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# Youth unemployment in Spain: causes and solutions

Economic Analysis  
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## Youth unemployment in Spain: causes and solutions\*

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### Abstract

Youth unemployment in Spain is a persistent phenomenon that has worsened during the current crisis. And at the levels now being registered (46.1% in 2Q11), the measures to fight it can be delayed no longer. The evidence presented in this document indicates that there are serious shortcomings in Spain's education system and labour market, which explain the country's relatively high level of youth unemployment. The former include early school leaving and the imbalance between job supply and demand at the different education levels attained, which complicates youngsters' access to the labour market and has a negative impact on their professional career. While the most significant among the latter are the segmentation of the labour market and the ineffectiveness of active labour market policies. Therefore, extenuating youth unemployment requires coordinated action between education and the labour market through measures as the ones suggested in this document.

Keywords: Youth unemployment, early school leaving, overqualification, temporariness, active labour market policies..

JEL: C25, I21, J24, J64,

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# 1. Introduction

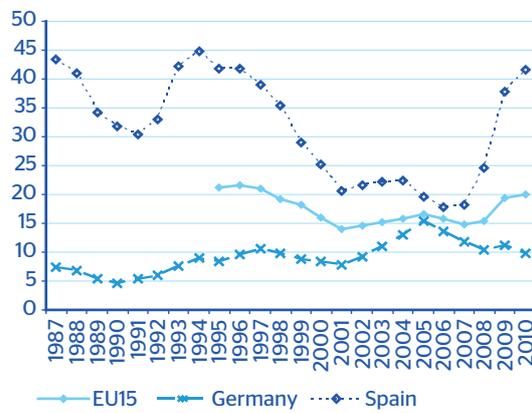
Youth unemployment is one of the main malfunctions in the Spanish labour market, impacting directly on the current and future economic situation of those unemployed youngsters and their environment and indirectly on the wider economy. While highlighted by the current crisis, it has been a problem in Spain for several decades. The unemployment rate among the active population under 25 years old has doubled that of the over-25s for the last four decades. In 2010, youth unemployment rate reached 41.6%, 2.3 times more than among the active population of over-25s (see Chart 1). And youth unemployment is not only high historically speaking, but also in a comparative perspective. Unemployment among Spain's under-25s has been 1.5 times that in the EU15 and 3.1 times that in Germany for the last 20 years. Having said this, the relationship in Spain between youth unemployment and unemployment among over-25s is similar to the EU15 average (see Chart 2), which suggests that the job insertion difficulties of youngsters compared to those of over-25s is similar in Spain to those in the rest of Europe, even though the causes are different, as we will see later.

The work conditions of the population, in general, and of youngsters, in particular, depend on the effectiveness of the education system. In an environment in which there is surplus job supply and increasingly demanding training requirements by companies, the likelihood of a youngster obtaining a stable and adequately remunerated job depend, among other things, on the quantity and quality of education received. However, the relationship between the education system and the job market is bidirectional. For example, when the probability of getting a job drops, or when the job vacancies for a student wishing to work fall short of his/her expectations, the opportunity cost of continuing to study falls, and this tends to have a negative impact on the percentage of youngsters entering the job market, thereby limiting the rise in the unemployment rate.

For this reason, we need to look for the causes of youth unemployment in Spain in the deficiencies not only of the education system but also of the labour market. Of the former, the most important are early school leaving and the polarisation of education. While the most significant among the latter are the segmentation of the labour market and the ineffectiveness of active employment policies. However, the deterioration of youth labour force participation by a discouragement effect, greater than that recorded in the EU15 average, has limited the rise in unemployment. In Section 2 of this Economic Observatory, we make a detailed analysis of the importance of each of these factors compared with other EU countries.

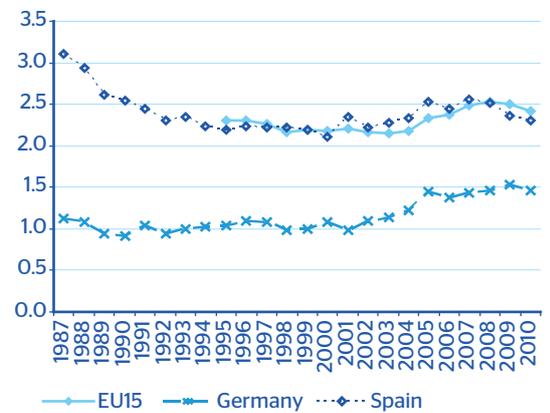
In order to quantify the impact of social and labor characteristics on the conditional probability of an individual being unemployed in Spain, we have used a discrete-choice model based on microdata from Spain's Active Population Survey (the EPA). Section 3 summarises the main results of this model, with a special focus on the importance of an individual's age and their level of education. The regression analysis confirms that the conditional probability of being unemployed decreases with an individual's age and educational attainment, particularly during a recessive cycle such as the current one. Age plays a particularly significant role during the early years of a person's working life, and this can be seen in the importance that employers give to work experience when taking their hiring decisions. The positive effect of education has also grown during the course of the current crisis, to the extent where higher secondary education or university graduates decrease a 20% the risk of being unemployed. And finally, Section 4 includes some recommendations regarding economic policy, based on the main conclusions of the analysis carried out in the previous sections.

Chart 1  
Youth unemployment rate  
(% of under-25s unemployed)



Source: BBVA Research based on Eurostat

Chart 2  
Relationship between  
unemployment levels based on age (Under-25s  
unemployment / Over-25s unemployment, %)



Source: BBVA Research based on Eurostat

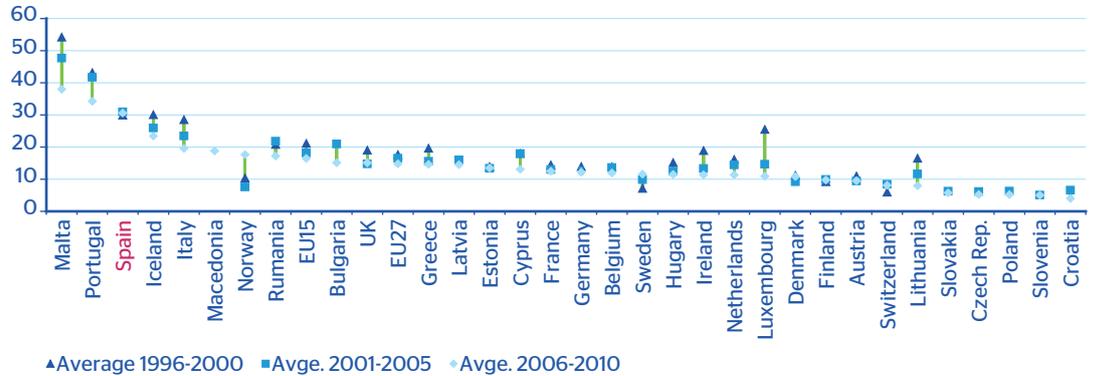
## 2. The interrelation between youth unemployment and the inefficiencies of the education system in comparative perspective

Education-related decisions and the evolution of the labour market are interlinked. The success of the transition process from the education system to the labour market is conditioned not only by the training received but also by the employment situation and outlook and by the quality of (worker-job) matching, all of which can have an impact on the decision to continue (or not) studying. This means that malfunctions that complicate the efficient transition from the education environment to the job environment will lead to increases in youth unemployment, the smaller the unemployment-triggered disincentive to join the labour force, the greater the increase. Below, we analyse some of the drivers behind youth unemployment.

### 2.1 Early school leaving

Spain stands out for its high early school leaving rate, which is taken to be the percentage of the population between 18 and 24 that has not completed higher secondary education (or second stage secondary education) and that is not participating in any kind of training. Chart 3 shows how Spain's rate (30.6%) is high compared with other EU27 member countries; only Malta (38.0%) and Portugal (34.3%) had higher rates during the five year period, 2005-2010. However, the most worrying part is not the figure itself, but its recurrent nature and limited relationship to the economic cycle over the last 15 years.

