well, this reform should boost student motivation and performance and, so, reduce their disengagement.

A third policy reform would see measures introduced to increase the quality of vocational studies. Currently, the proportion of students in Spain that opt for the vocational track is comparatively low and many do so as a means to gain entry to university. Increasing the quality of vocational studies should help change the current opinion of vocational education, often seen as the second-best option catering for the more limited students.

Reducing both the direct and indirect costs of studying also needs to be considered. Expanding student grant programmes and implementing conditional transfer

programmes may reduce school dropout associated with purely socio-economic criteria. For example, in 2009, the regional government of Andalusia introduced the *Becas 6000* programme, whereby students from low-income families that opt to take post-compulsory, academic or vocational secondary studies receive 6000 euros each school year. Recent assessments seem to confirm the programme's effectiveness (Río and Jiménez 2014).

Finally, as most early school dropout decisions appear to be based on incomplete information, the Spanish educational authorities need to intervene in, at least, two ways. The soft approach would see the introduction of better educational orientation services in schools, whereas a more paternalistic approach might involve the extension of compulsory education to the age of 18, for example. These additional years of compulsory schooling could be provided as full-time schooling, as happens in Portugal, or part-time schooling, as in Germany and Belgium. In this latter case, extending compulsory part-time schooling requires close coordination with the labour market, as it typically necessitates the introduction of a dual education system that combines vocational education and in-firm apprenticeships. Such a system is barely developed in Spain today, where the share of vocational students enrolled on a dual programme stands at around 2% of the total. This can be accounted for by the fact that it has only recently been introduced (in operation since 2012) and by the predominantly small size of Spanish companies, a fact that hinders its further development (Echeverría 2016).

Creating a dual education system is closely linked to the second challenge – namely, improving the labour market prospects of the low-skilled. The development of a system that recognises skills and competencies[9] may enhance the labour market prospects of low-educated workers. However, this will only be effective if they can access jobs in which they are able to acquire new skills. But, as we have seen, this is unlikely in Spain, as low-educated workers are predominantly employed in elementary tasks and in low-added value service jobs. Against this backdrop, additional measures need to be introduced that can increase the skills levels of low-educated workers. Indeed, the fact that low-skilled workers cannot gain new skills in the labour market highlights the need to attract them back to formal education.

It is well documented that high-educated workers participate more frequently in L3 programmes (OECD 2013) and that public authorities need to work to increase the participation of low-educated workers in such activities. Increasing the supply of public-funded courses, introducing further fiscal incentives for companies to invest in the skills of their workers and conditioning the payment of public benefits to participation on training programmes are just some of the policies that have to be considered. All three policies – dual training systems, the introduction of L3 programmes and the recognition of competencies – call for an increase in cooperation

[9]The European Qualifications Framework and the European Skills Passport provide an effective framework for the development of a system for the recognition of skills and competencies at the national level. Member countries are expected to develop systems for the accreditation of non-formal and informal learning by 2018.

between public and private sectors. In the meantime, increasing the limited geographical mobility of Spanish workers should help reduce the unemployment gaps across regions.

To conclude, the combination of a period of intense economic growth followed by the Great Recession has highlighted the deep-rooted problems in Spain's education and production systems and the negative impact of what have been short-sighted decisions taken by the country's education authorities. While education reform may reduce early school dropout rates, the improvement of the labour market situation of low-skilled workers not only depends on an improvement in their skills and educational endowment but also on a commitment to increasing coordination between the educational and production systems. In short, there is a pressing need to improve the mechanisms available for (a) forecasting the future demand for competencies and skills[10]; (b) transferring this information and orienting young people and adult workers; and (c) increasing the permeability of the education system to the changing needs of the labour market.

References

Abrassart, A. (2015). Low-skill jobs or jobs for low-skilled workers? An analysis of the institutional determinants of the employment rates of low-educated workers in 19 OECD countries, 1997–2010. *Journal of European Social Policy, 25*(2), 225–241.

Allen, C. S., Chen, Q., Wilson, V. L., & Hughes, J. N. (2009). Quality of research design moderates effects of grade retention on achievement: A meta-analytic, multi-level analysis. *Educational Evaluation and Policy Analysis, 31*(4), 480–499.

Anghel, B., De la Rica, S., & Lacuesta, A. (2014). The impact of the great recession on employment polarization in Spain. *SERIEs, 5*, 143–171.

