



Labour market change
**Assessment of public initiatives to
combat labour market segmentation
in the EU Member States**

**Case study: Redefinition of the
training and apprenticeship contract
(Spain)**

**[Labour market segmentation:
Piloting a new quantitative and policy analysis](#)**

Author: Carlos García-Serrano (UAH)

Research Manager/s: Irene Mandl and Valentina Patrini

Eurofound reference number: WPEF19069

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European Foundation for the Improvement of Living and Working Conditions

Telephone: (+353 1) 204 31 00

Email: information@eurofound.europa.eu

Web: www.eurofound.europa.eu

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Introduction

This report presents the in-depth analysis of the Spanish measure named ‘Re-definition of the training and apprenticeship contract’ (*Redefinición del contrato de formación y aprendizaje*). This type of contract is aimed at young people between 16 and 24 years of age with only primary or secondary education. Its objective is to help increase the professional qualification of these workers by alternating training with work activity in a company, and to improve their integration into the labour market. This policy measure is deemed an instrument to fight youth unemployment and labour market segmentation (LMS) and has been used since the 1990s. It has undergone several reforms since the beginning of the financial crisis in 2008. This case study focuses on the modifications carried out by Spanish governments in the 2010-2012 period and their potential effects, for which some evaluation studies exist.

Applied methodological approach

A thorough search of formal evaluation reports and academic studies of the selected policy measure has been carried out. In this context, effectiveness can be measured either in terms of the increase in training for the employees or in the improvement of their subsequent labour integration. In the Spanish case, the studies try to evaluate whether this type of contract helps to improve the employability of young individuals as compared to other temporary contracts which employers may potentially use to hire young workers. Only two evaluations have been found. Despite the growing interest in this type of contracts on the part of policymakers at EU level, there is still scarce empirical evidence on their impact on companies that use them as a means of hiring, and on the employability, job stability and career progression of workers who are bound by such a contractual relationship. The available international empirical evidence is focused mainly on countries whose dual training systems represent, for historical reasons, an important pillar of their respective education systems. The recent revisions of the available data (European Commission, 2013; CLEG, 2015) indicate the scarcity of studies that go beyond a descriptive analysis and aim to estimate the causal impact of participation in apprenticeship contracts.

The absence of empirical evidence is the result, on the one hand, of the lack of adequate data to carry out rigorous analysis and, on the other, of issues of a methodological nature, such as the difficulty of finding a suitable counterfactual scenario to adequately estimate the causal effect of this type of contract. That is, to estimate the causal impact of training and apprenticeship contracts, it is necessary to determine what the result would have been if the individual treated with that policy had used a different option than securing a training contract. By definition, this counterfactual scenario is unbreakable. The most rigorous and reliable method to construct a counterfactual is to carry out a randomised controlled trial. Alternatively, researchers need to build a control group of non-participants with characteristics (almost) identical to those of the participating individuals, based on non-experimental data.

The main difficulty in the construction of an adequate control group is to find a credible strategy to deal with the problem of ‘treatment selection’, given that using a training contract is a voluntary decision and, therefore, companies and workers who decide to use this type of contract may have characteristics that are unobservable to the researcher and that differentiate them from non-users; and these characteristics may be correlated with the labour outcomes on which the effect of the policy is quantified. As a result, the estimated effect of the policy could be biased and would not, therefore, be a causal effect of it.

That being said, the selected academic evaluations contain reliable conclusions. They are based on quantitative data coming from a large administrative dataset referring to contracts and social security records, the so-called ‘Continuous sample of working lives’ (*Muestra continua de vidas laborales*, MCVL), that contains longitudinal information on a representative sample of the population with any type of relationship with the social security. The availability of this sort of

data allows academics to focus on a period of several years of the workers' career and to analyse several transitions. The studies are also based on causal inference, since they use econometric methods such as propensity score matching techniques, for which they define treatment and control groups, to examine the labour market outcomes for young workers. They also use the duration models with competitive risks, in which the dependent variable is the number of days worked before securing an open-ended contract. They analyse the causal impact of having entered the labour market through a training and apprenticeship contract on either the transition to a permanent contract or the employment status of eligible workers after several years. The evaluation studies take account of not only the treatment selection but also the personal characteristics of the workers and the cyclical factors of the economy when analysing the potential impacts of the contracts on the individuals' labour market outcomes.

Two semi-structured interviews have been conducted as well and they have provided qualitative information on relevant features of the policy measure. The interview with a representative of the body administering the measure allowed to fill the gaps concerning the design and delivery characteristics of the policy measure. The interview with an expert in the field of LMS and evaluation served to deepen the knowledge on the intended and unintended effects of the initiative.

Description of the initiative in focus

Type of initiative

The training and apprenticeship contract (*Contrato de formación y aprendizaje*) is a policy measure that aims to influence the incentives of workers (labour supply) and employers (labour demand) alike and is related to employment/job stability and flexicurity. It is deemed a demand-side measure, since it can affect the hiring decisions of enterprises. But it may also be considered a supply-side policy due to its potential influence on the labour market participation of young individuals and on their decisions related to the acquisition of human capital and work experience. This type of policy measure is directed to facilitate upward mobility through transitions of disadvantaged workers to (permanent) employment, and to strengthen the link between workers and employers by facilitating the screening of young workers, their acquisition of general and specific training and their permanence in employment (either in the same firm or in a different one).

Rationale and objectives

The training and apprenticeship contract is specifically directed towards low-qualified young people – namely, young people who lack the academic level of education required to enter an internship contract (a university degree or a vocational training qualification of a medium/higher grade). Its main objective is to provide them with the possibility of obtaining an official degree, and to help them acquire skills and competences that increase their employability and career progression through the combination of work and training.

These contracts were originally conceived as temporary contracts with limited access to social benefits (such as unemployment benefits), and of duration of six months to three years. Their basic regulation established a series of measures referring to the minimum number of hours that the apprentice must allocate to training activities, and also delimited and defined the set of official titles and contents of the so-called certificates of professionalism. These certificates are the instrument of official accreditation of professional qualifications of the 'National Catalogue of Professional Qualifications' in the field of labour administration. They are used to certify a set of professional skills that enable the development of an identifiable work activity in the productive system without this constituting regulation of professional practice. They have official status and validity throughout the national territory and are issued by the [public employment service](#) (PES) and the competent bodies of the Spanish Autonomous Communities (regions).