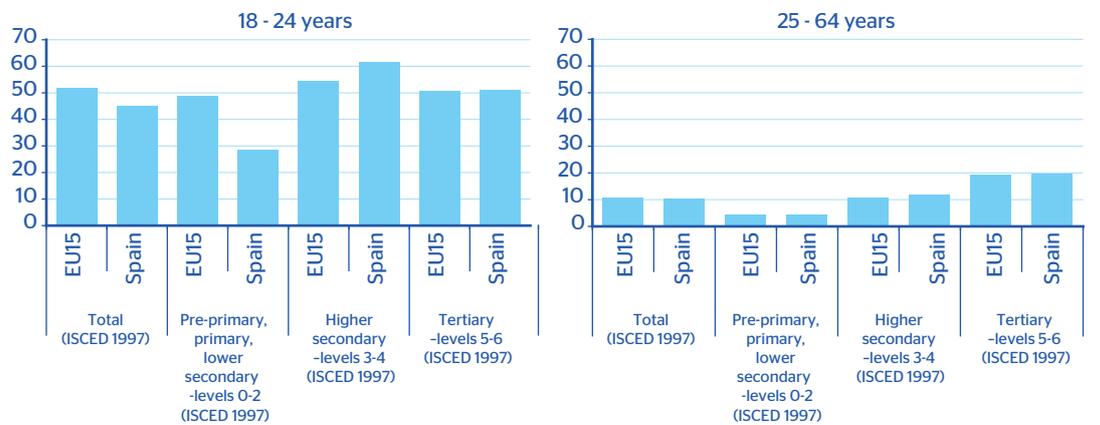
Chart 3  
Early school leaving rate (% of the population between 18 and 24 that failed to complete higher secondary education and that is not participating in any training)



Source: BBVA Research based on Eurostat

Leaving the education system before completing higher secondary education complicates the transition to the work environment for youngsters and has negative and persistent repercussions on their professional career, not only because they lack of knowledge considered as basic for insertion into the labour market<sup>1</sup>, but also because of their diminished propensity to participate in training activities throughout the course of their working life (see Chart 4).

Chart 4  
Participation in training activities (2005-2010) (% of population of each age groups and educational attainment)



Source: BBVA Research based on Eurostat

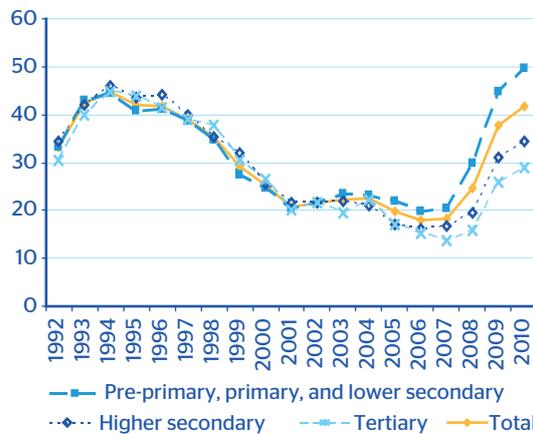
As Chart 5 demonstrates, the rate of youth unemployment varied very little between the different education levels until the end of the 90s. Then, during the first half of the last decade, while youngsters with higher secondary education and tertiary education experienced lower unemployment rates, those who had left the education system early saw their rate sticking above 19.5%. The effect of early school leaving on youth unemployment has become clear during the current crisis. For example, unemployment among youngsters with the lowest level of education rose almost 30 percentage points (pp) between 2007 and 2010 to 49.6%, 15.3pp more than among those who reached the second stage of secondary education and 20.7pp more than those who obtained a university degree<sup>2</sup>.

1: See OECD (2000).

2: Casquero, García and Navarro (2010) demonstrate that the level of education reached by a youngster is not only a factor that determines the probability of accessing a significant job (one lasting at least 6 months and involving at least 20 hours per week), but also the speed with which the incorporation into the labour market is achieved.

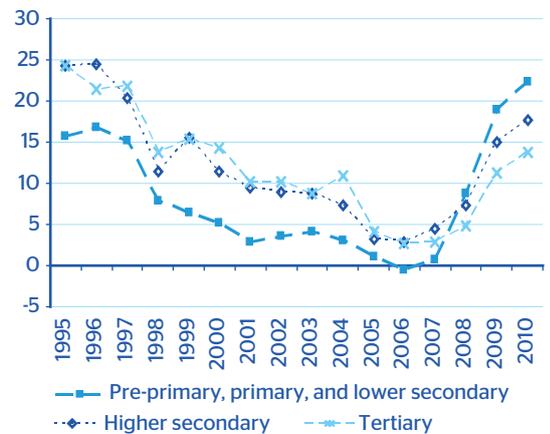
Chart 6 shows how the Spain / EU15 differential on youth unemployment by educational attainment has been continuously positive and across-the-board for the last 15 years. While the data appeared to suggest –as for the active population as a whole– a certain convergence during the preceding period of economic expansion, the deterioration in the job market during the crisis has confirmed that Spain's youth, particularly those with the lowest level of education, continue to have more difficulties accessing the labour market than their European peers. Overall, it is clear that education is playing a relevant role in determining the risk of a youngster becoming unemployed during the current crisis: the rise in the youth unemployment rate differential with the EU15 has been significantly greater among those with the lowest educational attainment (22.9pp between 2007-2010) than among those with a university degree (11.5pp).

Chart 5  
Spain: youth unemployment\*  
rate by educational attainment(%)



(\*) Under-25s  
Source: BBVA Research based on Eurostat

Chart 6  
Spain / EU15 differential for youth  
unemployment by educational attainment (pp)



(\*) Under-25s  
Source: BBVA Research based on Eurostat

## 2.2 Polarisation and education imbalance

The stubbornly high rate of early school leaving is not incompatible with the improved educational attainment of the new population cohorts registered during the last three decades<sup>3</sup>. However, the increase in training has been more focused on university education, and this has led to imbalances between job supply and demand at the different education levels which condition the youth unemployment evolution.

Charts 7, 8, and 9 show the breakdown of educational attainment by age in the European population in 2010. There are three interesting observations to be made from the Spanish data. Firstly, that the intergenerational improvement in Spain's educational attainment is in line with that for the EU15. For example, the percentage of the population in the 20-24 age bracket with first-stage secondary education or lower is 1.8 times lower than that in the 55-64 bracket, both in Spain and in the EU15.

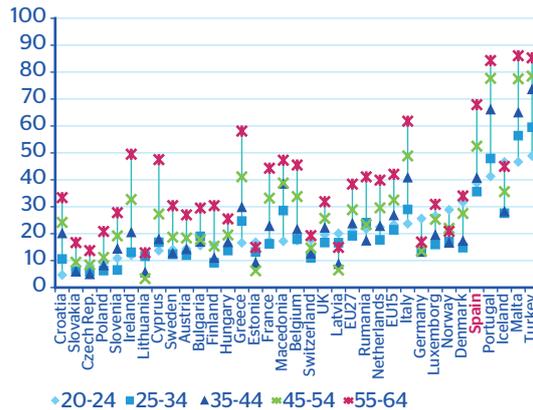
Secondly, that Spain's increase in human capital has not been sufficient to enable convergence with the surrounding countries, particularly when referring to the population with higher secondary education. Charts 7 and 8 show how Spain's youth continues to top the chart with the lowest level of education compared with EU15 (38.8% of the Spanish population aged 20-24 has no more than primary or lower secondary education, compared with 23.4% in the EU15) and bring up the rear in terms of the relative importance of second-stage secondary education (40.1% of under-25s in Spain compared with 61.1% in the EU15), mainly vocational education (VE)<sup>4</sup>.

3: Bedard (2001) suggests that the two phenomena are closely related. Using U.S. data, she finds that both the level of a population's education and its level of early school leaving are greater in those regions that have universities. This is due to the loss of market value of academic qualifications that are not gained through higher education. The easier access to university education in these regions means that more average-ability students go to university, and in turn this encourages below-average ability students to leave school if they find it impossible to pass for an average-ability student.

4: Box 1 shows the relative lack of VE-qualified people in Spain compared with those countries where a dual education system is being used.

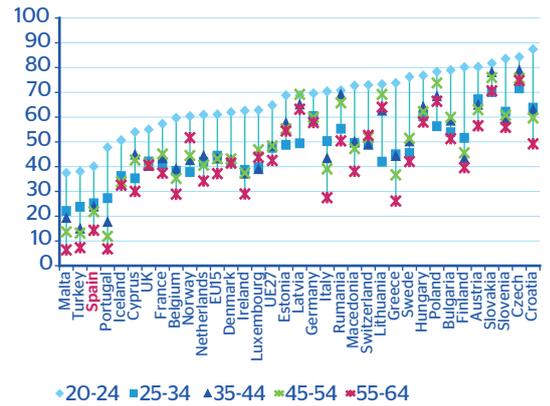
And thirdly, that the progress made in Spain's educational attainment has been driven largely by the increased importance of university education among the youngest cohorts. The data in Chart 9 shows that university graduates now make up 39.2% of the population between 25 and 34, 5.1pp more than the EU15 average and more than double the percentage of university graduates in the 55-64 cohort (17.8%).

