

**Drawing Lessons from the Boom  
of Temporary Jobs in Spain \***

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## Abstract

During the last two decades many EU countries have reformed the set of legal rules that regulate dismissals. And, in contrast with other institutional reforms of the labour market, there seems to be a common strategy of maintaining strict employment protection legislation for workers under the typical “full time”/permanent employment contract, but liberalising “atypical”/temporary/part-time employment contracts for new entrants in the labour market. As a result, the incidence of temporary employment has noticeably increased across the EU, being Spain the paramount case in this regard. In this paper we aim at two goals. First, we take stock of the available Spanish evidence regarding the consequences of a dual labour market -in which one-third of employees are under very flexible employment contracts with low severance payments and two-thirds are under permanent employment contracts with very high employment protection- and the lessons which can be drawn for other countries. Secondly, we address the puzzle of why temporary employment in Spain, despite of recent labour market reforms which have reduced firing costs under the permanent contract and restricted the use of temporary contracts, remains so high.

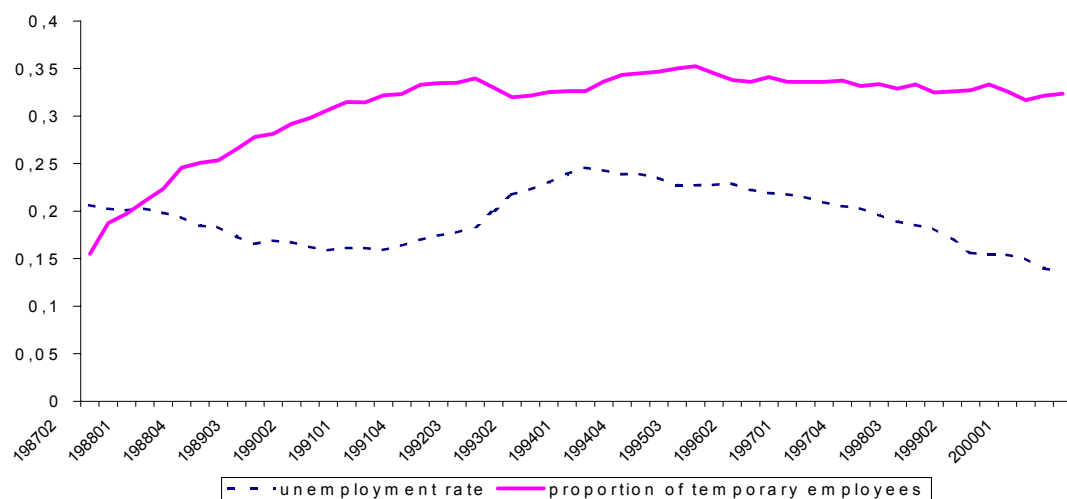
*Keywords:* Temporary employment, employment protection legislation.

*JEL Codes:* J65, J68.

## 1. Introduction

If one looks for a country where to test for the different effects of temporary employment contracts on the labour market, Spain provides a fascinating case study. In 1984, when the unemployment rate was 20.1%, the Spanish government liberalised fixed-term employment contracts (FTCs, henceforth), entailing much lower firing costs than the “typical” permanent employment contract. The proportion of temporary employees increased very rapidly and has been above 30% since 1990 (see Figure 1).<sup>1</sup> Despite further labour market reforms along the 1990s aimed at reducing firing costs for permanent employees and restricting the scope for the use of fixed-term contracts, the proportion of temporary employees has not significantly declined. During that period more than 90% of new hires are under FTCs and other types of temporary contracts (see section 2 below), and the duration of employment spells has very much decreased. Hence, in less than a decade, Spain went from a fairly regulated market with high firing costs and high unions’ bargaining power at wage determination to a dual labour market under which permanent employees (around 68% of all employees) enjoy the high protection and high bargaining power of the past, while temporary employees (around 32% of all employees) suffer from high turnover rates, low job tenure, and are paid lower wages.

**Figure 1. Temporary employment (as proportion of all employees) and unemployment rate. Spain, 1987-2000**



Source: Labour Force Survey.

<sup>1</sup> Data on the incidence of temporary employment are only available since 1987.

The implications of temporary employment contracts for employment creation, wage determination and productivity growth have been extensively studied along 1990s by a series of papers drawing from the Spanish experience.<sup>2</sup> A general conclusion of that research is that the rise of temporary employment can be rationalised as a convergence process to a steady-state composition of employment in which the ratio of temporary to permanent employees is determined by: i) the elasticity of substitution between both types of workers, ii) the relative wage of workers under each of those contracts, iii) the gap in firing costs between workers of both types, and iv) the volatility of labour demand along the business cycle. However, the evolution of temporary employment during the second half of the 1990s is less well understood: despite recent labour market reforms entailing considerable reductions of firing costs under permanent employment contracts introduced in 1994 and, again, in 1997, and generous subsidies to the hiring of permanent employees, the proportion of temporary employment has not significantly declined (see, once more, Figure 1).

In view of the above facts, the goal of this paper is twofold. *First*, we take stock of the available evidence regarding the consequences of a dual labour market -in which one-third of employees are under very flexible employment contracts with low severance payments and two-thirds are under permanent employment contracts with very high employment protection- and the lessons which can be drawn for other countries and for the future of the Spanish labour market if the current state of affairs were to remain unchanged. *Secondly*, we address the puzzle of why temporary employment in Spain, despite the labour market reforms of the 1990s, remains so high to date. The structure of the paper is as follows. We start, in section 2, by describing with some detail the nature of temporary employment contracts. Temporary employment can take different forms and different regulation across countries yields different types of contracts, all of which are, too often and mistakenly, considered under the same heading. In section 3, we describe the institutional peculiarities regarding fixed-term employment in Spain and the changes in the regulation which took place along the 1980s and the 1990s. Section 4 summarises the main theoretical implications of FTCs on a wide variety of labour market dimensions ranging from employment volatility to the provision of training, the evolution of labour productivity and the wage distribution, and provides a summary of some Spanish empirical evidence supporting/refuting the theory. In Section 5 we address the important issue of why the incidence of temporary employment remains so high even after 1997, when firing costs on a new type of permanent contracts went significantly down and large subsidies to permanent hires were awarded. For that, the different behaviour between the private and the public sectors in their hiring procedures will be subject to scrutiny. Finally, Section 6 concludes.

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<sup>2</sup> See, for instance, Bentolila and Saint-Paul (1992), Jimeno and Toharia (1993), Bentolila and Dolado (1994), Jimeno and Toharia (1996), Alba (1998), and Saint-Paul (2000), among others.

## 2. Some Thoughts on the Nature of Temporary Employment

Temporary employment is a term which is often used with different meanings. It may either refer to a certain characteristic of a “job” or to a characteristic of the employment contract under which the worker is hired, namely, its fixed-term/determined duration.<sup>3</sup> Hence, it is useful to distinguish among the following types of temporary employment:

- 1) Employment in *temporary jobs* which have a shorter duration than the regular “open ended” job. In this case, temporary employment is related to the “structure of the economy”, namely, to the composition of output by industry, insofar as different sectors face different technological and demand restrictions which may determine the relative weight of jobs which have a certain duration. In some countries (e.g. Sweden), leave replacement (substitution) contracts can be classified within this class.
- 2) Employment under *probation*, namely the early period in an employment relationship. In some countries, the regular employment contract specifies an initial period during which the worker can be fired if proven unfit for the job without the termination costs embedded in the regular employment contract at a later stage of the employment relationship. In other countries the “probationary period” is regulated under a different contract which changes when the worker gets a permanent contract. In this case, temporary employment is determined by the incidence of the asymmetric information problem which the “probationary” provisions are meant to solve and by how the Employment Protection Legislation (EPL, henceforth) deals with this problem (if under the regular contract or under an “atypical” one). Some training contracts (e.g. apprenticeship in Germany), can be counted under this heading.
- 3) Employment under *fixed-term contracts*, that is, employment under a contract specifying a fixed duration, in contrast to the “open-ended” duration nature of indefinite/regular contracts, for a regular (non-seasonal) activity. In the Spanish case, FTCs entail lower termination costs in case of workers’ dismissals than those specified under regular contracts, to which, using a slight abuse of language, we will refer in the sequel as *permanent* contracts. In this case, the incidence of the temporary employment is determined, to a large extent, by the EPL provisions regarding firing costs under both types of contracts and the restrictions to the use of FTCs.