Although there was already a contract for training applicable to individuals under 20 since 1984 (Law 32/1984), it was reformed in 1994 and in 1997, due to high unemployment rates and shares of temporary employment suffered by young people at those times. With the advent of the financial and economic crisis in 2008, the growth of unemployment and its persistence at high levels led successive Spanish governments to approve labour market reforms. The changes implemented in the apprenticeship contract between 2010 and 2012 were intended to make it more attractive to employers. No explicit quantitative targets were set on increasing the number of contracts or reducing the unemployment rate. By affecting the incentives of employers to hire young workers, this measure was aimed to facilitate transitions from unemployment to employment, increase labour market experience of young people and favour the acquisition of training. The ultimate goal is to provide a professional qualification by alternating training and work, to favour the employability of this population group and to increase the stability of their employment as it is one of the groups of workers more affected by temporary work, excessive turnover and LMS.

Time frame

This type of contract was introduced in Spain in the 1980s was aimed at young people under 20 years of age. The training and apprenticeship contract has undergone several reforms in recent years. Despite the large number of people entering the labour market with a low level of education, this sort of contracts has long played a marginal role in Spain. In an attempt to encourage their use, the successive governments have reformed the regulation of training and apprenticeship contracts several times during the crisis. This case study focuses on the changes put in place by the labour market reforms of 2010 and 2012, affecting several characteristics of the contract, including the age threshold, the duration restrictions and the financial incentives for employers.

Target group(s)

This type of contract is directed to increase the incentives of employers to hire a well-defined group of workers who suffer high unemployment rates, unstable employment trajectories, excess turnover and LMS. In particular, the target units are the low-qualified young people defined as individuals aged 16-24 with only primary or secondary education, namely those who have not reached a middle- or higher-level vocational training degree or a university degree. Although the general requirements refer to individuals' age and their educational attainment, if companies want to receive the rebates on social security contributions, there is a requirement that the individual must be registered as job seeker in the PES (although there is not a specific requirement on time since registration).

Delivery methods

Companies that use apprenticeship contracts benefit from bonuses that cover the total contributions that employers must pay to social security for each apprentice hired for the whole duration of the contract to offset the costs associated with hiring those workers. The regulation of the contract does not make any reference to the number of apprentices that a company can hire. The minimum duration of the contract is one year and the maximum three years. Nonetheless, different durations of the contract may be established by collective agreement, without the minimum duration being less than six months or the maximum longer than three years. In addition, companies are reimbursed the costs of formal training according to the following modules: in classroom mode, €8 per hour/participant; in distance/tele-training mode, €5 per hour/participant. Companies also receive a subsidy in order to partly cover the costs of the tutor that each apprentice is assigned during their apprenticeship contract. In particular, the additional bonus to finance the costs of tutoring consists of a maximum amount of €1.5 per apprentice and hour of tutoring time, with a maximum of 40 hours per month and individual. In companies with less than five workers, the maximum amount is €2 per apprentice and hour of

tutoring time. Using all that information (and assuming that training time is 25% of a total working time of 40 hours per week, the number of working days is 22 per month and that firms use the tele-training mode), the total subsidy per individual for firms would amount to about €300 monthly during the first year and about €400 monthly during the second and third year - a bit more for firms with less than five workers and a bit less for larger firms (CCOO, 2019). In both cases, the [Ministry of Labour](#) regulates the amounts and hourly rates paid. In addition to these subsidies, financial incentives are also available for firms that transform apprenticeship contracts into permanent ones (€1,500 yearly for a maximum period of three years; €1,800 in the case of women). There are specific requirements for companies to maintain the employment level after the end of the subsidy, and/or not to replace current staff by subsidised workers. In particular, if the firm dismisses the worker three years after the signature of the contract or if it dismisses any of the workers of the company within the year following the signature, the firm will have to pay back the subsidy.

Key actors involved in implementation

The main actor was the government through the Ministry of Labour, since they design and implement the changes in the characteristics of the contract, decide the exact target group and establish the amount of the financial incentives for the employers who hire a young worker using this type of contract. The labour market reforms of 2010 and 2012 and the corresponding alterations of the contract were enacted by two different governments (socialist and conservative, respectively) without any agreement or dialogue with the social partners.

Administrative level of implementation

The measure is implemented at the national level.

Sectoral focus

The measure was not targeted at any specific industry. However, the take-ups differ between sectors, being higher in the services sector (where the training and apprenticeship contracts are concentrated).

Funding arrangements

The bonuses on the employers' social security contributions are financed through the budget of the PES. In addition, companies can deduct their compensation for the costs of the tutor assigned to each apprentice and the training provided from the so-called obligatory training fee imposed on all companies, which amounts to 0.7% of the gross salary paid. The maximum amount that companies can claim for training is equal to the result of multiplying the hourly rate by the minimum hours of training stipulated by law, corresponding to 25% of the maximum working days for the first year of the contract, and 15% for the second and third years. The [Youth Guarantee Initiative](#), promoted by the government in 2013, temporarily raised these limits to 50% and 25%, respectively, for its young beneficiaries, but this additional training grant ended in June 2016.

Linkages with/embeddedness into other measures (national and EU)

The Spanish system of dual vocational training consists of two pillars. The first pillar is part of the Spanish formal education system, whereas the second pillar is based on training contracts and corresponds to the so-called vocational training system for employment. This second pillar presents important similarities with the system of 'apprenticeships' existing in other countries such as the United Kingdom. The objective of this second pillar of dual vocational training is to offer unskilled young people – who lack a vocational training qualification or who have not attended university – the possibility of acquiring specialised professional skills, through a dual teaching system that combines work experience in the company and specific academic training. Participants sign a work contract with a company that includes a training programme.