Chart 7  
**Population with first-stage secondary education or less, by age groups**  
(% of total population in each cohort, 2010)



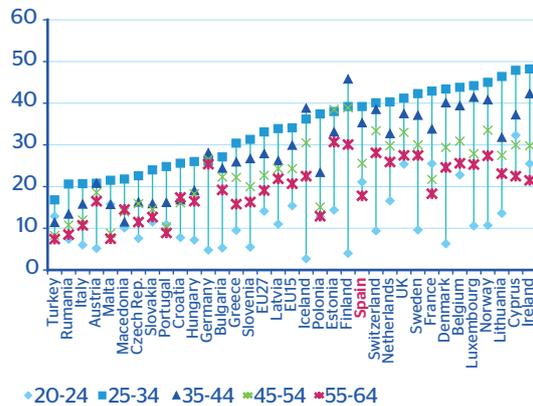
Source: BBVA Research based on Eurostat

Chart 8  
**Population with second-stage secondary education, by age groups**  
(% of total population in each cohort, 2010)



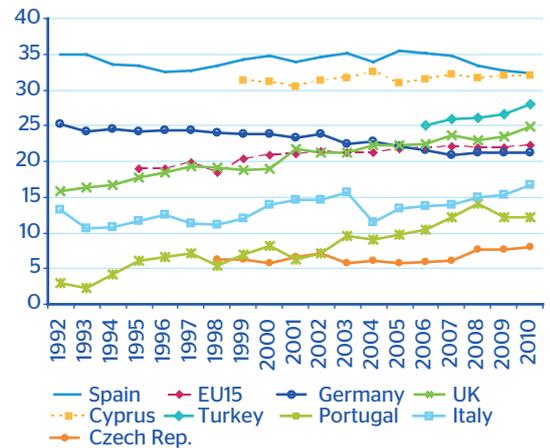
Source: BBVA Research based on Eurostat

Chart 9  
**Population with tertiary education by age groups**  
(% of total population in each cohort, 2010)



Source: BBVA Research based on Eurostat

Chart 10  
**Education imbalance and underemployment**  
(% of university graduates employed in ISCO 4 - 9 positions, selected countries)



Source: BBVA Research based on Eurostat

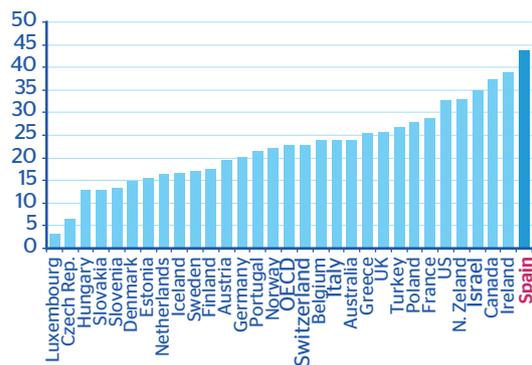
The polarisation of Spain's educational attainment has given rise to an imbalance between the supply and demand for qualified work, resulting in high levels of graduate unemployment compared with elsewhere in Europe<sup>5</sup> (see Chart 6), significant underemployment –or overqualification– and a drop in the education wage premium.

5: The oversupply of university graduates is to be found mainly among those with law and social studies degrees, as pointed out by Dolado, Felgueroso and Jimeno (2000c).

Chart 10 shows how underemployment<sup>6</sup> is not a temporary problem, but one that has existed for the last two decades. The percentage of university graduates in jobs that require a lower qualification has exceeded 30% since the beginning of the 90s, which is the highest rate among EU27 countries and 10pp higher than the EU15 average<sup>7</sup>. The incidence of overqualification is even higher among the younger cohorts of the population: the percentage of overqualified employees in the 25-29 age bracket exceeds 40% in Spain (see Chart 11).

Chart 11

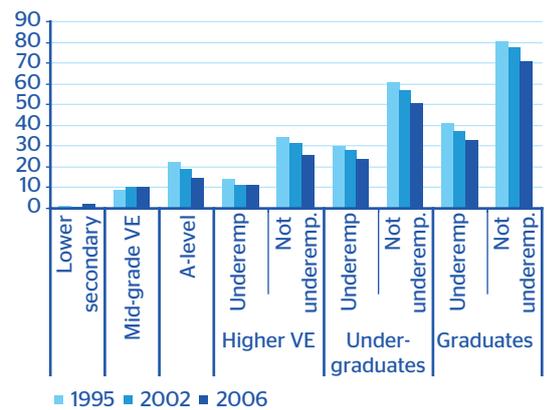
**Education imbalance and underemployment among youngsters (% of university graduates aged 25-29 in jobs with an ISCO rating of 4-9, in 2007)**



Source: BBVA Research based on OECD data

Chart 12

**Spain: returns to education (wage premium versus salaried worker with primary education or less, %)**



Source: BBVA Research based on Felgueroso and Jiménez-Martín (2009)

The oversupply of university graduates and the resulting overqualification not only helps to explain the extent of youth unemployment rate among graduates<sup>8</sup>, but also the level among those youngsters with the lowest level of education. Firstly, because the advances in technology have led to an increase in the relative demand for qualified workers and reduced that for non-qualified<sup>9</sup>. And secondly, because the qualified workers take over the positions that have traditionally been occupied by non-qualified workers, either as a result of an oversupply of labour or due to an increase in the hiring standards of the employers<sup>10</sup>.

At the same time, underemployment has reduced the education wage premium. Unlike in surrounding countries<sup>11</sup>, salary dispersion by level of education has dropped in Spain since the beginning of the 90s, particularly among males<sup>12</sup>. As Chart 12 shows, while the education wage premium rises according to the level of education achieved and the quality of the worker-job matching, it has dropped during the last two decades (the higher the qualification the bigger the drop in yield): ceteris paribus, the salary received by a university graduate with a job matching their degree in the mid 90s was 80.3% higher than that of a primary-education employee, 10pp more than the current differential.

6: An employee with a university degree is understood to be underemployed when their professional status is between groups 4 and 9 of the International Standard Classification of Occupations 1988 (ISCO88):

- Group 4: Administrative workers.
- Group 5: Catering, personal, security, and retail service workers.
- Group 6: Qualified agriculture and fishery workers.
- Group 7: Artesans and qualified workers.
- Group 8: Machine and systems operators.
- Group 9: Non-qualified workers.

7: OECD (2010) shows that underemployment among those with higher secondary education is lower in all developed countries. However, as with university graduates, Spain is at the top of the list: in 2007, the percentage of employees with a higher secondary education who were carrying out non-qualified work (ISCO88 category 9) stood at 17%.

8: Blázquez (2005) found that overeducation had a negative effect on the probability of remaining in work in the Spanish labour market.

9: As shown by Berman, Bound and Machin (1998).

10: The idea of the expulsion effect as an explanation for the increase in the incidence of unemployment among the least qualified was proposed by Thurow (1975). Dolado, Felgueroso and Jimeno (2000a and 2000b) demonstrate that the combination of the rigidities inherent in the Spanish labour market together with the increase in the relative supply of qualified workers explains the difference in the unemployment rate that exists from one education level to the next. And finally, Dolado, Felgueroso and Jimeno (2000c) find that the expulsion effect helped to limit the rise in the unemployment rate among university graduates in Spain during the recessions at the end of the 70s and at the beginning of the 90s.

11: See Strauss and de la Maisonneuve (2009) and Boarini and Strauss (2010).

12: See Felgueroso, Hidalgo and Jiménez-Martín (2010).