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<sup>3</sup> See Booth, Francesconi and Frank (2000) for further reflections on the nature of temporary employment in the context of the U.K.

Table 1 reports a summary of the incidence of temporary employment in EU countries and a very brief list of restrictions applying to “atypical” contracts (circa mid-1990s). Since the mid-1980s there has been a tendency towards the reduction of EPL in almost all EU countries, very often as a result of the introduction of new contractual types entailing higher flexibility.<sup>4</sup> And, as can be observed in Table 1, the incidence of temporary employment has increased in most EU countries (with the exceptions of Greece, UK, Denmark and Luxembourg). As mentioned already, Spain holds the leadership with almost twice (32%) the proportion of temporary jobs in Portugal (18,6%) which currently stands second. Figure 2 shows the evolution of different types of temporary employment in Spain since the mid-1980s and what really stands out, in terms of the previous classification of temporary employment, is the predominance of FTCs. As shown in Table 1, there are other countries in the EU where that type of contract exists but in none of them reaches half of the importance that it does in Spain. Another salient feature of the Spanish case is that, once the proportion of temporary jobs in total salaried employment converged to an equilibrium value of around one-third, it has remained roughly constant at this level, despite the implementation of various reforms aimed at lowering it.

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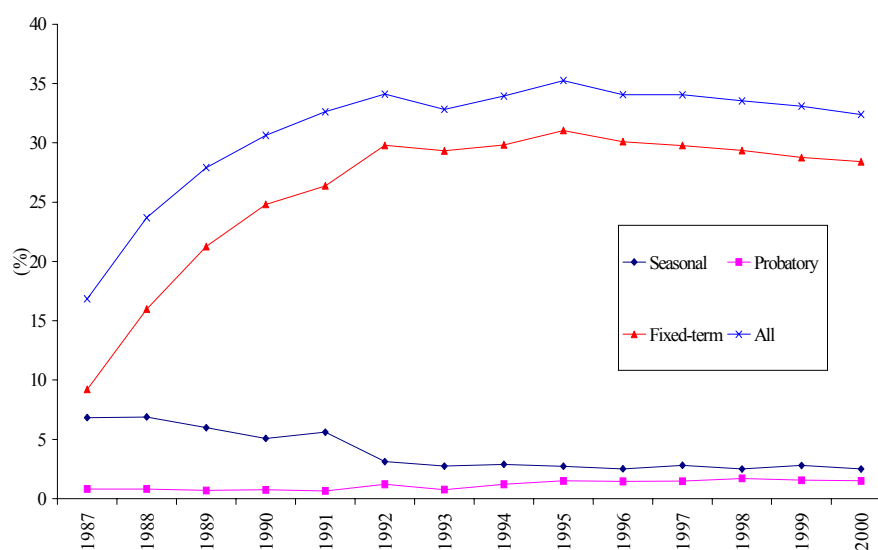
<sup>4</sup> Fondazione Rodolfo De Benedetti (2000) presents a detailed account EPL reforms in the EU over the 1986-1997 period.

**Table 1. Temporary employment across Europe**

	% Temporary employees				Restrictions to the use of fixed-term contracts
	1985	1990	1996	1998	
<b>Spain</b>	15.6	29.8	33.6	32.9	No restrictions for jobs of limited duration (seasonal, casual eventual jobs). Since 1994 they cannot be used for permanent jobs.
<b>Men</b>	14.4	27.8	31.9	32.1	
<b>Women</b>	18.4	34.2	36.7	34.4	
<b>Finland</b>	10.5	11.5	17.3	17.7	Can be used for temporary substitutions and special needs of firms of certain characteristics.
<b>Men</b>	9.6		14.1	13.3	
<b>Women</b>	11.3		20.5	21.9	
<b>Portugal</b>	14.4	18.3	10.6	17.3	Can be used by new firms or to hire first job-seekers and long-term unemployed.
<b>Men</b>	13.5	16.8	10.2	16.2	
<b>Women</b>	15.9	20.5	11.1	18.6	
<b>France</b>	4.7	10.5	12.6	13.9	Restricted to “objective” situations: Seasonal jobs, temporary substitutions, training contracts and some subsidised jobs in the public sector.
<b>Men</b>	4.8	9.4	11.5	13.0	
<b>Women</b>	4.6	12.0	13.9	15.0	
<b>Greece</b>	21.1	16.5	11.0	13.0	Only for seasonal jobs.
<b>Men</b>	21.8	16.9	10.5	12.0	
<b>Women</b>	19.6	15.0	11.9	14.7	
<b>Sweden</b>	11.9	10.0	11.8	12.9	Can be used for temporary substitutions, training contracts and transitory increases in production. Also, without causes for at most 5 employers within each firm.
<b>Men</b>		7.3	10.1	10.6	
<b>Women</b>		12.7	13.4	15.2	
<b>Germany</b>	10.0	10.5	11.1	12.3	Could be used only under objective causes before 1986 and even without since then.
<b>Men</b>	9.2	9.8	11.0	12.1	
<b>Women</b>	11.1	11.6	11.2	12.5	
<b>Netherlands</b>	7.5	7.6	12.0	12.7	Restrictions against repeated use.
<b>Men</b>	5.9	6.1	9.1	10.2	
<b>Women</b>	10.8	10.2	15.9	16.1	
<b>Denmark</b>	12.3	10.8	11.2	10.1	For specific workers, mostly in professional services and the construction sector.
<b>Men</b>	11.6	10.6	10.8	9.3	
<b>Women</b>	13.1	11.0	11.8	11.0	
<b>Austria</b>			8.0	7.8	No restrictions for the first contract.
<b>Men</b>			8.1	8.0	
<b>Women</b>			7.9	7.7	
<b>Italy</b>	4.8	5.2	7.5	8.6	Since 1987, under any provisions established by collective bargaining agreements.
<b>Men</b>	3.6	3.9	6.6	7.5	
<b>Women</b>	7.0	7.6	8.9	10.3	
<b>Ireland</b>	7.3	8.5	9.2		No restrictions
<b>Men</b>	5.5	6.6	7.1		
<b>Women</b>	15.5	17.6	22.2		
<b>UK</b>	7.0	5.2	7.1	7.1	No restrictions
<b>Men</b>	5.7	3.7	6.0	6.0	
<b>Women</b>	8.8	7.0	8.2	8.3	
<b>Belgium</b>	6.9	5.3	5.9	7.8	No restrictions within the first two years of contract.
<b>Men</b>	4.7	3.3	4.5	5.9	
<b>Women</b>	10.9	8.6	8.0	10.4	

Source: OECD (1999) and European Commission (2000).