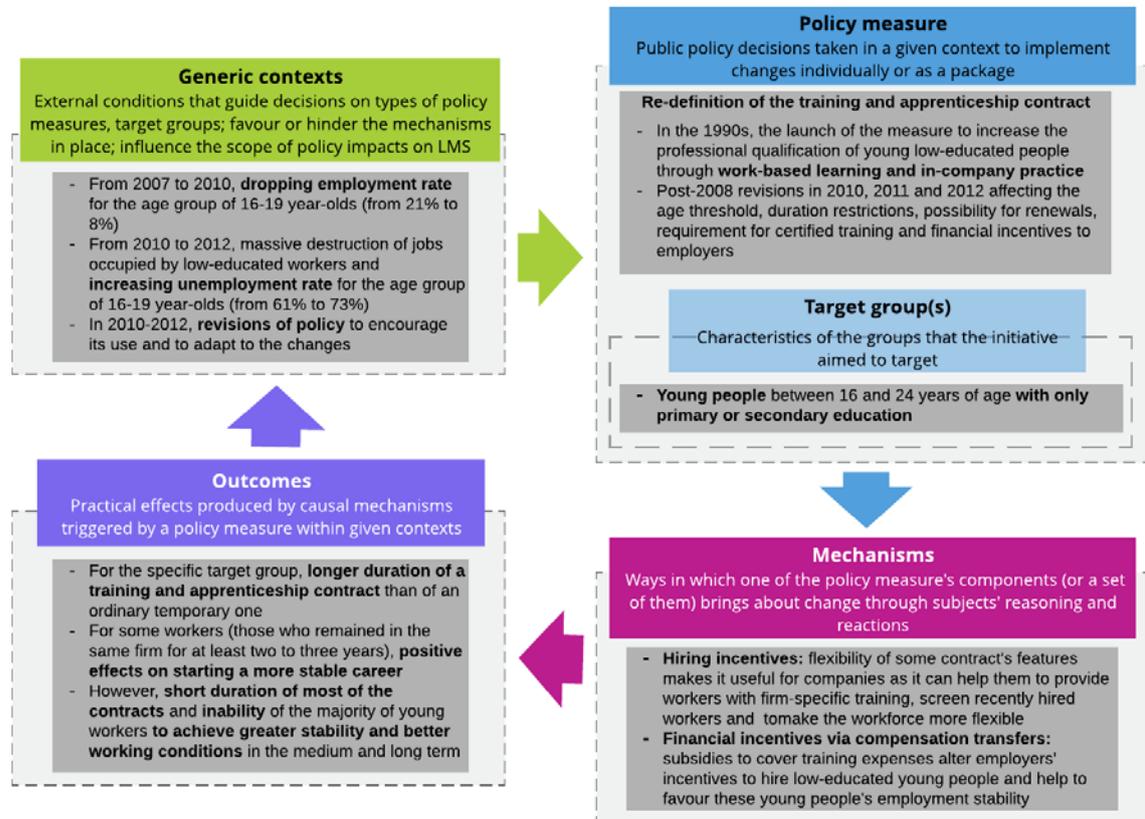
Training and apprenticeship contracts are widely used throughout Europe. 24 Member States of the EU have dual apprenticeship plans that are mainly based on in-company training, where more than half of the training activities take place within the company (European Commission, 2012). The [New Skills Agenda](#) built on past initiatives like the European Alliance for Apprenticeships (EaFA) that was launched in 2013 with the aim to strengthen the quality, supply and image of apprenticeships, and (more recently) the mobility of apprentices. 27 Member States have joined the EaFA (European Commission, 2017). Dual professional training, both regulated and non-regulated, is receiving growing interest from policymakers. Given the success that countries with robust apprenticeship systems have had in reducing youth unemployment and limiting skill shortages, international organisations have called for major expansions of these programmes (see, for instance, OECD/ILO, 2014). In general, apprenticeships are considered to be a useful instrument to improve the integration of young people into the labour market, although there is also some concern regarding the quality of the training received during the apprenticeship contract and the ability to transfer knowledge and skills. Vocational training and formal education are promoted as means to improve the transition from the education system to the labour market, but individuals should acquire sufficiently general and transferable qualifications to successfully do that. If they do not, apprentices can be exposed to considerable risks later in their working life, either because they have to change employers or because technological progress makes their qualifications obsolete (Hampf and Woessmann, 2017).

In the context of the 2008 crisis and the ensuing high youth unemployment rates, the European Commission launched the [Youth on the Move](#) programme, an EU flagship initiative that began in 2010 as part of the [Europe 2020](#) strategy. The programme promoted policy measures at national and European levels to enhance educational and training systems (European Commission, 2011). One of the key areas of the initiative is to develop modern education and training systems based on key competences. This also implies the decrease in early school leaving to 10% by concentrating on prevention and targeting those at risk of dropping out of school; the encouragement of vocational education and training (VET) and early workplace experience in the form of apprenticeship-type training and traineeships; as well as the expansion of career and life-enhancing learning opportunities for non-formal and informal learning for the youth. Moreover, in December 2011, the ‘Youth Opportunities Initiative’ was launched and subsequently a European-wide [Youth Guarantee](#) supporting Member States with above-average youth unemployment rates was established. The purpose of the Youth Guarantee is that all young people aged under 25 receive a good-quality offer of employment, on-going education, an apprenticeship or work experience within four months after finishing formal education or becoming unemployed. In Spain, [the Spanish Youth Guarantee](#) has been implemented since July 2014 and targets young people aged up to 29 who are neither in employment nor in education or training (NEET), envisaging, among other things, the development of the VET system. The National Youth Guarantee Implementation Plan incorporates many measures adopted within the [Entrepreneurship and Youth Employment Strategy](#) (2013-2016), which was a tool for promoting youth employment and entrepreneurship, covering about 100 initiatives aiming to facilitate access to the labour market for young people through either salaried employment or self-employment. Furthermore, the Youth Employment Initiative is embedded in the 2014-2020 Operational Programme for Youth Employment (funded by the European Social Fund), which is entirely devoted to implement the Youth Guarantee in Spain, and represents 80% of its total funding.

In-depth analysis of the initiative in focus

This section presents an in-depth analysis of the context of the initiative, its details in terms of measures and target groups, mechanisms, and outcomes. These separate elements are represented in Figure 1.