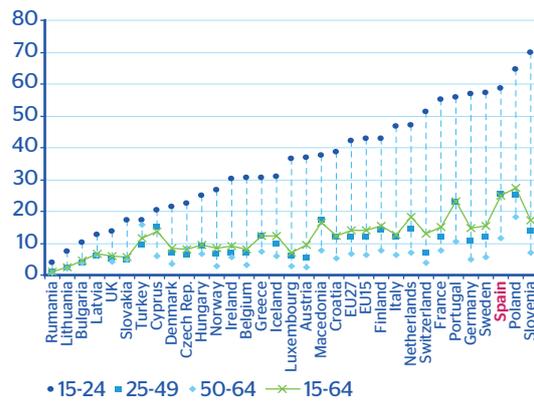
### 2.3 Segmentation of the labour market

The problems of youth job insertion and employability not only depend on the education received over the course of the training phase but also on the labour market's institutions. And it is here that temporary hiring plays a relevant role.

From a regulatory standpoint, companies prefer to hire a youngster without work experience on a temporary basis if the difficulty of knowing their productivity *ex ante* is big. In the same way, an individual deciding to enter the labour market may opt for a temporary contract if they consider it to be the best way of obtaining a stable job. However, data indicates that only 12.4% of temporary workers below the age of 25 in Spain have voluntarily accepted a non-permanent contract (versus 14.4% in Europe)<sup>13</sup>. In addition, international empirical evidence<sup>14</sup> shows that temporary work can turn out to be a trap for certain groups among the youth population that repeat these kinds of contracts in what turns into a vicious circle of temporariness-unemployment-limited training opportunities.

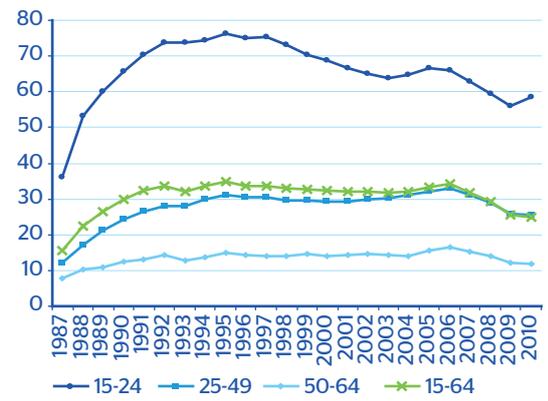
Chart 13 shows how in Spain a quarter of all wage earners aged 16 to 64 have temporary work contracts, 11pp more than the EU15 average. The temporary rate decreases with age in virtually all EU27 countries: in Spain, it ranges from 58.6% among the under-25s (similar to Germany, 56.9%, and France, 55.2%) to 11.7% for those wage earners in the 50-64 age bracket<sup>15</sup>. Overall, the concentration of temporary among the youth population is lower in Spain than for the whole of the EU15: while in Spain the percentage of under-25 wage earners with a temporary contract is 2.3 times the total temporary rate, in the EU15 it is 3.1 greater.

Chart 13  
**Temporary rate by age groups**  
(% of wage earners with temporary contract, 2010)



Source: BBVA Research based on Eurostat

Chart 14  
**Spain: temporary rate by age groups**  
(% of wage earners with temporary contract)



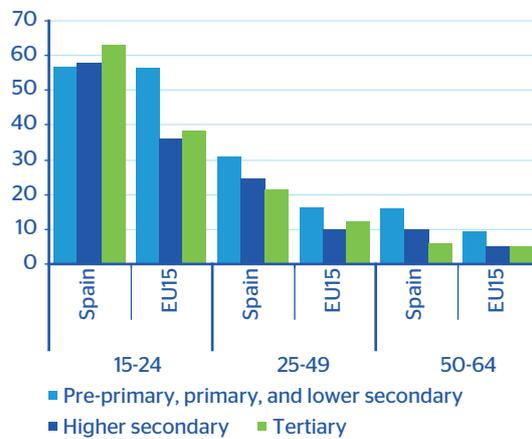
Source: BBVA Research based on INE data

13: See Eurostat (2009).

14: See OECD (2007).

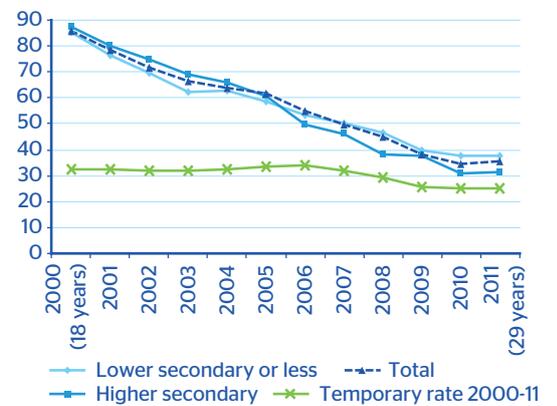
15: Although temporariness has been a distinguishing characteristic of youth unemployment since the mid 80s, its recent performance has been relatively favourable, especially during the second half of the 90s (see Chart 14).

Chart 15  
Temporary rate  
by age groups and educational attainment  
(% of wage earners with temporary contract, 2010)



Source: BBVA Research based on Eurostat

Chart 16  
Spain: performance of the temporary rate among  
those who were 18 in 2000 (% of temporary  
workers among total wage earners in each cohort)



Source: BBVA Research based on INE data

What role does education play in determining the type of contract? Chart 15 shows how, in the EU15 as a whole, education reduces the probability of a temporary work contract right across all age groups. In Spain, the importance of education as an explanatory variable in the stability of employment is only detected among the over-25s. This indicates that the temporary work contract represents the way into the labour market for Spain's youth, irrespective of their level of education.

If the temporary contract were the best vehicle for gaining experience and achieving stable work, the type of contract with which a youngster enters the labour market would be irrelevant. However, empirical evidence demonstrates that temporariness is a persistent phenomenon among Spanish youngsters. As Chart 16 shows, 85% of those youngsters entering the labour market as wage earners do so with a non-permanent contract. Although this percentage drops over the course of their working life, it does so only slowly and in a decade later 35% still hold temporary contracts<sup>16</sup>, having alternated between periods of employment (temporary), unemployment and inactivity<sup>17</sup>.

## 2.4 The limited effectiveness of active labour market policies

With the aim of boosting labour force participation and reducing structural unemployment, Directive 7 of the "Europe 2020"<sup>18</sup> strategy suggests integrating the principles of flexicurity into the employment policies of Member States. These include active labour market policies (ALMP), which attempt to minimise episodes of unemployment and ease the transition process to new jobs.

Although the ALMP form a vital tool for improving the employability of the active population as a whole, their importance for youngsters –especially those who left school before completing higher secondary education– is absolutely key, given their limited specific training, lack of experience, and lower coverage in terms of unemployment benefit. For this reason, youngsters are one of the most highly represented groups in the activation programmes, particularly in those countries where youth unemployment is relatively high. As can be seen in Chart 17, Spain stands out for its quantity of ALMP participants as a percentage of the active population: around 15% of the total active population and 30% of the active population under 25 have benefited from activation measures

16: Estrada, Izquierdo and Lacuesta (2009) find a similar result using the Continuous Sample of Working Lives. They suggest that the explanation for the ongoing nature of temporariness may lie in the difference in severance costs between the different types of contract, which complicate the conversion of temporary workers in to permanent workers.

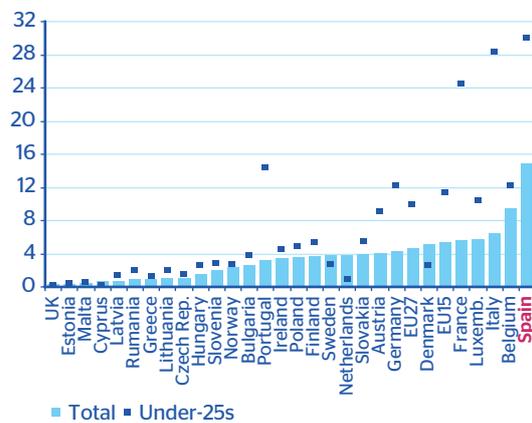
17: Toharia and Cebrian (2007) show that 25% of those wage earners in 2004 who had entered the labour market before 1990 had never had a permanent contract, and that they had made Social Security contributions during no more than 65% of the maximum time possible (versus 88% in the case of those who had always enjoyed a permanent contract).