**Figure 2. Temporary employment contracts by type (as % of all employees), Spain, 1987-2000**

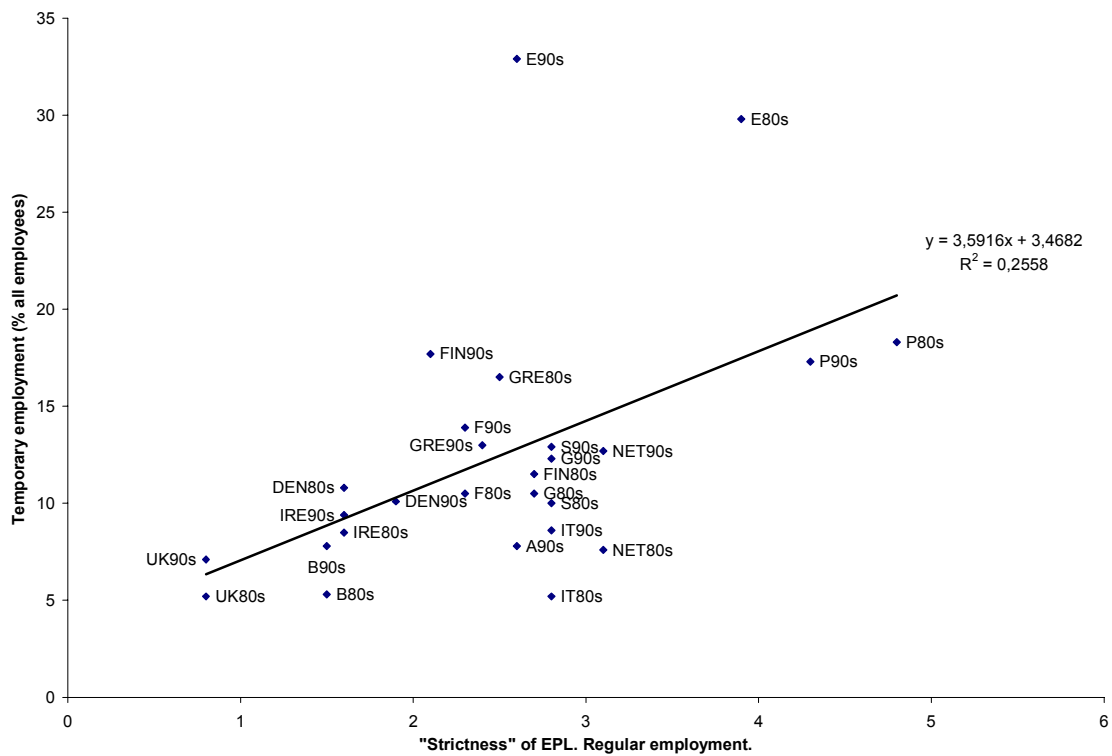


Source: Labour Force Survey.

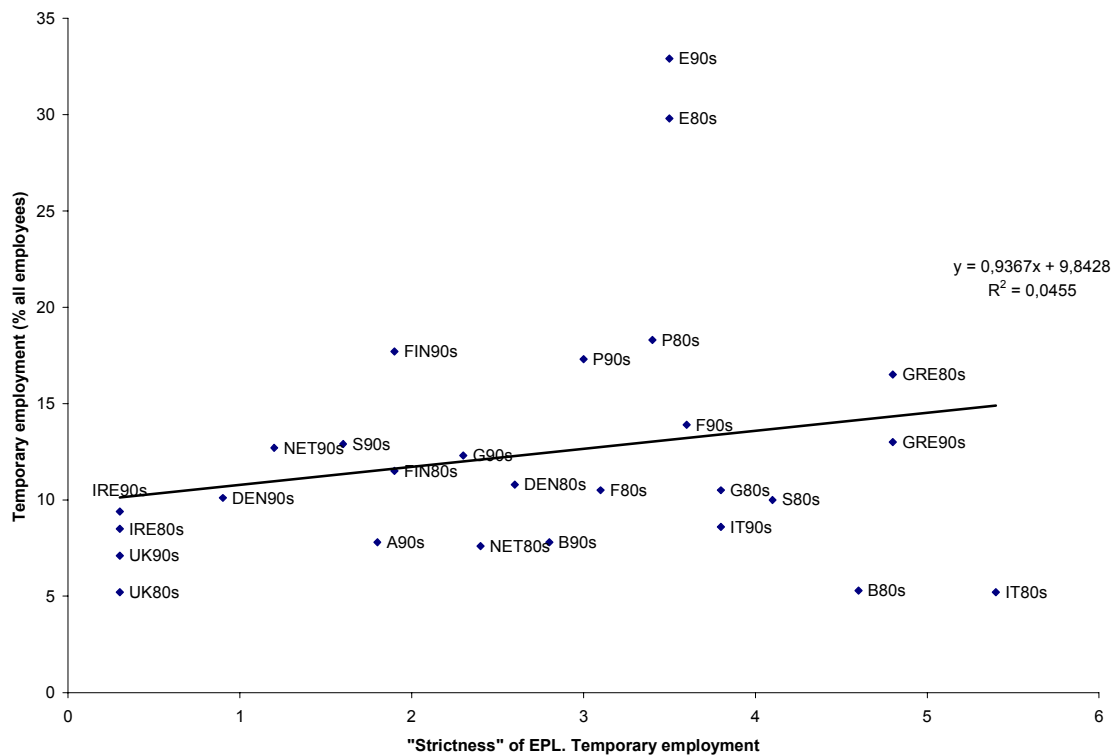
Since there are many legal provisions affecting both firings under the regular permanent contract and the use of temporary contracts, it is not an easy task to summarise in a single indicator the main differences in the degree of strictness of EPL across countries. There are, however, several attempts at constructing such a type of indicator, out of which the most widely used is that from OECD (1999), which weights several provisions (notice period, severance payments, etc.) under both types of contracts. Figures 3a and 3b depict the relationship between the weight of temporary employment and the OECD indicator of EPL strictness under both permanent and temporary employment, respectively, where the sample consists of EU countries during the 1980s ('80s) and the 1990s ('90s). As can be seen, there is a positive relationship between the importance of temporary contracts and both types of indicator, though much stronger with respect to the degree of EPL strictness regarding permanent contracts. The positive correlation in Figure 3a can be clearly interpreted as sign that temporary contracts act as a substitute for flexibility in those countries with severe EPL for permanent jobs. However, that temporary employment increases with EPL strictness regarding temporary contracts, as shown in Figure 3b, is a surprising feature, which can be explained by the fact that both indicators of the degree of strictness are positively correlated. This suggests that countries using temporary contracts as a flexibility device eventually tend to restrict them in order to avoid an excessive segmentation of the labour market. That interpretation of the previous puzzle seems to be confirmed by the fact that in a regression of the incidence of temporary employment on both EPL indicators, only the one pertaining to the use of permanent contracts is found to be statistically significant.<sup>5</sup>

<sup>5</sup> A regression of the proportion of temporary employment (TEMP) on a constant, EPL for permanent employees (EPLP) and EPL for temporary employees (EPLT) yields:  $TEMP = 3.43 + 3.56 * EPLP + 0.04 * EPLT$  (with t-ratios of

**Figure 3a. “Strictness” of EPL (regular employment) and temporary employment**



**Figure 3b. “Strictness” of EPL (temporary employment) and temporary employment**



Source: OECD (1999) and European Commission (1999). Legend: E: Spain. P: Portugal. FIN: Finland. GRE: Greece, F: France, S: Sweden, NET: The Netherlands, G: Germany, A: Austria, IT: Italy, D: Denmark, B: Belgium, IRE: Ireland, UK: United Kingdom.

2.60 and 0.05 for the estimated coefficients of EPLP and EPLT, respectively). According to this equation, the predicted values of TEMP for Spain would be 17.5% in the 1980s and 12.8 in the 1990s, respectively.