Figure 1: Visual presentation of the initiative



Source: Compiled by the authors

Overview of the context

As a consequence of the crisis in 2008, high youth unemployment became one of the biggest problems for the Spanish society. According to the Spanish Labour Force Survey, the employment rate, which had reached a maximum of 43% in 2007 for those aged less than 24 (21% for the 16-19 group and 58% for the 20-24 group), dropped to 27% in 2010 and to 20% in 2012 (8.3% and 4.8%, respectively, for the 16-19 group, and 41% and 31%, respectively, for the 20-24 group). As a consequence of the massive destruction of jobs occupied by workers with low levels of education, the unemployment rate of the 16-19 age group increased to 61% in 2010 and to nearly 73% in 2012, while the corresponding one of the 20-24 group reached 37% in 2010 and 49% in 2012. At the same time, the share of temporary employment remained high and rose for young workers since 2009 in spite of the reduction observed in the overall share in the 2008-2013 period: it was 78% in 2010 and 83% in 2012 for the 16-19 group, and 56% and 60%, respectively, for the 20-24 group. Even for the group of young adults (aged 25-29) the share of temporary employment was very high (around 40% in those years).

The lack of growth played an important role in explaining the upsurge in youth unemployment in Europe during the crisis. The sharp decline in economic activity on average explains about 50% of the increase in youth unemployment in Europe during the crisis, and even more - 70% - in some euro area economies such as Spain (Banerji et al, 2014). In most countries, youth unemployment is almost three times more sensitive to growth than adult unemployment. This is partially due to the concentration of youth employment in cyclically sensitive sectors of the economy (such as construction) and in small and medium enterprises (SMEs), and the generally more fragile employment conditions of younger workers (temporary and part-time contracts),

which make them more susceptible to the effects of the recession. Nevertheless, younger workers always exhibit higher unemployment levels than adults, regardless of the economic conditions. The high levels of youth unemployment can be explained, among other factors, by labour market institutions (Banerji et al, 2014). Of particular relevance are labour costs (measured by the tax wedge and minimum wages relative to the median wage), especially for low-skilled labour; and spending on active labour market policies. Insufficient vocational training and pervasive labour market duality also affect youth unemployment rates. In particular, dual labour markets are characterised by a high share of temporary employment contracts with lower employment protection for workers who are on temporary contracts than for those on regular contracts.

Labour market duality has been associated with lower youth employment rates (Bertola et al, 2007). Blanchard et al (2013) suggest that the unequal distribution of unemployment and its unusual concentration among youth in some countries in part reflects dysfunctional labour market institutions, namely the dual employment protection systems. This would be the case of Spain. Also, duality could be more harmful for employment if combined with wage rigidity: when hit by a negative shock, firms are unable to adjust wages and instead end up dismissing workers, particularly those on temporary contracts (mainly youth). This was also the case of Spain, with labour market adjustments mainly focused on shedding workers on temporary contracts.

Despite the enormous destruction of jobs and the impact this had on the unemployment of workers, especially the youngest ones, none of the Spanish governments of the 2008-2012 period carried out a shock plan to increase employment and reduce unemployment quickly. Discussions in the media and in the political debate continuously focused on the ravages that the recession was provoking among the young population and on the fact that this was giving rise to a 'lost generation'. Measures of all kinds were adopted but not articulated in the form of a coherent and comprehensive plan aimed at the young population. The only attempt to do this was the Entrepreneurship and Youth Employment Strategy (2013-2016), adopted in February 2013, which was a project that resulted from a process of dialogue and participation with the social partners. The catalogue of initiatives comprised four main lines of action to:

1. Improve mediation: Actions involving vocational guidance, labour information and assistance in job seeking; modernisation of public employment services; single employment and self-employment portal; actions with placement agencies; mobility programmes; etc.
2. Improve employability: Second chance programmes; training with an employment commitment; training, especially in languages and information and communications technology; improved traineeships; promotion of vocational training through schools; training leading to professional certificates; evaluation and accreditation of vocational skills acquired during work experience and through informal training channels; etc.
3. Promote hiring: Incentives for part-time employment with training; hiring incentives for micro-enterprises and self-employed workers; 'first job' programme; incentives for work placement contracts; 'generations' contract¹; etc.
4. Promote entrepreneurship: Flat rate for young self-employed workers; making unemployment benefit compatible with the start of entrepreneurial activity; capitalisation of unemployment benefit; etc.

However, and in an attempt to encourage its use, the Spanish government reformed the regulation of the apprenticeship contract three times during the crisis. An interview with a

¹ 'Generations' contract was designed as an incentive for open-ended employment and it was introduced to encourage self-employed workers to hire long-term unemployed workers aged over 45 who can offer the experience needed to achieve the success of new, young entrepreneurial projects (Ministerio de Empleo y Seguridad Social, n.d.).

representative of the administrative staff conducted for this case study allowed to understand in detail all the modifications made to this policy measure. These changes coincided with broader reforms of the Spanish labour market, carried out in 2010 and 2012, which focused on five main areas: hiring, dismissal, changes in working conditions, labour intermediation and active policies, and collective bargaining. None of these reforms were agreed beforehand with the social partners (the employer associations and the most representative trade unions).

The first reform ([Royal-Decree Law 10/2010](#), 16 June):

- Created a separation between the theoretical and practical training, providing the theoretical training outside the workplace;
- Allowed to advance part of the theoretical training before employment in courses conducted by the autonomous communities (regions) to reduce early school leaving;
- Exempted students to attend compulsory secondary education (*educación secundaria obligatoria*, ESO) if they did not have this level of education (previously, apprentices without that degree were obliged to dedicate the hours of training to obtain this degree);
- Increased the age limit from 21 to 25 years and allowed individuals employed through this apprenticeship contract to qualify for the same social security benefits as the rest of the workers;
- Maintained the legal duration of the contract, which ranged from six months to two years; and
- Introduced bonuses of up to 100% in the employers' social security contribution for the whole duration of the contract, provided that the contracts implied an increase in the company's workforce, and bonuses for the conversion of training contracts to open-ended ones (€1,500 yearly for three years – €1,800 in the case of women).