18: "Europe 2020" is the name given to the EU's growth strategy for the next decade. It is built around five objectives covering employment, innovation, climate change & energy, education, and social integration. In order to achieve these objectives, the EU has set out 10 directives. More details at: [http://ec.europa.eu/europe2020/index\\_en.htm](http://ec.europa.eu/europe2020/index_en.htm)

over the last five years. This means that the limited effectiveness of ALMP when it comes to reducing youth unemployment in Spain has little to do with the level of youth participation in activation programmes; but instead, probably, with the result of the small amount of resources destined to the introducing of measures and of the erroneous focussing of the programmes.

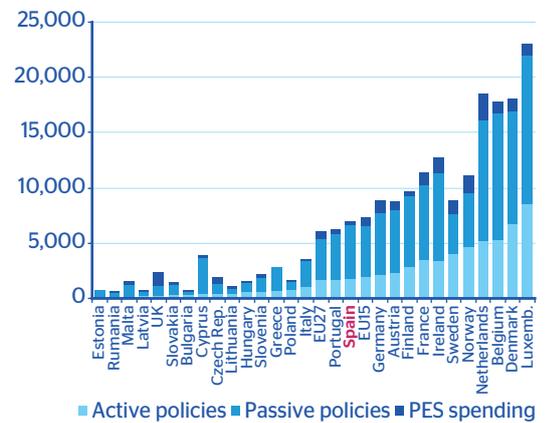
Although Spain's ALMP spending relative to GDP was higher than the EU15 average during the last five years<sup>19</sup>, the amount per individual-looking-for-work was lower. Chart 18 shows how ALMP spending per individual-looking-for-work was €1,740 in Spain during the 2005-2009 period (average figure), amount that was 12.5% lower than the EU15 average and 3 to 4 times less than the amounts invested by the Netherlands and Denmark, the two economies that represent the paradigm of labour flexicurity. Chart 18 also shows that spending on employment policies involving activation programmes was relatively reduced in Spain: over the last five years, ALMP absorbed 46.2% of the resources used for employment policies in Sweden, 37.2% in the case of Denmark, 26.9% in the EU15 and 25.2% in Spain.

Chart 17  
**ALMP participants (% of active population in each group, average 2005-2009)**



Source: BBVA Research based Eurostat and OECD (2010b)

Chart 18  
**Employment policy spending (€ per individual-looking-for-work on purchasing power parity basis, average 2005-2009)**



Source: BBVA Research based on Eurostat

An analysis of the breakdown of ALMP spending reveals that activation strategies may not be the most effective<sup>20</sup>. Chart 19 shows how Spain channels almost half the resources earmarked for ALMP into encouraging the hiring and retaining of personnel (mainly by subsidising the company's Social Security contribution), while the EU15 assigns only a quarter. On the other hand, spending on training, labour integration, and professional recycling is relatively reduced. For example, during the 2005-2009 period, 24.5% of Spain's ALMP spending was used for training – versus 40.0% in the EU15 –, and labour integration and recycling accounted for just 3.8%, compared with an EU15 average of 14.1%, 51.9% in Denmark and 63.4% in the Netherlands. Given that part of the job destruction that has taken place in the construction sector is structural, it is disappointing to see the relative lack of focus on activation measures that would increase the employability of this group of workers through capacitating them to take up positions in other sectors<sup>21</sup>.

In addition to the inadequate focus of ALMP spending, there have also been imbalances in some of the programmes that have conditioned their efficiency. Firstly, the training programmes have focused on those already in work instead of those out of work: less than 7% of the more than 3.8 million participants in training activities in 2010 were unemployed. Similarly, just 34.2% of the spending budgeted for job training programmes in 2011 is earmarked for the unemployed.

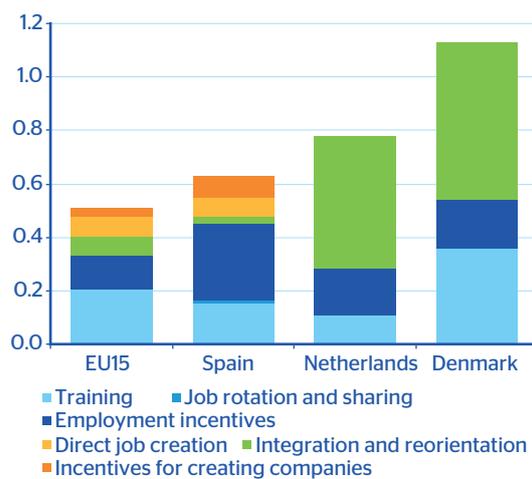
19: The average spending exceeded 0.6% of GDP in Spain, compared with 0.5% for the EU15.

20: A detailed definition of each of the ALMP can be found in Eurostat (2006).

21: Bear in mind that the downturn in Spain's construction sector accounts directly for 270% of the job destruction that has taken place among under-25s and 79.4% of that among over-25s since the beginning of 2008.

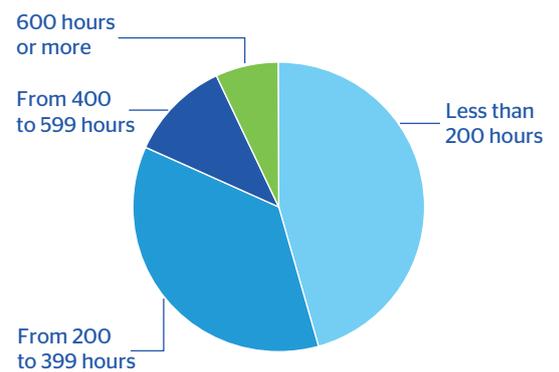
Secondly, the unemployed who take part in training activities tend to opt for assignments with a low level of specialisation, with a reduced element of specific training, and excessively short courses. Data from Spain's Ministry of Employment and Immigration (MTIN) show that: i) a quarter of the unemployed who completed training programmes in 2010 acquired generic knowledge on training and management; and ii) half of the unemployed who underwent training in 2010 took part in courses that lasted less than 200 hours, and only 19.3% completed programmes of 400 hours or more (see Chart 20).

Chart 19  
**Breakdown of ALMP spending**  
(% of GDP, average 2005-2009)



Source: BBVA Research based on Eurostat

Chart 20  
**Spain: unemployed who completed a training activity, by duration of the activity (% , 2010)**



Source: BBVA Research based on MTIN data

And finally, the effectiveness of the ALMP is limited -not only in Spain- by the existence of perverse effects resulting from design errors on some of the activation programmes. Particularly important here are the "deadweight effect" and the "substitution effect". The former refers to the certain amount of employment generated by policies that would also have been created without the policies; and the latter refers to the fact that a percentage of new workers benefiting from the programme are occupying positions that would have been occupied by individuals that did not participate in the programme. The available empirical evidence indicates that both effects are sizeable: together they may have accounted for 90% of the jobs generated by measures relating to salary cost subsidies for the newly employed in Belgium, Ireland, and the Netherlands<sup>22</sup>.

## 2.5 Labour force participation and the discouragement effect

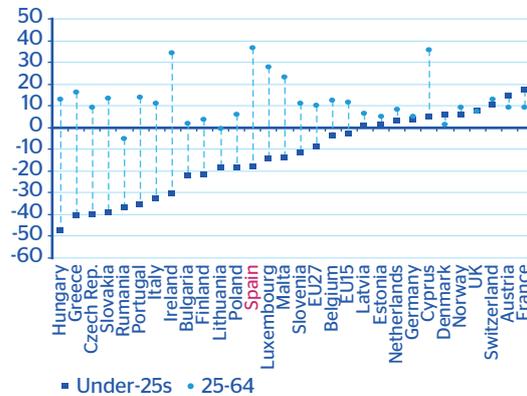
The deterioration in youth unemployment has led to a widespread reduction in the propensity to participate in the labour market among under-25s in several European countries, and this has limited the rise in the youth unemployment rate during the current crisis.

As Chart 21 shows, Spain was the EU country that registered the largest increase in active population over the last decade: immigration flows into Spain were so great between 2000 and 2010 that the active population in the 25-64 age bracket rose by 5.6 million (36.5%) to 20.9 million. On the other hand, the active population below the age of 25 dropped significantly (-452 thousand people since 2000, -18.1%), almost six times the drop registered in the EU15 (-3.1%).

While in the EU15 growth in the active population under 25 increased according to the level of education, in Spain this relationship had an inverted u-shape: over the last decade the size of the active population fell more among those with a primary education and with university degrees (-19.4% and -29.0% respectively) and less among those who had attained higher secondary education (-7.8%) (see Chart 22). These developments in labour participation help to explain the lower relative dispersion of the youth unemployment rate across the different education levels in Spain.