### 3. The Institutional Background and Labour Market Reforms

The current institutional framework of the Spanish labour market dates back to 1980, with the approval of the so-called Workers' Statute (*Ley del Estatuto de los Trabajadores*). This law defined two main institutional features of the Spanish system of labour market relations which, despite subsequent reforms, still remain operative<sup>6</sup>:

- i) A high degree of employment protection against both dismissals and functional and geographical mobility. Under a permanent contract, firing costs depend upon worker's seniority and the reasons for dismissals, which may be: i) "objective" (worker's incompetence, lack of adaptation to the job post, absenteeism), ii) due to economic, technological, organisational or productive causes, or iii) "disciplinary" reasons. Dismissed workers may appeal to court, and severance payments depend on the judge's decision. Collective dismissals (roughly those affecting more than 10% of the firm's labour force over a period of 90 days) may be justified only on economic, technological, organisational or productive reasons, and require administrative approval.<sup>7</sup>
- ii) The predominance of collective bargaining at the provincial/industry level as the means for establishing wages, working hours, and other employment conditions, complemented by negotiations at other levels of bargaining (national, firm-level), where wages paid to workers under FTCs should be the same as wages paid to workers doing a similar job under a permanent contract, though, in practice, there are wage gaps against temporary workers.<sup>8</sup>

During the eighties and nineties, Spanish labour market institutions have been under continuous, gradual reforms which have reduced the strictness of EPL. The most significant change in this regard was the liberalisation of fixed-term employment contracts in the late 1984, introducing a whole variety of

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<sup>6</sup> See Jimeno and Toharia (1994) for further details.

<sup>7</sup>The judge may declare dismissals "fair", "unfair" or "null". If a dismissal justified by either "objective" or economic, technological, organisational or productive reasons is declared "fair", the worker receives a severance payment of 20 days' wages per year of seniority with a maximum of 12 months' wages. If any dismissal is declared "unfair", the employer can choose between the worker's reinstatement and a higher severance payment of 45 days' wages per year of seniority with a maximum of 42 months' wages (33 days' wages per year of seniority with a maximum of 24 months' wages under the new permanent contract introduced in 1997) together with the wages corresponding to the period between the date of the dismissal and the date of the court's decision. If the dismissal is declared "null", then the worker must be reinstated and the wages corresponding to the period between the date of the dismissal and the date of the court's decision must be paid. Collective dismissals entailed severance payments of 20 days' wages per year of seniority with a maximum of 12 months' wages but, in practice, to achieve workers' agreement, which eases the administrative approval, severance payments are much higher.

<sup>8</sup>Workers under FTCs receive wages which are about 10% lower than those of permanent employees (after controlling for observable characteristics). Something similar happens in other countries (on France, see Blanchard and Landier, 2000).

temporary contracts which, by contrast to the permanent ones, entail much lower severance payments, if any, and whose termination cannot be appealed. More recently, there have been two labour market reforms (in 1994 and in 1997) aimed at undoing the liberalisation of 1984 and reducing the proportion of temporary employment. In 1994 the conditions for “fair” dismissals were widened and the conditions for the use of temporary contracts restricted. In 1997 the employer confederation (CEOE) and the two major unions (UGT and CC.OO.) reached an agreement to reform the system of employment contracts and the structure of collective bargaining. The main objective of that reform was to reduce the proportion of temporary employees, and to those means, a new permanent employment contract with lower firing costs in case of unfair dismissals was put in place.<sup>9</sup>

Thus, a brief summary of the process of EPL reforms in Spain over the last two decades can be as follows. Having Spain one of the most rigid EPL in the EU, flexibility “at the margin” was introduced in 1984 by easing the use of temporary contracts for non-seasonal productive activities while keeping the protection of permanent contracts. As the proportion of temporary jobs surged, the recent reforms during the 1990s have tried to get a more “balanced” situation between both types of contracts by restricting the use of temporary contracts, on the one hand, and by reducing firing costs under permanent contracts, on the other.

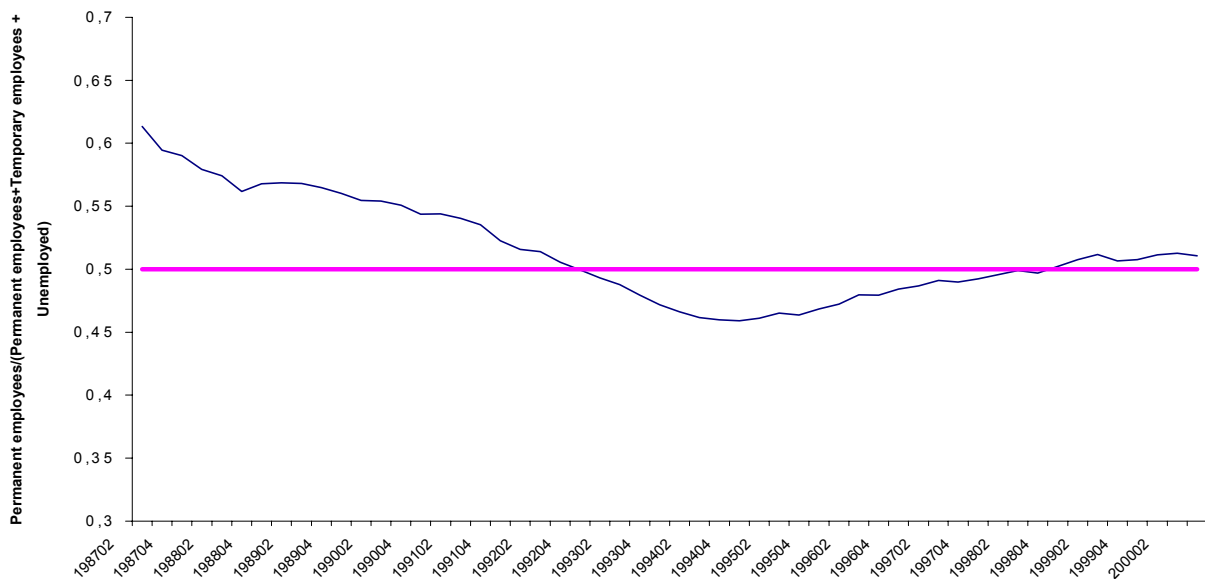
The understanding of the political determinants of labour market reforms has recently become one of the key topics of the research on European unemployment (see, e.g., Alogoskoufis et al., 1995, and Saint-Paul, 1996, 2001). In the specific case of the Spanish EPL reforms, there is a simple indicator which shows the “political support” of the reforms. Assuming that the workers’ only goal is to maximise the expected wage (i.e., the wage times the probability of employment), that unions protect the interest of the median worker and that the potential constituency of the unions is formed by both salaried workers (both permanent and temporary) and the unemployed, a value above 0.5 of the proportion of workers with permanent contracts entailing “45 days” of redundancy pay over the sum of total salaried employment and the unemployed, will signify that permanent workers are the “insiders” and that the unions will try to favour their interests. Conversely, if the ratio is below 0.5, it means that the temporary workers plus permanent ones with lower severance payments and the unemployed will be those who dictate the interests of the unions. Figure 4 displays such a ratio since 1987 (the first year for which data on temporary employment are available). The introduction of FTCs in 1984 can be rationalised as a last-resource measure

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<sup>9</sup>Severance payments in case of unfair dismissal under the new contract are 33 days’ wages per year of seniority with a maximum of 24 months of wages (instead of 45 and 42, respectively, under the regular permanent contract). This new contract could be used for most new hires, with the exception of workers aged 30-45 years with unemployment spells below one year, and was strongly supported by social security contribution rebates.

when unemployment was very high and increasing, employment creation was very low and, hence, there were very few job alternatives for displaced workers. Eventually, with the widespread use of FTCs and the further increase in unemployment, there was a very rapid drop of the proportion of permanent employees, to the extent that, by the early 1990s, the ratio was clearly below 0.5. That suggests the opening of a “window of opportunity” for the reforms that took place later in 1994 and 1997.

**Figure 4. The “political support” for EPL reforms**



#### 4. The Effects of Two-Tier Labour Market Reforms

Since FTCs have much lower severance payments than regular contracts, the Spanish experiment of “flexibility at the margin” in 1984 can be best understood as a two-tier reform in a country where job protection was high and where the median worker protected by the unions was one with a permanent contract. The implications of reducing employment protection at the margin for various dimensions of the labour market have been extensively analysed in the literature.<sup>10</sup> In what follows, we summarise some of the most important theoretical predictions and compare them to the available Spanish empirical evidence on that subject.