The second reform, adopted on 26 August 2011 ([Royal-Decree Law 10/2011](#)), changed the name of the contract to 'A contract for training and apprenticeship' (hereinafter, TAC). The reform reinforced the rights of apprentices, modified certain aspects of the regulation of training activities and introduced the participation in certified training programmes as a legal requirement. Depending on the apprentices' previous educational level, they may choose to obtain either a vocational title of medium or high grade or a certificate of professionalism. All the training activities foreseen in the contracts must take place in approved training centres. In addition to these changes, the reform established new rules on the duration of the TACs, increasing the minimum duration to one year; and raised the age limit to access such contracts from 25 to 29 years (this was motivated by the strong increase observed in the number of young people NEET with low educational level and of age above 25). Lastly, (until the end of 2013) the reform maintained the temporary bonuses in the employers' social security contribution for the whole duration of the contract, over a period of 12 months, but it distinguished the amount of those bonuses by employers' size: 100% for firms with fewer than 250 employees and 75% for the rest. Employers were also entitled to other reductions on the social security quota paid by each apprentice hired, for a maximum period of three years, if the TAC were converted into an open-ended contract.

The third reform took place in 2012. The main changes were introduced within the framework of the labour market reform of 2012 ([Law 3/2012](#), 6 July), while the regulatory development was completed with Royal Decree 1529/2012. These changes made many of the requirements introduced by the previous reform more flexible. Thus, for example, while the 2011 reform repealed the possibility to renew training and apprenticeship contracts, the 2012 reform reintroduced the possibility to renew these contracts for a maximum period of three years (the minimum being, again, six months). In addition, this reform also relaxed the requirements for linking TACs. In this way, with the new regulation, the same individual can sign more than one training and apprenticeship contract with different employers, provided that the content of the training activity of these contracts is conducive to a different title. The 2012 reform also reduced the minimum number of hours that apprentices must dedicate to training activities (15% of the working time) and explicitly mentioned the possibility of receiving training in the same job.

The new regulation did not contemplate the possibility to offer unqualified apprentices the option of obtaining, through the TAC, a compulsory secondary studies degree. In the case of young people who left secondary education prematurely, professional certificates were the only way to obtain a training qualification, although completing compulsory education could also appear as one of the complementary activities contemplated in the training plans of TACs. Finally, the 2012 reform modified the economic incentives for the conversion of this type of contract into a permanent one. Previously, companies could only benefit from social security bonuses if the TAC resulted in a net increase in the company's workforce. The 2012 reform repealed this requirement and made the programme of hiring incentives permanent.

Apart from these permanent changes, the 2012 reform also introduced two important changes of a transitory nature. The first one maintained the age limit to access a TAC below 30 years as long as the national unemployment rate exceeds 15%. The second measure temporarily repealed the requirement of certified training (which in addition needed the prior authorisation of the PES). This measure, which was destined to be discontinued in February 2013, was nevertheless extended successively twice until the end of December 2015. Therefore, the formal requirement by which TACs should lead to obtaining a certified training with prior authorisation was not imposed until the beginning of 2016. The exemption was introduced to allow the adaptation of a regulation according to distance learning (or tele-training activities), which was finally introduced in 2016.

Overview of the mechanisms

The design of the TAC and the corresponding financial incentives are demand-side measures whose objective is to alter the hiring preferences of employers towards the recruitment of low-skilled young workers, improve the human capital of these workers and increase their transitions into stable employment. The regulation of this type of contract in Spain has undergone frequent and, at times, contradictory changes. Policymakers have alternated over the years between fairly flexible and permissive rules to promote the use of TACs, and stricter rules aimed to safeguard the quality of training received by apprentices. In general, the generosity of the economic incentives applied to this type of contracts has been progressively increasing.

Some features of the contract are designed to allow for the acquisition of general and specific training for young workers and increase their chances of remaining in employment either in the same firm or in a different one. In its initial regulation, the minimum time that apprentices had to dedicate to training activities could not be less than 15% of the hours dedicated to the working day of a full-time equivalent job. By law, apprentices without a compulsory secondary education degree (ESO) were obliged to dedicate the hours of training to obtain this degree. For others, the apprenticeship contract should allow the trainee to acquire the technical knowledge and experience necessary to carry out a qualified job. The content of the training programme must be specified in an annex to the contract and must be previously approved by the PES. In addition, the trainee must be assigned a tutor who acts as a link between the company and the chosen training centre. The companies, for their part, receive a monetary amount to cover the cost of the tutor and the training programme.

Other characteristics of this type of contract imply saving labour costs for employers, as TACs allow to receive compensation for social security contributions and set lower wages. On the one hand, the salary received by apprentices is determined by the collective agreement the company that hires them is subject to, and in any case, it must never be less than a legal minimum established by the rules that regulate it. In 1993, that legal minimum was set, respectively, at 70%, 80% and 90% of the legal minimum wage during the first, second and third year of the apprenticeship contract. Currently (2019), companies are simply required to pay apprentices at least the minimum wage for the hours dedicated to non-training work activities performed in the workplace. For example, if the apprentice spends 25% of the time to receive training, the company has to pay the apprentice at least 75% of the legal minimum wage.

On the other hand, employers take advantage of hiring incentives and compensation transfers. The subsidies are justified by the fact that the hiring of apprentices by companies can result in

insufficient investment in training by firms. The financial subsidies are designed to alter the incentives of employers to hire low-qualified young workers and to favour their employment stability, breaking the pervasive chain of temporary jobs and unemployment and the excessive turnover that this group of workers usually suffers from. In particular, companies that use TACs benefit from rebates in the social security quota, which are aimed to offset the costs associated with this type of contract. These bonuses cover the total quota that employers must pay to the social security for each apprentice hired (23.6% of total wage costs). Firms also receive subsidies for the costs of the tutor that each apprentice is assigned during their apprenticeship contract. The Ministry of Labour regulates these hourly rates. As of 2019, the hourly rate for distance or online courses is fixed at €5 per hour, while it is €8 per hour for classroom courses. In addition, micro businesses, with fewer than five employees, can claim a maximum of €80 per apprentice and month for tutoring activities. For all other companies, this compensation is reduced to €60 per month per trainee (Ministerial Order ESS/2518/2013). Companies can deduct this compensation from the so-called compulsory training fee imposed on all companies, amounting to 0.7% of the gross salary paid.

Overview of results and impacts

Considering the number of changes made to this contract in recent years, very few evaluations of its effectiveness have been carried out. Two recent studies, which compiled the main evidence of the impact of apprenticeship contracts (European Commission, 2013; CLEG, 2015), identified several dozens of impact assessments, but none of the two studies mentioned carried out any work on Spain. To the author's knowledge, there are only two academic evaluations (Jansen and Troncoso, 2018; Cueto and López, 2019) which can be used to provide evidence on the results of the use of this type of contract for hiring workers in Spain.