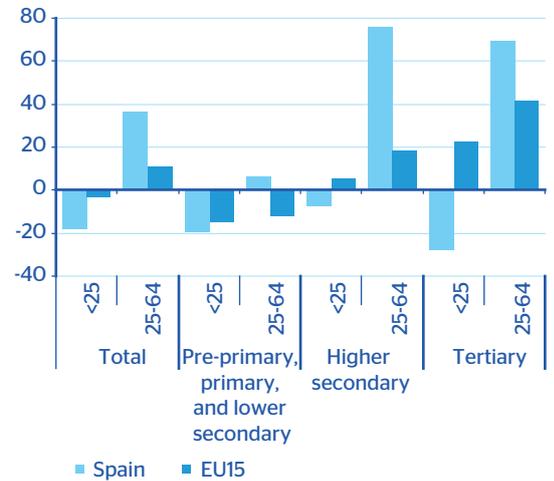
22: See Martin and Grubb (2001) and Betcherman *et al.* (2007).

Chart 21  
Active population by age groups  
(accumulated growth 2000-2010, %)



Source: BBVA Research based on Eurostat

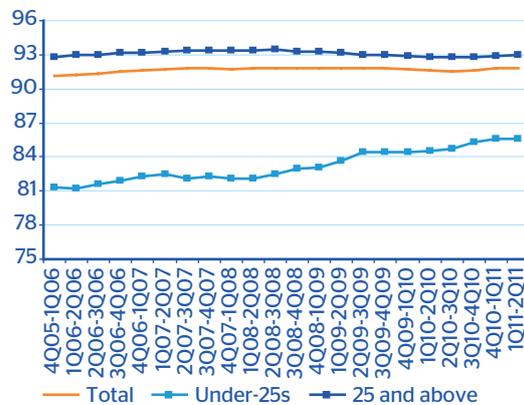
Chart 22  
Active population by age groups and  
highest level of education attained  
(accumulated growth 2000-2010, %)



Source: BBVA Research based on Eurostat

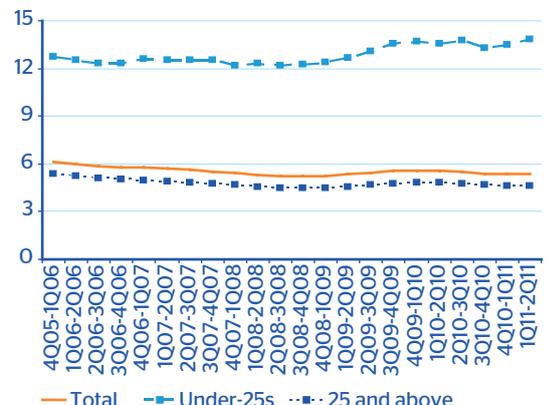
The drop in the size of Spain's young active population is explained not only by a lower inflow from inactive status but also by an increase in the outflow to inactive status. Chart 23 shows what percentage of inactive youngsters in a quarter remain inactive during the following quarter. Over the last five years –especially since mid 2008– the probability of a youngster remaining inactive increased almost 6 points, while that among the 25-and-overs was virtually unchanged. Chart 24, meanwhile, shows the probability of passing from active to inactive in each age group. We can see how the percentage of youngsters abandoning the labour market has risen since 2008, while that among the over-25s has fallen slightly. The increase in the outflow among youngsters is explained by the "discouragement effect", which offsets the drop in the probability of going from holding a job to becoming inactive: job destruction and the increase in the amount of time that they tend to remain unemployed have caused a gradual reduction in the intensity with which the young unemployed look for work, and this increases their propensity to become inactive.

Chart 23  
Spain: inactive population in quarter t-1  
that remains inactive in quarter t  
(% of total inactive population, ma4)



Source: BBVA Research based on INE data

Chart 24  
Spain: active population in quarter t-1  
that remains inactive in quarter t  
(% of total active population, ma4)



Source: BBVA Research based on INE data

### 3. Factors that determine the probability of being unemployed: the importance of age and educational attainment during the crisis

The descriptive analysis in the previous section suggests that the risk of becoming unemployed falls with individual's age and level of education. But it does not allow us to isolate the impact of each of these characteristics on the probability of being out of work.

In order to pinpoint which of an active individual's characteristics affect the probability of them being unemployed and so as to be able to quantify this effect, we need to carry out a regression analysis. In the specific case in question there is then an additional problem: the group that is unemployed people is a restricted and no random sample of the population. If this lack of randomness is not corrected, the estimation of the factors determining the risk of becoming unemployed could produce bias (and inconsistent) results. Bias arise when unobserved factors that affect the probability of being unemployed are correlated with other factors that condition the decision to form part of the active population. For example, an individual's natural abilities may condition not only the probability of them being unemployed but also their propensity to participate in the labour market. If only the most capable individuals decide to form part of the active population, the estimated impact of the different characteristics on the probability of being unemployed would have a downward bias. So in order to avoid erroneous conclusions, we need to correct the effect of each variable on the probability of being unemployed for each individual's propensity to participate in the labour market<sup>23</sup>.

The results of the regression analysis<sup>24</sup> confirm the important role played by an individual's age and level of education in determining the probability of them being unemployed, particularly during recessive cycles like the current one. Charts 25 and 26 show the changing effects over the last decade that age and level of education have had on the probability of an individual being unemployed, based on their place of residence, individual characteristics (sex, marital status, nationality, etc.), and the details of their home (size and breakdown, whether or not there are dependent children and, if so, how many, etc.)

Even though the conditional probability of being unemployed decreases with age, its effect is noticeable during the initial years of an individual's working life, before then remaining virtually constant from the age of 30 and through to retirement. This finding corroborates the importance that employers give to work experience (or the lack of it) when hiring, irrespective of the youngster's level of education. Education also has a negative impact on the probability of unemployment. Particularly noteworthy are the importance of -at least- a primary education and the small difference that exists between the effects of compulsory secondary school education, higher secondary education, and university, during the previous expansionary period. Undoubtedly the oversupply of university graduates and the relative lack of VE qualifications contribute to this result.

The most significant finding from the regression analysis is the growth of the returns to experience and education -in terms of employment- during the current crisis. *Ceteris paribus*, the probability of a 25-29 year-old being unemployed during the 2000-2007 period was 4.4% lower than that of a 21 year-old; by 2011, those in the 25-28 age bracket were 11.6% less likely to be unemployed than a 21 year-old.

23: To estimate the factors determining the likelihood of being unemployed, we use a probit model, with sample selection. It is assumed that the latent risk of each individual being unemployed ( $y^*$ ) is determined by an equation  $y^* = X_i\beta + u_i$ , where  $X_i$  denotes the combination of determining factors of  $y^*$ . But  $y^*$  is unobserved; only is observed the binary variable  $y$ , which is equal to 1 when the individual is unemployed and 0 when they are employed:  $y = y^* > 0$ . However,  $y$  only has a value when the individual is active ( $y_A$ ), which will be the case when  $y_A = X_i\beta + u_i > 0$ , where  $X_i \subset X_2$ . Given that the correlation between  $u_i$  and  $u_{i_2}$  is other than zero, the failure to consider the propensity to be active when estimating the probability of an individual being unemployed can lead to bias results.

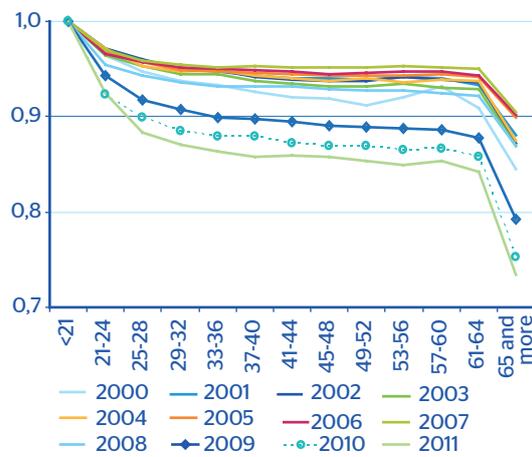
The estimation is based on maximum likelihood, and takes into account the possible existence of heteroscedasticity and intra-household correlation.

More details on the probit model with sample selection can be found in Van de Ven and Van Praag (1981) and in Wooldridge (2002), chapter 17.

24: Detailed results of the estimates are available on request.