- i) Lower firing costs increase the volatility of employment by rising both the hiring and layoff rates. Likewise, workers’ turnover and job reallocation should increase whereas job tenure should decrease. García-Serrano and

<sup>10</sup>See, for example, Bentolila and Bertola (1990) for an analysis of firing costs in partial equilibrium models of labour demand, and Cabrales and Hopenhayn (1997) and Aguirregabiria and Alonso-Borrego (1999) for a general equilibrium one. A comprehensive survey of the literature can be found in Bertola (2000).

Jimeno (1999a) analyse the effects of FTCs on labour flows by distinguishing between *reshuffling* (a reallocation of jobs across regions, sectors and other relevant segments of the labour market), *turnover* (a reallocation of jobs within firms), and *churning* (a reallocation of workers across a given configuration of jobs). They construct pooled cross-sections of 17 sectors and 17 regions from the *Spanish Labour Force Survey* for the 1987-1997 period and use regional, sectoral and time fixed effects, a lagged dependent variable and a set of instrumented labour-market indicators, besides the proportion of fixed-term jobs, as controls. They find that the incidence of fixed-term jobs is the most significant variable in explaining the above-mentioned flows. For example, a rise of one percentage point in that variable increases the flows of employment to unemployment, unemployment to employment and employment to employment by 0.26, 0.16 and 0.34 percentage points, respectively. Likewise, García-Serrano and Jimeno (1999b), using a similar specification, find that a rise of one percentage point in the share of fixed-term employment decreases job tenure by 2.3%, namely, by two months in a mean- elapsed job tenure of 9 years.<sup>11</sup>

- ii) Higher workers' turnover implies a decrease of unemployment duration and therefore reduces long-term unemployment. Despite the lack of direct empirical evidence on the effects on FTCs on long-term unemployment, the indirect evidence is favourable. The proportion of unemployed workers with duration of at least one year followed very closely the evolution of the unemployment rate, going down from 67% in 1986 to 47% in 1992. Given the very limited use of active labour market policies, the other main determinant of long-term unemployment during that period, it seems sensible to conclude that the widespread use of FTCs helped to achieve such a reduction. Furthermore, in the recession of the early-1990s, the very rapid rise in high unemployment figures, from 16% in 1991 to 24% in 1994, was not followed by a parallel increase in the proportion of long-term unemployed which only rose from 48% to 53%. Notwithstanding, frequent shifts from job-to-job by workers holding FTCs may crowd out the employment prospects of the unemployed leading to a low unemployment turnover (see Boeri, 1999).
- iii) The combination of a higher turnover and a lower unemployment duration implies, in principle, an ambiguous effect on the unemployment rate. However, if either wage-setting or the firms' investment rate on physical capital is adversely affected by the existence of a dual labour market (see v and vii below), then unemployment may increase. As is well known

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<sup>11</sup>On the effects of temporary employment on workers' flows see also Saint-Paul (2000) where it is shown that Spain has relatively small flows out of unemployment (comparable to France) while it has relatively large flows from employment into unemployment (of the same order of magnitude as in the US).

since the seminal work by Oi (1962), a reduction in employment adjustment costs increases the variation in employment after a shock. The intuition is that adjustment costs drive a wedge between marginal revenue product and the wage, so that a decrease in such costs is equivalent to decreasing the wage when hiring and increasing it when firing. Thus, as seen before in i), the introduction of temporary contracts with low firing costs should lead to more employees in good times and fewer employees in bad times. In general, however, it is not clear how the average employment may vary over the cycle. The previous conclusion is reached in dynamic labour demand models where wages are taken to be exogenously determined. In the Spanish case, there is empirical evidence regarding the effects of FTCs on wages -to be discussed under v)- showing that the introduction of flexibility “at the margin” may have increased wage pressure, at least while the median voter was a worker with a permanent contract. In this respect, Güell (2000) argues, in the context of an efficiency-wage model, that employers provide incentives to permanent and temporary workers through wages and the renewal rates of temporary contracts, respectively. However, to the extent that firms ignore the externality that an increase in unemployment outflows results in higher wages for permanent workers, unemployment may turn up to be higher under a two-tier system than when only permanent contracts exist. On the other hand, as discussed in ii), temporary contracts have probably had a favourable effect on reducing hysteresis which, as pointed out by Dolado and Jimeno (1997), has been a major factor behind the rise and persistence of the Spanish unemployment rate. Thus, overall, the decision on whether temporary contracts are good or bad for unemployment seems to be even. However, the introduction of permanent contracts with lower redundancy pay, as from the 1997 reform, seems to have helped at reducing the unemployment rate from 20% in 1997 to 13.6% nowadays.

- iv) A rise in the turnover rate decreases the probability of receiving specific training in the firms and, therefore, may decrease labour productivity. This is particularly so, if the rate of conversion of temporary contracts into permanent ones is low, reflecting the fact that employers use those contracts as a more flexible device to adjust employment in the face of adverse shocks to the firm than as a screening device under asymmetric information. If the turnover rate of temporary jobs is very high, there is little incentive either for employers or workers to invest in specific human capital. Although, to our knowledge, there is no direct empirical evidence about such an issue in Spain, Dolado et al. (1999), using information from the 1994 European Community Household Panel (ECHP), estimate that the probability of receiving free or subsidized on-the-job training is 22% lower for workers under FTCs. Likewise, Güell and Petrongolo (2000) study the duration pattern of FTCs and the determinants of their

conversion rate into permanent ones, which went down from 18% in 1987 to about 5% in 1996. They use a duration model for temporary employment, with competing risks of flowing into permanent employment versus a new spell of temporary employment or non-employment, and find two pronounced spikes at one and three years, the latter coinciding with the maximum legal duration of FTCs. The first one is a sign of a screening device and applies mostly to skilled workers whereas the second one just reflects their use as a cheaper option adjusting employment. On top of that, Dolado et al. (1998) point out the fact that minimum wages, set at the sectoral/provincial collective bargaining and superimposed on the statutory ones, may be also behind the relative lack of training provided by Spanish firms. The fact that under-investment in specific human capital has strong implications on overall labour productivity is clearly illustrated by the expansion of the late 1980s, where employment growth was based on the massive use of FTCs and labour productivity hardly reached an annual average growth rate of 1% during the 1986-1990 boom. Likewise, the current expansionary phase since 1997 has resulted in very low labour-productivity growth rates. The results in Jimeno and Toharia (1996) also suggest that temporary employment increase work accidents, which happen to be three times larger than for workers under permanent contracts.

- v) An increased dualism in the labour market may imply a higher wage pressure if the unions protect the interests of permanent workers in the wage bargaining. Insofar as they feel protected from being fired by their high severance payments, they shift the burden of the employment adjustment, following excessive wage growth claims, on workers with temporary contracts. There might be, however, a counteracting effect on wage pressure stemming from the decline in the wage drift due to the rise in the proportion of workers with low job tenure. Bentolila and Dolado (1994) analyse the effects of temporary jobs on wage-setting showing that when workers with permanent contracts are the *insiders*, two main effects may take place: a *buffer* effect because excessive wage settlements affect temporary workers first and a *bargaining* effect due to a modification in the bargaining power of permanent workers. Against those two effects, there is a *composition* effect on the average wage growth due to the reduction in the wage drift. They use a panel of 1167 firms from the *Central de Balances* (Balance Sheet Data) of the Bank of Spain to estimate a dynamic wage equation and find that an increase of one percentage point in the temporary employment share raises the growth rate of permanent workers' wages by about one-third of one percent.