The main results of Jansen and Troncoso (2018) refer to the use of the TACs during the 2000-2015 period and show that long-term apprenticeship contracts significantly improve the access to an open-ended contract of entrants to the labour market, regardless of their previous educational experience. Specifically, at the end of the second and third year of the contract, they find substantial increases in the monthly transition rate from a TAC to an open-ended contract. These exit rates reach levels of 25% (second year) and 35% (third year) compared to rates close to 1% for the rest of temporary contracts of the same duration. This means that one in four individuals employed using a TAC of at least 24 months goes directly to a permanent job (within the same company) and this figure rises to one in three for those who have it for the maximum legal period of 36 months.

However, their findings also reveal important caveats. First, despite the positive results found for long-term TACs, one important issue that must be borne in mind is that most of the TACs observed in their sample are of short duration (about 90% last one year or less), and do not produce significant improvements in the rates of transition into permanent contracts and the labour stability of the individuals treated with these contracts, in comparison to the rest of temporary contracts of the same duration. Second, the positive effects of using training and apprenticeship contracts (especially if they last less than one year) tend to disappear when the contracts end. Although the authors find significant differences in the employment stability in the post-treatment period (TACs contribute to increasing the stability of subsequent temporary and permanent jobs, this effect being larger the longer the duration of the initial TAC), the effect of using TACs on subsequent exit rates from unemployment (once the worker has separated from the initial firm) is less optimistic (treated individuals remain longer in unemployment).

Taking into account not only the immediate effect (at the end of the episode of initial employment) but also the post-treatment effect (at the end of the subsequent episodes of employment and unemployment), the cumulative effects seem to be relevant but they are limited exclusively to workers who initially have longer contracts. Around 60% of young people who started their career with a three-year-long TAC found a permanent job within the first seven years of their working life, compared to 26% of those who started working with other types of temporary contracts of the same duration, different from the one of training and apprenticeship.

However, this difference is fully explained by the conversion into permanent contracts within the same company at the end of the TAC rather than by the subsequently improved stability. Furthermore, that difference is null for short-term contracts (less than one year). In sum, the good results obtained in this study concentrate exclusively on long-term contracts (the minority of TACs). For short-term contracts, the authors found that they did not produce significant increase in the rate of transitions into permanent contracts and the labour stability of the individuals treated with these contracts. The same findings stem from the analysis of longer trajectories (seven years of the individuals' working life).

One interesting piece of evaluation offered by these authors relates to the reforms passed in 2011 that increased the age limit to access a TAC from 25 to 29 years. This fact offers a unique scenario (a natural experiment) to evaluate the impact of apprenticeship contracts on the integration of young people into the Spanish labour market since, before the introduction of this measure, this group of young people between 25 and 29 years old could not access a TAC. The study results indicate that the temporary increase in the age limit to access a TAC did not produce a significant improvement in the employment rate of the individuals affected by the measure.

Cueto and López (2019) focus their evaluation analysis on the 2011 reform using data for the 2011-2015 period. To evaluate the effectiveness of TACs, the authors use several variables related to labour outcomes: whether the person worked at some point once the contract had ended; whether he/she gained access to a permanent contract; the time worked as a percentage of potential working time at the end of the contract; and the average monthly wages in the following years after hiring. With nearly all outcome variables analysed, significantly negative effects are obtained. Being hired under a TAC with a minimum duration of six months for a young person between 16 and 25 years is less effective than being hired under a similar temporary contract, both in terms of the likelihood of being hired for another job (nearly 30% less), percentage of time worked (about 30% less) and remuneration at the end of the contract (about €400 monthly less after one year; around €200 monthly less after three years). As regards access to a permanent contract, the effect of the treatment is not significant, therefore indicating that the TAC shows neither advantages nor disadvantages over a temporary contract (this effect is slightly positive only when longer contracts - one year or more - are considered). It can be said, therefore, that TACs do not seem to lead to better labour market outcomes of young people. This conclusion coincides with that reached by the authors of the first study (as described above). The only positive feature is that TACs have a longer duration (3-4 more months) than temporary ones. This may be related to the fact that legal regulations prevent this type of contracts from being chained over time (although this protection was diminished with the 2012 reform).

To put these findings into context, it is necessary to highlight that the importance of TACs in general and for the group of workers that they target is very limited. Despite the large number of potential beneficiaries of this type of contract (nearly two million in 2007 and about one million in 2017), official statistics (PES data on contracts signed) show that TACs represent a very small share of total contracts signed in Spain. This could be due to the possibility for employers to use other types of temporary contracts. The share of training and apprenticeship contracts in the total volume of initial contracts signed by the age group of 16-24 is very low. It was 2% in 2006-2007, declined to about 1.2% in 2009-2010 and grew after the 2010-2012 reforms. Thus, between 2012 and 2015, the proportion of TACs doubled, from 1.7% to 3.3% of total initial contracts. The duration of the majority of these contracts is, nevertheless, quite short; most of them last one year or less. They are, in addition, quite concentrated by industry, occupation and firm size. According to PES data for 2018 (CCOO, 2019), most of the contracts are signed in the services sector (92%, of which 28% in 'retail trade' and in 'food and beverage services'); in occupations with little or no qualifications (23% in 'salespersons in stores and warehouses' and 'workers of bars and restaurants', and 36% in 'elementary occupations' of agriculture, industry, construction and services); and in small companies (66% in firms with less 25 employees or less

– a share that was even larger before: 79% in 2015). All in all, the share of TACs converted into permanent contracts has been traditionally low (less than 5% in the 2010-2015 period).

One interpretation of the above findings and data would be that the null results of the TAC on the labour trajectories of most of the young workers obtained by the evaluation studies are partially attributable to:

- A prolonged period with excess labour supply and thus high unemployment rates;
- The institutional setting, in particular the implementation since the 1980s of labour market reforms at the margin that affected mostly the new comers (making available to companies all kinds of temporary and flexible contracts, whose extinction cost was practically nil, at least until 2010); and
- A poorly oriented and largely segmented productive system (and maybe a business culture in which training and professional qualification have not been sufficiently fostered). In this respect, it is very symptomatic that the qualifications structure of the workforce in Spain is inverse to the one existing in most European countries: a broad base of people with low qualification, a broad roof of people with university degrees, and a very narrow central strip of graduates with professional and vocational training (OECD, 2018).