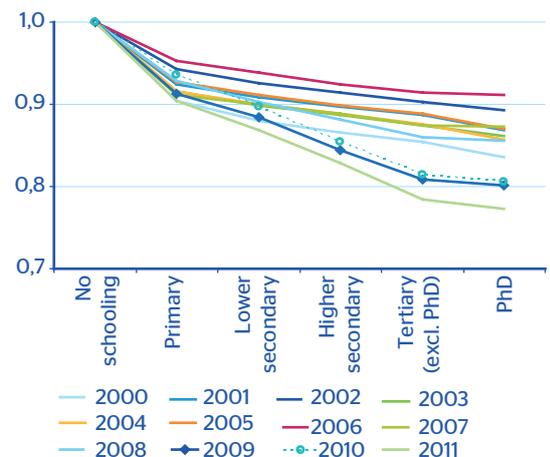
The change in the importance of education since 2008 is even greater. While the labour return of a primary education hardly rises at all (the conditional probability of an individual with primary education being unemployed in 2011 is 9.6% lower than that of an individual without schooling, compared to a 7.5% during the 2000-2007 period), the return to higher secondary education and, above all, to university education rises significantly. The completion of higher secondary education reduces the probability of being unemployed by 17.2%, 6.8pp more than during the previous expansive cycle. The return, in terms of employment, to a university degree rises to 21.5% in 2011 from 11.6% during 2000-2007.

Chart 25  
Spain: conditional probability of being unemployed by age groups (under-21=1; annual averages)



Source: BBVA Research

Chart 26  
Spain: conditional probability of being unemployed by educational attainment (no schooling=1, annual averages)



Source: BBVA Research

## 4. Conclusions and economic policy recommendations

Youth unemployment in Spain is a persistent phenomenon that has worsened during the current crisis. And at the levels now being registered (46.1% in 2Q11), the measures to fight it can be delayed no longer. Choosing the right policies to ease the problem requires the correct identifying of its causes. The evidence presented in this Working Paper indicates that there are serious shortcomings in Spain's education system and labour market, which explain the country's relatively high level of youth unemployment.

The former include early school leaving and the imbalance between job supply and demand at the different education levels, which complicates youngsters' access to the labour market and has a negative impact on their professional career. Although Spain has stood out for its high rate of early school leavers for the last two decades, it is only since the onset of the current crisis that this has had a clear repercussion on youth unemployment. For example, unemployment rate among youngsters with the lowest level of education rose more than 30pp between 2Q07 and 2Q11 to 52.6%, 10.3pp more than among those who reached the second stage of secondary education and 19.5pp more than those who obtained a university degree.

Spain's high level of early school leaving means that the relative weighting of the least educated youngsters is higher here than anywhere else in Europe. This, together with the extraordinary rise in the weighting of university graduates among the youngest cohorts to the detriment of those with a higher secondary education -particularly those with VE qualifications- has led to education polarisation of the population, which in turn has led to an imbalance between job supply and demand, a high rate of underemployment, and a fall in the wage premium of education.

Of the various labour market malfunctions that aggravate youth unemployment in Spain two of the most significant are the high level of segmentation and the limited effectiveness of ALMP. In the case of the former, data indicates that temporariness is now a common phenomenon among

Spain's youth, its main characteristics being its high persistence, which condemns youngsters to a vicious circle of uncertainty, insufficient opportunities for specific training, and unemployment. And in the case of the latter, while youngsters make up one of the largest groups participating in the activation programmes, the reduced amount of resources channelled into ALMP and the wrong focus of measures conditions their effectiveness.

Now that we know the main causes, what measures might help to alleviate the problem of youth unemployment in Spain?

**In terms of education**, it is absolutely vital to reduce the rate of early school leaving. And to achieve this, action is required on two fronts. Firstly, through improved control and support for those students at risk<sup>25</sup>. The introduction of an early-warning strategy together with the compulsory participation in intensive support classes (the most possible personalised) would help to meet this objective. In this respect, the measures approved by the Cabinet on July 29, which included the bringing forward to 15 the minimum age for entry into the Initial Professional Qualification Programmes (PCPI), together with easier access and an extension of the programme periods to two years, ought to encourage certain groups of the population to remain in the education system<sup>26</sup>.

At the same time, it is important to encourage youngsters to remain in the education system via policies that improve education appealing (particularly that which is vocational-related), to both students and parents<sup>27</sup>. It would help if both were made aware of the return on education -in terms of employment-, which means that there have to be public information and advisory services. And finally, greater control over school absenteeism would also help.

The second front would involve the reincorporation of early school leavers into the education system. This would require increasing the flexibility of education programmes, and in this respect the recent reform of the VE system is a step in the right direction<sup>28</sup>. The fact that those students who have completed the compulsory modules of the PCPI can now access the medium-level VE cycles is particularly positive, as is the access to higher-level VE cycles for those having passed a bridging course. Also beneficial are those training programmes aimed at youngsters over the age of 17 who left the education system early.

In addition to measures that try to combat early school leaving, it is important to improve the probabilities of job insertion among the younger population, easing their transition from the education system to the labour market, and avoiding underemployment situations. Undoubtedly, the introduction of a dual VE system similar to the one described in Box 1, would help to partially rebalance the structure of the education system and increase the employability of those youngsters with higher secondary education<sup>29</sup>. For this, business leaders need to be more involved in the design of the training on offer and in the establishing of the working conditions for interns.

As for university education, what is really needed is a reform of the number of degrees, their content, and their duration. In particular, the possibility of obtaining a degree after three years of transversal training -as in France for example- would help reduce not only the number of youngsters that fail to complete their university studies, but also the cost of training, and underemployment. In order to improve the employability of graduates, we need to see greater links with the private sector. For example, certain subjects should have compulsory internships that provide the student with experience and specific knowledge. As with VE, it would be nice to see companies playing a bigger role in the creation of the training plans and in the financing of the internships.

25: De la Fuente and Doménech (2010) propose focus training efforts on the first schooling stages -particularly among minors from disadvantaged groups-.

26: See [Royal Decree 1146/2011](#), of July 29, which served to modify Royal Decree 1631/2006, of December 29, and under which the minimum level for Compulsory Secondary Education is established.

27: De la Fuente and Doménech (2010) propose offer the right incentives to each one of the participants in the educative process in order to improve the quality of the education. Particularly, they suggest increase the election possibility set of parents, modify the teaching personnel retribution sketch introducing concepts link to productivity, encourage the competition among centres through the publication of the standardized test results and increase their decision capacity in certain topics. In this regard, Wöessmann (2003) obtain that a large autonomy of educative centres on hiring and administration decisions and a large academic freedom have a positive effect in educational results.

28: See [Royal Decree 1147/2011](#), of July 29, which sets out the general plan for the Spanish education system's vocational education.

29: In fact, the reform of VE, mentioned earlier, makes timid progress in the dualisation of the system by allowing for the possibility of developing youth training programmes that allow part of the learning process to take place inside companies. Also, the [Royal Decree-Law 10/2011](#), of August 26, covering urgent measures for promoting youth employment, tries to work towards improving the employability of those youngsters out of work. It establishes a new temporary contract for training and internship aimed at under-25s with few qualifications; the worker will combine his/her formal training -received in an education centre- with a work activity related to his/her training activity. The time spent working cannot represent more than 75% of a maximum working day. This new contract offers a relative reduction in the hiring costs of unemployed youngsters, given that it subsidises 100% of the companies' Social Security contributions for new employees at companies with a workforce of less than 250 (and 75% for those with 250 workers or more).

**With regards to the labour market**, the main priorities are the reduction in segmentation and a more successful activation of unemployed youngsters. The best way to prevent temporariness becoming a trap that threatens young people's professional careers, difficult human capital accumulation in the company and reduce their chances of employment is to create a single permanent contract (partial or full time). In this respect, BBVA (2009) proposed combining: i) a new single contract -that would not affect existing contracts- with severance costs that would rise according to the amount of time the worker had been with the company<sup>30</sup>; and ii) a dismissal insurance system financed with social security contributions, similar to that in Austria, that would accumulate in individual accounts. If the worker decides to change company, they could take the account with them, and this would encourage labour mobility; if the worker is never dismissed throughout his working life, the sum accumulated in their account would be added to their retirement pension<sup>31</sup>. Also recommended is an extension of the trial period on permanent contracts, so as to encourage the hiring of youngsters without experience and whose productivity cannot be assessed.