- vi) Higher workers' turnover leads to larger uncertainty regarding the termination of a contract and therefore may hinder labour mobility, e.g., they may reduce the rate of regional migration, as well as fertility. As Bentolila (1997) has pointed out, absolute net inter-regional migration has almost halved between the 1960s and the 1990s. Furthermore, for the period 1987-1993, only about 30% of the unemployed would accept a job implying a change of residence. Gil-Alaña and Jimeno (1993), using data from the Spanish LFS, investigate the relationship between migration decisions and employment status in a fully-fledged migration model and find that the incidence of temporary employment reduces the likelihood of migration. As for fertility, Spain is at the bottom of the OECD countries with a fertility rate of 1.2, putting the financial sustainability of the pensions systems under strong pressure. Ahn and Mira (1999) conclude that both unemployment and low employment instability due to high turnover (the "job bust") are two relevant factors behind the decline in fertility (the "baby bust").
- vii) Employment contracts with high firing costs in case of "unfair" dismissal which can be appealed to labour courts, may induce a higher level of uncertainty and, therefore, contribute to reduce firms' investment on physical capital (see Bertola, 2000).<sup>12</sup> That effect can be partially responsible for the fall of the investment-to-GDP ratio, from an average value of 22.5% since the early 1970s to values around 19.7% in the recessions of the 1980s and 1990s.
- viii) Although in principle there should be no wage discrimination by type of contract<sup>13</sup>, employers tend to "under classify" workers with temporary contracts so that they actually get paid less than an equivalent worker with a permanent contract. This has implications for the wage distribution. Insofar as higher-educated workers are more prone to under-classification than lower-educated workers, we should observe a widening of the wage (earnings) distribution for the former group of workers. Jimeno and Toharia (1993), de la Rica and Felgueroso (2000), and Davia and Hernanz (2000) examine whether temporary contracts involve lower wages than permanent ones, after controlling for observed and unobserved heterogeneity in personal and job-related characteristics. The data based used to explore the existence of wage differentials are the Wage Structure Survey (*Encuesta de Salarios*) and the European Community Household

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<sup>12</sup> The relevance of uncertainty can be grasped by the fact that employers, in order to avoid a lengthy process and large "red tape" costs associated to the arbitration procedure, tend to avoid dismissal procedures by reaching pre-trial agreements involving higher redundancy payments than those legally established (see Malo, 2000).

<sup>13</sup> Indeed, as pointed out by Booth, Francesconi and Frank (2000), the theory of "compensating differentials" would imply that workers of the same characteristics would only prefer a temporary contract to a permanent one unless compensated in wage terms for the loss of the option to remain in the job. However, as also pointed out by those authors, the wage of temporary workers might be lower if they have no incentive, given the low renewal rate, to invest heavily on specific human capital.

Panel for different sample periods. As for the econometric approach, it is based on the estimation of wage equations for workers with different employment contracts, sometimes controlling for selectivity bias arising from a non-random choice of employment contract, and the computation of the well-known Oaxaca-Blinder decomposition of wage differentials. The results of the papers quoted above agree in estimating a wage gap in favour of permanent male workers of around 10% to 15% and about 7% for female workers. As regards the wage distribution, the evidence is more scarce and less clear-cut. However, Bover et al. (2000), in a very thorough analysis of wage dispersion in Spain during the 1980s using individual records at Social Security, point out that the ratio between the 75<sup>th</sup> and the 25<sup>th</sup> percentiles of the distribution of (log) earnings of workers with tertiary education increased by 8% during the decade, whilst the corresponding ratio for lower educated workers hardly changed.

In sum, the Spanish evidence on the labour market effects of temporary contracts seems to support the following main theoretical predictions: (a) a large increase in workers' turnover; (b) a reduction in long-term unemployment; (c) a fall in training offered by firms and a decrease in labour productivity; (d) a decline in regional migrations and in the fertility rate; a widening of the wage distribution; and (e) a neutral or slightly positive effect on unemployment. Hence, there have been pros and cons following the implementation of a two-tier reform which can be weighed against each other in order to improve the workings of the Spanish labour market, or of any other country which is ready to follow the same route, in any future reform.

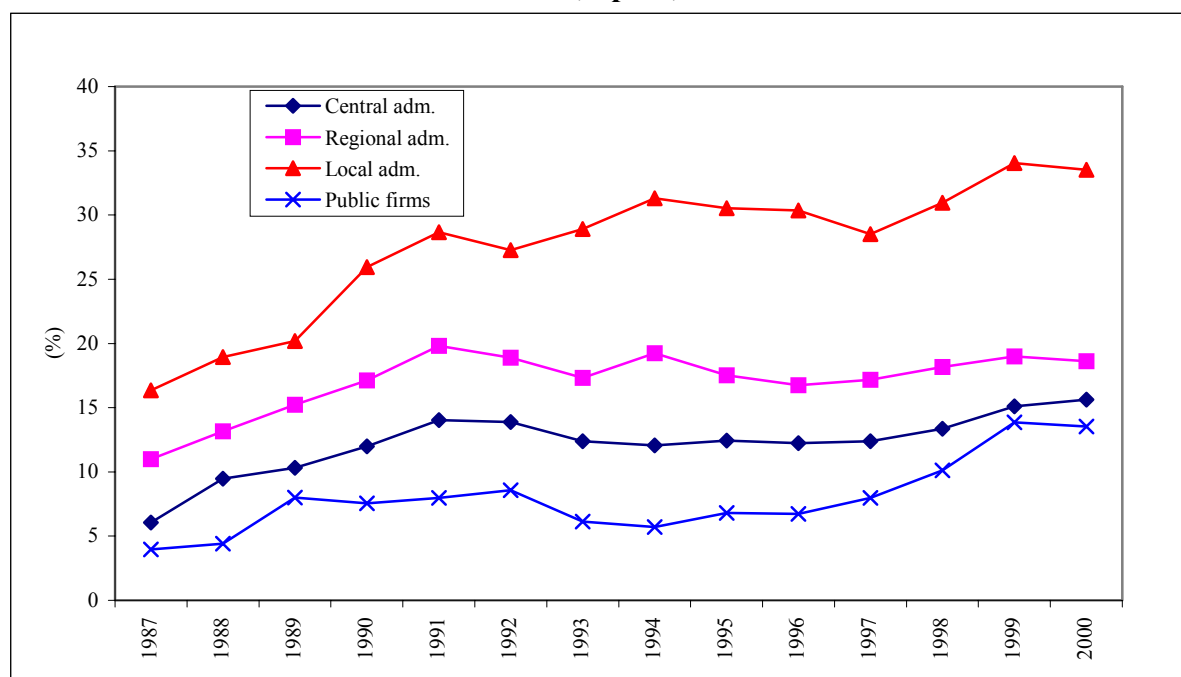
## **5. The Resilience of The Proportion of Temporary Jobs Since 1997**

As discussed in Section 3, the signature in April 1997 of the *Acuerdo Interconfederal para la Estabilidad del Empleo* (AIEE) between the unions and the employers' confederation meant a change of regime in what concerns the type of labour market reforms that so far had taken place. For the first time, permanent employment contracts with lower firing costs were approved. By 2000, three years after the implementation of the AIEE, the call seems to be a success. In combination with an expansionary phase of the business cycle, 1.5 million jobs have been created, out of which 76% correspond to workers under permanent contracts. This evolution contrasts with that observed during the previous expansion of the late 1980s where most of the employment created at the time was of temporary nature and permanent employment even fell.

However, the incidence of temporary employment contracts remains very resilient, at about the same level that was reached before the AIEE. Thus, at first sight, one of the main goals of the AIEE, namely, the reduction of the weight of

temporary employment in the Spanish economy, does not seem to have been achieved. However, a closer look at the composition of the employment created since 1997, tells a somewhat different story. The proportion of temporary employment has fallen by 6.4 percentage points for youth workers aged less than 25, although it remains at 68%, well above that for adults, at 25%. More significantly, the incidence of temporary jobs in the private sector has fallen by almost 4 percentage points reaching 35.3% in 2000, a drop which has been offset by the rise of the incidence in the public sector, which has reached a level of 19.5%, after increasing by 3.9 percentage points over the period.<sup>14</sup> In order to take even a closer look at the data, Figure 5 depicts the proportion of temporary workers in the public sector, distinguishing among four levels of administration: central, regional, local and public firms. As can be seen, incidence since 1997 has risen in public firms and, above all, in Local Administrations whose proportion of temporary workers is 14 percentage points higher than the average incidence in the public sector.