Calero, J., & Choi, Á. (2017). The distribution of skills among the European adult population and unemployment: A comparative approach. *European Journal of Education, 52*(3), 348–364.

Choi, Á., & Calero, J. (2013a). Determinantes del riesgo de fracaso escolar en España en PISA-2009 y propuestas de reforma. *Revista de Educación, 362*, 562–593. https://doi.org/10.4438/1988-592X RE-2013-362-242.

Choi, Á., & Calero, J. (2013b). The contribution of the population of disabled people to the attainment of Europe 2020 strategy headline targets. *Disability & Society, 28*(6), 853–873. https://doi.org/10.1080/09687599.2013.808573.

Cordero, J. M., Crespo, E., & Pedraja, F. (2013). Rendimiento educativo y determinantes según PISA: Una revisión de la literatura. *Revista de Educación, 362*, 273–297. https://doi.org/10.4438/1988-592X-RE-2011-362-161.

Echeverría, B. (2016). Transferencia del Sistema de FP Dual a España. *Revista de Investigación Educativa, 34*(2), 295–314.

European Commission. (2014). *Taking stock of the Europe 2020 strategy for smart, sustainable and inclusive growth, COM(2014) 130 final*. Brussels: European Commission.

European Commission. (2016). Poverty and social exclusion. *European Semester Thematic Fiche*, 2016/5.

[10] Initiatives such as the *Mid-term skills supply and demand forecast*, drawn up by CEDEFOP, are interesting steps in this direction.

Gili, M., Roca, M., Basu, S., McKee, M., & Stuckler, D. (2012). The mental health risks of economic crisis in Spain: Evidence from primary care centres, 2006 and 2010. *European Journal of Public Health, 23*(1), 103–108.

Guio, J. M., & Choi, Á. (2014). The evolution of school failure risk during the 2000 decade in Spain: Analysis of PISA results with a two-level logistic model. *Estudios Sobre Educación, 26*, 33–62.

Guio, J. M., Choi, Á., & Escardíbul, J. O. (2016). Labor markets, academic performance and the risk of early school dropout: Evidence from Spain. *IEB working paper*, 2016/9.

Hanushek, E. A., & Kimko, D. D. (2000). Schooling, labor-force quality, and the growth of nations. *American Economic Review, 90*(5), 1184–1208.

Hanushek, E. A., Schwerdt, G., Wiederhold, S., & Woessmann, L. (2015). Returns to skills around the world: Evidence from PIAAC. *European Economic Review, 73*, 103–130. https://doi.org/10.1016/j.euroecorev.2014.10.006.

Martínez, J. S. (2009). Fracaso escolar, PISA y la dificil ESO. *Revista de la Asociación de Sociología de la Educación, 2*(1), 56–85.

Nieto, S., & Ramos, R. (in press). Overeducation, skills and wage penalty: Evidence for Spain using PIAAC data. *Social Indicators Research*. https://doi.org/10.1007/s11205-016-1423-1.

O'Hanlon, C. (2016). The European struggle to educate and include Roma people: A critique of differences in policy and practice in western and eastern EU countries. *Social Inclusion, 4*(1), 1–10. https://doi.org/10.17645/si.v4i1.363.

OECD. (2013). *OECD skills outlook 2013: First results from the survey of adult skills*. Paris: OECD.

OECD. (2015). *OECD skills outlook 2015: Youth skills and employability*. Paris: OECD.

OECD. (2016). *Education at a glance 2016*. Paris: OECD.

Oreopoulos, P., & Salvanes, K. G. (2011). Priceless: The nonpecuniary benefits of schooling. *Journal of Economic Perspective, 25*(1), 159–184.

Pascual Sáez, M., González-Prieto, N., & Cantarero-Prieto, D. (2016). Is over-education a problem in Spain? Empirical evidence based on the EU-SILC. *Social Indicators Research, 126*(2), 617–632. https://doi.org/10.1007/s11205-015-0916-7.

Petrongolo, B., & San Segundo, M. J. (2002). Staying-on at school at 16: The impact of labor market conditions in Spain. *Economics of Education Review, 21*(4), 353–365.

Río, M. Á., & Jiménez, M. L. (2014). Examining Becas 6000: Scholar performance, practices, expectations and opportunities of families and students included in the program. *Revista Internacional de Sociología, 72*(3), 609–632.

Schleicher, A. (2007). Can competencies assessed by PISA be considered the fundamental school knowledge 15-year-olds should possess? *Journal of Educational Change, 8*(4), 349–357.