Finally, on aggregate terms, some of the modifications introduced in recent years have produced changes in the use of this type of contract by companies. Official data published by the PES allow to look at the evolution of the number of contracts. The most visible effect of the reforms is an increase in the volume of signed TACs, mainly from the year 2012: that number declined from nearly 120,000 in 2006 to around 60,000 in 2009-2012 but then increased to 175,000 in 2015. Interestingly, it dropped significantly in 2016 to reach the minimum in a decade, with about 46,000 contracts. The formal requirement established by the 2012 reform, which stated that TACs should lead to obtaining a certified training with prior authorisation of the PES, was not imposed until the beginning of 2016. As pointed out by both interviewees, the clear drop in the number of signed TACs in 2016 might be explained by the end of this exemption in the regulation, which might increase the difficulties to carry out training actions and reduce the flexibility of the contract. This can be deemed as an unintended effect of the new regulation. A part of that decrease was compensated by the use by companies of a more flexible contract (the part-time contract with a training link (*Contrato a tiempo parcial con vinculación formativa*), which is similar to an internship contract), the number of which increased as of 2016.

Furthermore, the main increase in the number of contracts in 2012-2015 occurred in the groups aged 20 to 24 and, in particular, 25 to 29. These correspond to the age groups modified in the latest reforms. At the same time, the number of contracts within the age group which the TAC traditionally targeted (16-19 years) declined substantially until 2012: their share of the total number of signed TACs diminished from about 70% in 2006 to less than 15% in 2013-2015. Therefore, it appears that the rise in the use of this contractual figure has occurred, among other things, because the eligible workers are more numerous as a result of the increase in the age limit up to 30 years.

Conclusions and policy pointers

As stressed by several authors (Autor and Dorn, 2013; Goos et al, 2014), LMS can be linked to the introduction and use of technology in the workplace (skill-biased technical change) and the interaction between technology and the changing characteristics of product markets (uncertainty). Moreover, the digital revolution and the impact of globalisation are causing rapid changes in the structure of the professions and the demand for qualifications by companies. Low-educated workers comprise the population group whose employment prospects in the long-run are rather bleak. The offer of training opportunities should adapt quickly to those changes. The TAC could become a flexible instrument to adapt unskilled young labour to the changing

needs of the labour market and to combat LMS, since the TAC is aimed, through the combination of work and training, to upgrade the professional qualifications of low-educated young people and to provide them with the possibility of acquiring skills and competences that increase their employability and career progression. At the same time, the TAC (if not limited to young people only) could be useful for companies, because it could help them to provide workers with firm-specific training from the beginning of their professional careers, keep the workers that are most valuable to the firm, make the workforce more flexible and adaptable, increase productivity, create jobs with more added value, introduce new technologies and increase competitiveness. Probably, this would be true especially for larger firms, for which the contract would be much easier to use and more beneficial than for small companies. If this is the case, a more differentiated support for smaller firms (for instance, with higher reductions/subsidies) might be useful to avoid that LMS occurs because of company characteristics. Therefore, the TAC may help address aspects of segmentation related to labour supply and demand. This is also what the interviewed expert points out.

The characteristics of this type of contract seem to make it an appealing measure for companies. The use of training contracts implies a saving of labour costs for employers and result in lower wages (Picchio and Staffolani, 2013). This decrease in costs would encourage companies to invest in training even if the trained worker changed firms. Furthermore, training contracts can serve as a mechanism for selecting workers and as a means to reduce recruitment risks (Grassi, 2009). In the selection process of workers, these contracts can be used to attract those who show more motivation. An implicit contract between an employer and an employee may result in more flexible working conditions in return for further training and potential job opportunities in the future. Thus, the youth and the less educated, interested in improving their qualifications in exchange for better positions, would probably be more inclined to choose this type of contract.

However, in a situation characterised by excess labour supply, a wide availability of different types of temporary and flexible contracts, reduced union power and LMS, that is unlikely to be the case. In this respect, the results of the evaluations reviewed in this case study raise certain doubts about the role of TACs for employers. Findings also question the ability of this type of contract to facilitate a transfer of the skills acquired by workers during the process of learning in a TAC to their subsequent career and to improve the stability and working conditions of the eligible workers in the medium and long term. Those studies indicate that, on average, training and apprenticeship contracts last longer than ordinary temporary contracts (so young people who start their careers by making use of a training contract partially avoid the turnover which is more common among other temporary workers). For some (those who remain longer in the same firm, at least two or three years), this helps them to start a more stable career. In spite of that, most TACs last short and the majority of young workers using them are unable to achieve greater stability and better working conditions in a period of several years. In sum, this type of contract does not seem to contribute to improving youth employability when compared to other temporary contracts.

The reforms carried out in 2010, 2011 and 2012 do not seem to have reversed the situation. There can be two explanations behind this result. The first is the configuration of the contract itself and how it has been modified. The training component has been relaxed (especially by the 2012 reform) to the detriment of the labour integration component and flexibility in the conditions of application. The second is that the contract has no impact because of the (unchanged) vision that employers have of it, namely that it is used as a way to reduce the labour costs of hiring low-educated young workers rather than as an initiative to improve their qualification in order to make them valuable for employers.