**Figure 5. Proportion of temporary workers in the public sector by level of administration, Spain, 1987-2000.**



In order to disentangle the effect of the hiring practices of the public sector on the overall incidence of temporary employment from other causes, we estimate a regression model based on the following simple theoretical considerations. Suppose that firms hire workers under either permanent or temporary contracts to produce according to the following CES production function:

<sup>14</sup> Nevertheless, the average number of temporary contracts per job has risen from 2.9 in 1997 to 3.5 in 2000, since most of the temporary contracts converted into permanent ones were those with long duration between 10 and 30 months.

$$Y = N^\alpha, 0 < \alpha < 1, N^{1-1/\sigma} = [N_P^{1-1/\sigma} + (1-m) N_T^{1-1/\sigma}], \sigma > 1 \quad (1)$$

where  $Y$  is output,  $N$  is the labour input ( $N_P$  and  $N_T$  are the numbers of permanent and temporary workers, respectively),  $\sigma$  is the elasticity of substitution between both types of workers, and  $(1-m)$  stands for the relative efficiency effect of temporary contracts. Permanent (temporary) workers receive a wage  $W_P$  ( $W_T$ ), which is assumed to be exogenously determined. Firing permanent workers requires a severance payment,  $s$ , where the firing probability,  $f(s, \phi)$ , is decreasing in both the severance payment and the number of temporary workers employed per each permanent worker,  $\phi = N_T / N_P$ . For simplicity, it will be assumed that temporary workers can be fired at no cost. Thus, employers choose  $N_T$  and  $N_P$  to minimise expected cost, given by:

$$\text{Min } N_P [W_P + s f(s, \phi)] + N_T W_T \quad (2)$$

subject to (1). It is easy to show that the first-order condition is as follows:

$$\phi = [(1-m)[W_P + s f(s, \phi) - s f_\phi(s, \phi)] / [W_T - s f_\phi(s, \phi)]^\sigma \quad (3)$$

where the ratio in the bold brackets is the relative expected cost of hiring a permanent worker relative to hiring a temporary worker. Hiring a temporary worker reduces the firing probability of a permanent worker. Hence, the net cost of hiring a temporary worker is lower than the net cost of a newly hired permanent worker. Likewise, hiring a permanent worker increases expected severance payments. Thus, the net cost of hiring a permanent worker is higher than the net cost of hiring a newly hired temporary worker. When  $\sigma > 1$ , the right-hand-side of (3) is either decreasing or increasing in  $\phi$  depending on the sign of  $f_{\phi\phi}$ . In the most likely case, where  $f_{\phi\phi} > 0$ , it is decreasing so that the proportion of temporary workers in total employment ( $\tau = \phi / (1 + \phi)$ ) is increasing in the wage of permanent workers for a given wage of temporary workers, the probability of firing a permanent worker, the elasticity of substitution between both types of worker and, for plausible parameter values, the severance payment. In turn, it is decreasing in the efficiency effects of temporary contracts ( $m$ ) and in the extent to which the probability of firing a permanent worker changes with the number of temporary workers ( $f_\phi$ ).

The simple analytical framework considered above provides theoretical motivation for the estimation of a panel regression model explaining the incidence of temporary jobs, measured by the logistic transformation of  $\tau$  ( $l\tau = \log(\tau / (1 - \tau))$ ), so as to have support over the whole real line, according to the following specification:

$$l\tau_{ijt} = \lambda_i + \lambda_j + \mu_t + \beta Z_{ijt} + \varepsilon_{ijt} \quad (4)$$

where  $i$  ( $=1,2,\dots,17$ ) stands for region,  $j$  ( $= 1,2,\dots,17$ ) stands for sector,  $t$  ( $= 1987,\dots,2000$ ) stands for year;  $\lambda_i$ ,  $\lambda_j$  and  $\mu_t$  are, respectively, regional, industry and time fixed effects and  $\varepsilon_{ijt}$  is an i.i.d. error term. The data base is the Spanish *Labour Force Survey* (*Encuesta de Población Activa*). Since some regional/industry cells are empty, the total number of observations is 3948. As for the explanatory variables, we will use the following: (i) the rate of growth of regional employment to control for the business cycle<sup>15</sup>, (ii) the proportion of young (under 25 years of age) workers in each region/sector, since youth are likely to be more affected by temporary contracts than adult workers, (iii) the proportion of public employees in each region/sector, to test for the possible lower propensity of the public sector to hire workers under temporary contracts, and (iv) the latter variable interacted with a dummy variable for the period 1998-2000 in order to check whether there has been a regime shift in the behaviour of the latter variable after 1997. The first variable, being a proxy for business-cycle fluctuations which will approximate the firing probability,  $f(\cdot)$ , whilst the second and third variables are meant to capture the effects of the wage gap between permanent and temporary workers, the elasticity of substitution and the relative efficiency of temporary contracts. On the one hand, we expect the wage gap to be inversely related to the proportion of employees working in the public sector since they are likely to be less discriminated against. On the other hand, the wage gap is expected to be positively correlated both with the proportions of young and highly educated workers since the possibility of occupational “under-classification” may be larger for those groups. Finally, the fourth variable is included in order to test for the differential hiring patterns of the public and private sectors after the 1997 reform.

Table 2 reports the OLS estimates of the coefficients in (4) for two alternative definitions of the dependent variable: the proportion of all temporary employees (column 1) and the proportion of workers with FTCs (column 2).<sup>16</sup> The results are very similar in both instances showing that both the incidence of all temporary contracts and FTCs is higher for young workers and lower for public-sector workers. More importantly, the interaction of the 1998-2000 time dummy with the share of public employment has a significant positive effect, indicating that the negative effect of the hiring practices of the public sector on the incidence of temporary employment has decreased by 0.3 percentage points. That confirms our previous conjecture that the hiring practices of the public sector are the main culprit of the persistence of the overall proportion of temporary/FTC jobs in the Spanish economy during the last three years. Figure 6, in turn, displays the fixed time effects for both regression models, showing that, after controlling for the sectoral pattern of employment, the incidence of

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<sup>15</sup> Since we introduce time dummies in the regression, regional employment growth captures the deviation of the business cycle across regions.

<sup>16</sup> See section 2 for the definition of both variables.

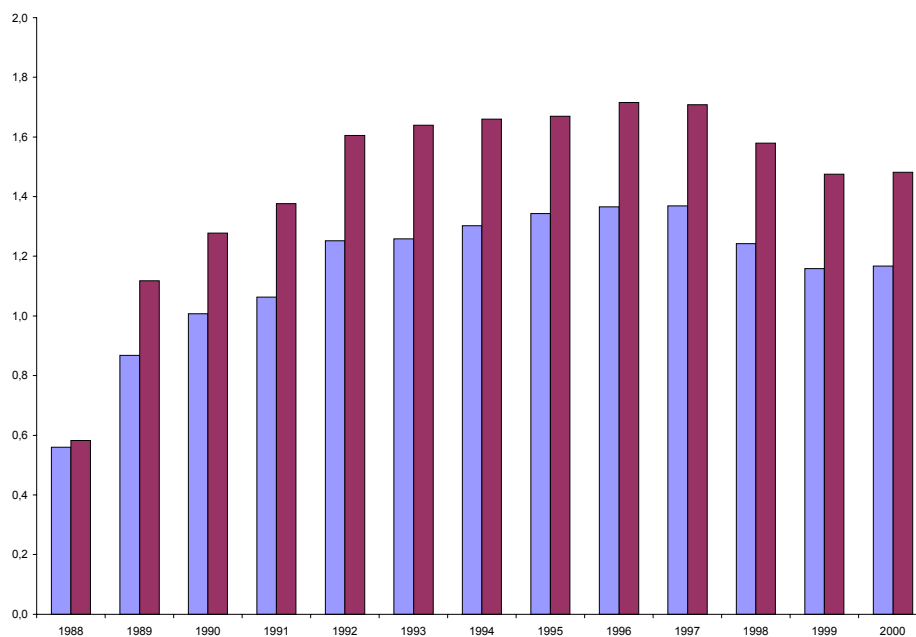
FTCs and temporary contracts has decreased significantly after the reduction of severance payments for new permanent jobs in 1997.