And finally, the redesigning and refocusing of ALMP are bound to improve their effectiveness. Firstly, and given the size of the problem, more funding is needed for activation programmes. An alternative (and one that is especially attractive during periods of fiscal consolidation), would be to improve their effectiveness. This would require: i) a rigorous evaluation of each measure, so as to maintain those that work and refocus those that do not; and ii) the implementation of new policies on small groups so as to test *ex ante* their effectiveness. Secondly, the breakdown of ALMP spending needs to be modified, with a reduction in the employment incentives -which should be aimed specifically at those groups with significant job insertion difficulties- and an increase in spending on professional recycling and training. When the cycle is adverse, the unemployed -not the employed- should be the focus of any training, the duration of which should be extended so as to impart more detailed knowledge. A continual updating of the catalogues containing the courses in which companies participate would help adapt the training on offer to the type of qualifications needed by the market. In the specific case of youngsters, the successful experiences in other economies<sup>32</sup> suggest implementing an early activation strategy, the development of job-search assistance programmes that demand an active role from the participants, and the setting up of personalised plans that provide the unemployed youngster with integrated attention and advice<sup>33</sup>. To achieve all this, it will be necessary to strengthen the Public Employment Services, to revise the structure of pay incentives for the personnel responsible for guiding the unemployed and to consider the suitability of private placement agencies.

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30: A similar proposal for a single discipline contract can be found at:

[http://www.crisis09es/propuesta/?page\\_id=37](http://www.crisis09es/propuesta/?page_id=37). Bentolila and Jansen (2010) suggest that severance pay could differ according to the circumstances of the dismissal (fair or unfair).

31: Even though *Law 35/2010*, of September 17, which covers urgent measures for reforming the labour market, considers the second part of the proposal, the widespread introduction of the contract that encourages permanent hiring is unlikely to lead to the kind of decrease in duality that we would probably have seen with a single contract, which long-term implies -by definition- a zero temporary rate.

32: Compiled from Betcherman et al. (2007), OECD (2010b) and the European Commission (2011).

33: The reform of the ALMP, approved in February, promises progress on some of these issues. See *Royal Decree-law 3/2011*, of February 18, covering urgent measures for the improvement of employability and the reform of active employment policies.

## Box 1. Vocational Employment as a problem and the dual system as a solution

As shown in Section 2, Spain has a relative lack of people with higher secondary education. This shortfall is explained by the reduced number of people completing vocational education compared with the number passing their baccalauréat (A-levels). Chart 27 shows Spain to be at the bottom of the OECD ranking that measures the proportion of the population with vocational studies relative to those who have completed higher secondary education (35.8%). At the other end of the scale are Denmark, Switzerland, Austria, and Germany, all of which stand out for the relative importance of vocational education in post-compulsory secondary education.

What do these four countries have in common? A dual system for vocational education, the original form of which was introduced in Germany at the end of the 60s following the approval of the Law for Education and Vocational Training and the creation of the Federal Institute for Vocational Training (BIBB in German)<sup>34</sup>.

After completing the orientative stage -which lasts the first two years of compulsory secondary education- students have to choose one of the three types of school on offer based on their capacities and preferences for university education: first-cycle secondary schools (Hauptschulen), general education secondary schools (Realschulen), and post secondary education baccalauréat (A-level) centres (Gymnasium)<sup>35</sup>. Roughly two third graduates from these three types of school that go on to higher secondary education opt for the dual system and complete it (see Chart 28).

The vocational education system is referred to as dual because the learning process -which normally lasts three years- takes place in the vocational education schools and in the companies participating in the programme simultaneously. This means that the responsibility for training is shared: the interns attend the school one or two days a week, where they receive both general training and training specific to the profession they have chosen; and during the rest of the week they are trained in the company.

The learning process is centred on the concept of the profession: it does not focus on the specific needs of the company providing the training, but on imparting the knowledge and abilities required for carrying out a specific trade or job<sup>36</sup>. With this objective in mind, employers, union organisations, and the BIBB agree on the syllabus

and training material, which are then later adopted by the competent authorities. At the same time, the training should prepare the students for a continuous learning process over the full length of their professional career, in order to make sure that their level of employability does not diminish.

Although companies are not forced to participate in the dual system, data shows that roughly a quarter of them provide training within this framework<sup>37</sup>. This figure increases according to the size of the companies, with 90% of companies with 500 workers or more taking part in the dual system.

As with the training responsibilities, the financing is also shared. The cost of the education provided in the vocational education school is paid for by the Government, the Federal Employment Service, the Länder, and the local authorities. And the companies foot the bill for the on-the-job training. In some sectors -such as construction- the financing of the system comes from a sector fund that has been financed with previous individual contributions. Figures show that companies bear between 60% and 70% of gross training costs<sup>38</sup>. The intern's salary -negotiated under the sector's collective bargaining agreements- accounts for approximately half the gross cost met by the companies, and it varies according to the sector and the trade. The salary is relatively low: a student can expect to receive three times less than the average qualified worker.

The dual system, however, is not problem-free. There are difficulties such as imbalances between the supply of intern positions and demand; imbalances caused by the concentration of the most qualified youngsters -those coming from the Realschulen- in the professions with the best possibilities, and of the least educated -those from the Hauptschulen- in the least valued professions; the system's lack of flexibility when it comes to adapting to changes in work methods, and the increased difficulties moving into the workplace faced by those interns coming from smaller companies. However, all in all, the empirical evidence shows that a vocational education system increases the employability of youngsters and reduces the problems associated with their transition from the education system to the workplace, basically because it provides them with specific training and the initial experience that enables them to continue their career<sup>39</sup>.

34: See <http://www.bibb.de/en/index.htm>

35: A fourth option is integrated schools (Gesamtschulen), but these are not available in all the Länder.

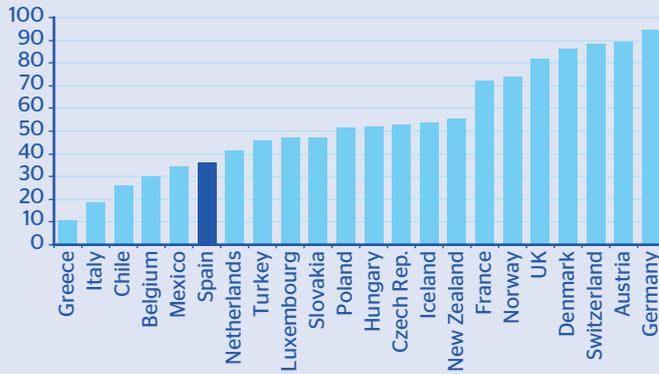
36: Specialised training is allowed, but only as a complement to career training.

37: See Hippach-Schneider, Krause and Woll (2007).

38: An estimation of the real net cost would require a calculation of the intern's contribution to the company's results. BIBB (2006) shows that the profitability of a student depends on the size of the company, on the geographical region, on the sector and on the specific trade. But on average, the intern's contribution is equivalent to 47% of the total gross cost.

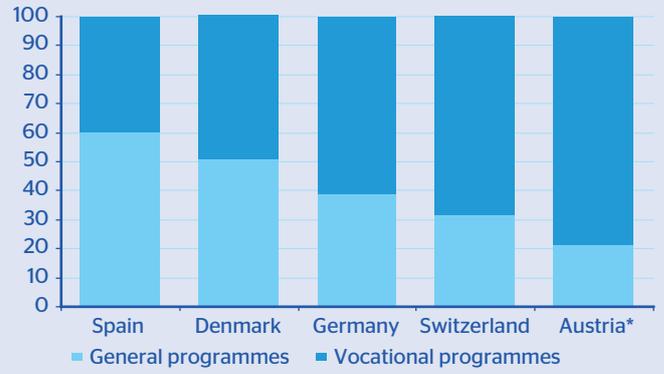
39: A detailed description of Germany's dual system can be found in OECD (1994) and in BMBF (2003).

Chart 27  
Proportion of vocational education graduates among population with higher secondary education (2008, age group 25-64, %)



Source: BBVA Research based on OECD data

Chart 28  
Breakdown of higher secondary education graduates by type of training (2000-2009 average, %)



(\*)Vocational and pre-vocational programmes

Source: BBVA Research based on Eurostat

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