In terms of transferability, as the interviewed expert points out, the Spanish experience shows that employers seem to be quite sensitive to modifications in the design of the contracts, given the labour market situation and the institutional setting. On the one hand, changes that introduce more flexibility in the conditions concerning the application of the contract and that reduce the training component lead to an increased use of these contracts on the part of firms. This occurred after the 2012 reform (after several years of recession) that reintroduced the possibility

of renewing these contracts for a maximum period of three years, relaxed the requirements for linking contracts (by temporarily repealing the requirement to provide a certified training qualification), and reduced the minimum number of hours that apprentices must dedicate to training activities. In this way, the Spanish authorities succeeded in promoting the use of TACs. However, such measures (which could undermine the quality of the training received by apprentices, although no information to prove this is available) might not help low-educated young workers obtain an official degree and acquire and enhance skills that improve their career progression. On the other hand, the reinstatement in 2016 (an expansionary year but still with high unemployment rates) of the requirement to provide certified training, associated to an increase in the difficulties to implement distance learning as well as formative actions authorised by the PES, led the number of apprenticeship contracts to its lowest levels in recent years. Overall, it seems difficult to balance features of the contract for them to respond simultaneously to the needs of both workers and employers. The above proves true in situations with excess labour supply, where firms largely determine the working conditions, while social partners (and especially trade unions) have reduced power (as in Spain through the relatively decentralisation of collective bargaining after the labour market reforms of 2010 and above all 2012). In a situation of labour shortages, the mechanisms might work differently.

In sum, the following features could be pointed out:

- The design of a more flexible regulation of apprenticeship contracts can boost the creation of apprenticeships. However, measures that erode the quantity and quality of training should be avoided;
- Longer contracts bring better results in terms of employment stability, access to permanent contracts and progression opportunities. Therefore, the creation of long-term apprenticeships should be encouraged;
- The existence of financial incentives to transform this type of contract into a permanent one could be an important factor in achieving the transition of young workers towards job stability. This would help companies recover the costs associated with hiring these workers more quickly; and
- Special attention should be paid to the needs of the most vulnerable groups, in particular the young people who left secondary school prematurely. The regulations should facilitate their return to and completion of the compulsory education; as well as the development of long-term training programmes for this group.

All this implies that, in order to tackle LMS, it would be desirable to achieve a combination of the following measures:

- Making training attractive for workers and employers;
- Ensuring quality of training (which includes a sound training period);
- Incentivising the transition after training; and
- Tailoring the above to the characteristics and needs of specific target groups.

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List of abbreviations

ESO Educación secundaria obligatoria (compulsory secondary education)

GDP Gross domestic product

NEET Neither in employment nor in education or training

PES Public employment service

TAC Contract for training and apprenticeship

VET Vocational education and training

Table 1: CMO configurations of ‘Re-definition of the training and apprenticeship contract’

Initiative	This contract intends to increase the professional qualification of young low-educated workers through work-based learning and practice in a company. Changes were put in place in 2010, 2011 and 2012, affecting several characteristics of the measure, including the age threshold, the duration restrictions, the possibility of renewals, the requirement of certified training, and the financial incentives for employers.
Target group characteristics	Young people between 16 and 24 years of age with only primary or secondary education.
Contextual features	<ul style="list-style-type: none"> • Between 2007 and 2010, the employment rate dropped from 21% to 8% for the 16-19 age group (from 58% to 41% for the 20-24 age group). • As a consequence of the massive destruction of jobs occupied by low-educated workers, the unemployment rate of the 16-19 age group increased to 61% in 2010 and to nearly 73% in 2012 (37% and 49%, respectively, for the 20-24 age group). • The share of temporary employment remained very high and even rose: 78% in 2010 and 83% in 2012 for the 16-19 age group (56% and 60% for the 20-24 age group). • Faced with this situation, and in an attempt to encourage its use, the Spanish governments reformed the regulation of this type of contract three times during the crisis. None of these reforms were agreed beforehand with the social partners.
Mechanisms	<ul style="list-style-type: none"> • Some features of the contract are designed to allow for the acquisition of general and specific training (training content, minimum time of training, existence of a tutor). These features make the contract useful for companies, because it can help them to provide workers with firm-specific training, screen recently hired workers, and make their workforce more flexible. • Hiring incentives are combined with compensation transfers (to cover training costs). These economic incentives are justified because the recruitment of apprentices can result in insufficient investment in training by firms. These subsidies are designed to alter the incentives of employers to hire low-educated young workers and to favour their employment stability.
Outcomes	<ul style="list-style-type: none"> • On average, training and apprenticeship contracts last longer than ordinary temporary contracts for this specific target group. • For some workers (those who remain longer in the same firm, at least two or three years) this helps them to start a more stable career. • However, most contracts last short and the majority of young workers are unable to achieve greater stability and better working conditions in the medium and long term (after several years).

Table 2: Evaluation studies of 'Re-definition of the training and apprenticeship contract'

Evaluation study	Period	Data source	Method	Outcomes	Author's assessment of the quality of the evidence
Jansen and Troncoso (2018)	2000-2015	'Continuous sample of working lives' (administrative and longitudinal data based on social security employment records)	Multi-state and multi-spell discrete time duration model	<ul style="list-style-type: none"> • Positive effects on the monthly transition rate from a TAC to an open-ended contract: 25% (at the end of the second year) and 35% (at the end of the third year) compared to rates close to 1% for the rest of temporary contracts of the same duration. • Positive effects on work trajectories: around 60% of young people who start their career with a 'three-year' TAC find a permanent job within the first seven years of their working life, compared to 26% of those who start working with a similar temporary contract. • Caveats: most contracts last one year or less; and individuals who start with a TAC remain longer in unemployment. • Reform of 2011-2012: the increase in the age limit to access a TAC did not improve the employment rate of the individuals affected. 	The main focus of the evaluation is on effectiveness. It is relevant for the purposes of this study because it considers employment effects, in terms of transitions into permanent contracts in the short-run (within the same company) and also in the longer-run (after several years of working life). The evidence produced on the basis of a counterfactual analysis using a control group is strong. The study provides extensive information for contextual analysis.
Cueto and López (2019)	2011-2015	'Continuous sample of working lives' (administrative and longitudinal data based on social security employment records)	Propensity score matching	<ul style="list-style-type: none"> • Negative effects of being hired under a TAC: less likelihood of being hired for another job (nearly 30%), smaller percentage of time worked (about 30%) and smaller monthly remuneration after the contract (about €400 after one year; around €200 after three years). • No differential effects on access to a permanent contract. 	The main focus of the evaluation is on effectiveness. It is relevant for the purposes of this study because it considers a set of labour market indicators: not only the probability of having a permanent contract but also wages and proportion of time worked. The evidence produced on

				<ul style="list-style-type: none">• TACs last longer (3-4 months) than other temporary contracts.	the basis of a counterfactual analysis using a control group is strong.
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