**Table 2. Estimates of the determinants of the proportion of temporary and fixed-term employment across sectors and regions. Spain, 1987-2000.**

	1	2
	Dependent variable: Proportion of temporary employees	Dependent variable: Proportion of fixed-term employees
Constant	-2.180 (16.24)	-2.987 (19.69)
Proportion of public employees	-0.008 (3.69)	-0.008 (3.37)
Proportion of young workers	0.045 (16.58)	0.041 (12.44)
Proportion of workers with a university degree	0.007 (2.37)	0.005 (1.38)
Rate of growth of regional employment	0.008 (1.95)	0.009 (1.93)
Proportion of public employees * dummy 1998-2000	0.003 (3.56)	0.003 (3.46)
R-squared	0.65	0.63
N	3,948	3,948

Note: The regressions also contain time, regional and industry effects as right-hand side variables.

(unsigned t-statistics in parenthesis).

**Figure 6. Time dummies from pooled cross-section regressions**

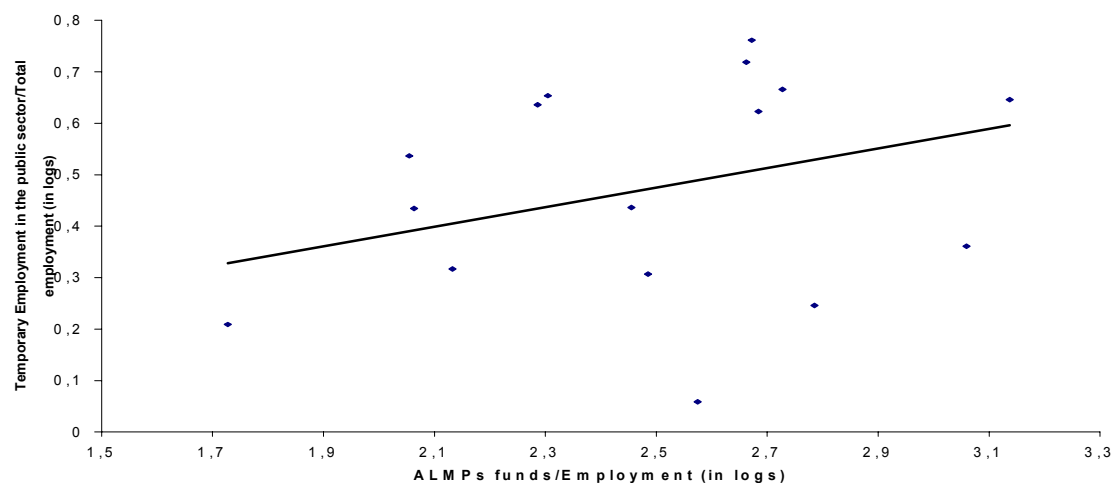
As for why the public sector has increased so much the proportion of temporary hires in recent years, there are at least two explanations. First, following the fiscal consolidation pursued by the Spanish government after the Maastricht Treaty and the further restrictions imposed by the Growth and Stability Pact, there have been so far limits to hiring so that for every four retirements in the Public Administration only one new permanent contract was allowed to be made. And secondly, a high proportion of the EC Structural Funds received by the Local Administrations for promoting Active Labour Market Policies (ALMPs, henceforth), following the 1997 Amsterdam Summit, have been used to hire workers in targeted groups (youth, female, long-term unemployed, etc.) under temporary contracts. Figure 7 displays the correlation between the (log of) temporary employment in the public sector in each of the 16 regions in Spain<sup>17</sup>, as of 2000, and the (log) of the ALMPs funds allocated to each region by the European Social Fund (each normalised by total regional employment). The estimated coefficient in this regression is around 0.2 (t-ratio=9.4), so that an increase of 1% in those funds increase temporary employment in the public sector by 0.2%. Further, if we eliminate the clear outlier in the graph, which corresponds to Catalonia, the estimated coefficient remains the same while the t-ratio raises to 11.3<sup>18</sup>. A benevolent interpretation of that result is that, insofar as jobs financed by ALMPs funds are mostly created for groups of workers with specific difficulties in the labour market, these temporary contracts, instead of being a pure flexibility device, may act as

<sup>17</sup>The Basque Country is excluded due to lack of data on ALMP funds.

<sup>18</sup> Catalonia represents an outlier because some of the ALMP funds are devoted to occupational training and that region makes an intensive use of them.

“stepping stones” which can improve the “employability” of those workers in the future.

**Figure 7. Temporary employment in the public sector and ALMPs funds**



## 6. Concluding Remarks.

Over the last two decades many European countries have reformed their labour market institutions in several respects, and further changes are in the pipeline. This on-going reform process has led many pundits to argue that labour market flexibility has increased and that European equilibrium unemployment is well below the levels reached in the early 1990s. However, when asking about the most relevant reforms which have substantially changed the workings of the European labour market, the usual response singles out changes in Employment Protection Legislation. And the main changes in EPL in EU countries boil down to the liberalisation of “atypical” employment contracts (part-time, temporary, fixed-term, and so on). In this paper we have taken a thorough look at the effects of one particular type of these contracts, i.e., temporary employment contracts, on a wide range of labour market dimensions.

Since 1984 Spain has had the highest incidence of temporary employment in the EU, particularly in terms of FTCs, although since the mid-1990s there has been a policy reversal towards reducing its scope. Recently other EU countries (notoriously Italy and France) seem to have embraced the Spanish strategy of relaxing EPL by liberalising and promoting fixed-term employment. According to our review of the Spanish experience, it cannot be taken for granted that this strategy improves the workings of the labour market. Together with the plausible benefits of higher “flexibility”, there may be perverse effects on both efficiency and equity grounds. In principle, the most evident effects of the surge of temporary employment are higher worker and job turnover rates, and a lower unemployment duration. As regards the unemployment rate, the evidence is more mixed. On the one hand, the lower firing costs associated to FTCs seem to

have contributed to employment growth. Yet, on the other hand, there have been some unexpected negative consequences stemming from the existence of a segmented/dual labour market such as lower investment in human capital, higher wage pressure, lower labour mobility and larger wage dispersion.

In fact, a symptom on the mixed blessings of temporary employment is the policy reversal regarding EPL reforms which has taken place in Spain since the mid-1990s. From then on, the main goal of labour market reform has been to reduce the proportion of temporary employment by cutting down firing costs under the permanent contracts and subsidising both hires under permanent contracts and the conversion of temporary employment into permanent by means of rebates of Social Security contributions. The preliminary evidence presented in Section 5 shows that, as a result of these measures, the incidence of temporary employment in the private sector private sector has fallen by about 4 percentage points in three years, although the aggregate rate has fallen only by 1 percentage point because of the increase of temporary employment in the public sector by a similar amount. Thus, there are three topics which deserve further attention. First, the relative contribution to the reduction of the proportion of temporary employment in the private sector of both lower firing costs under the permanent contract and social security rebates remains to be estimated. Secondly, the public sector behaviour regarding the use of temporary employment needs to be further scrutinised. Finally, at the time this paper was written, a new reform is underway whereby the government intends to extend the new permanent contracts to groups which were excluded in 1997 and, at the same time, to introduce some redundancy pay (8 days' wages) for temporary contracts. To the extent, that this last reform continues to be a two-tier one, the lessons drawn in this paper might be useful in ascertaining its effects on the labour market.

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