

## EMPLOYMENT FLUCTUATIONS IN A DUAL LABOUR MARKET

## Employment fluctuations in a dual labour market

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### *Introduction*

During the last two decades, the Spanish labour market has shown high employment and unemployment volatility. In growth phases, job creation and the decrease in the unemployment rate have been very high but during downturns in the cycle, job destruction and the increase in unemployment have also been substantial. This phenomenon has become yet more evident during the recent economic crisis when the unemployment rate, in the face of a slowdown in growth similar to that experienced by other countries, increased by around 10 pp, a far higher figure than that recorded even in countries which have labour markets with low firing costs (for example, Ireland and the United States).

In principle, there may be several explanations for this high employment volatility. In the face of a negative shock, a sectoral breakdown biased towards labour-intensive activities may trigger more pronounced job destruction. Furthermore, the greater wage inertia is, with labour costs not adapting to this shock, the greater job destruction will be. Finally, the level and duality of firing costs directly impact hiring and firing decisions and, consequently, they also determine net job destruction in the face of a negative shock.

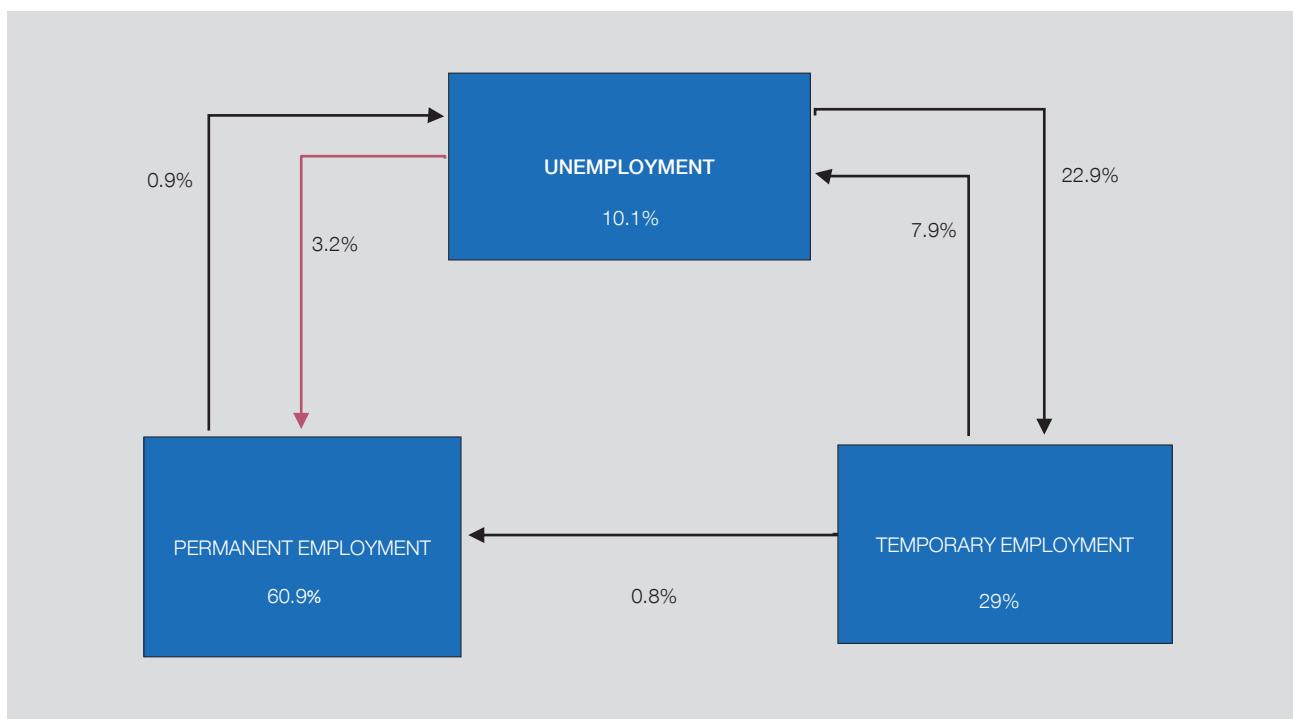
This article summarises the main findings of a recent eminently analytical paper [see Costain, Jimeno and Thomas (2010)], the main objective of which is to identify to what extent the third of these above-mentioned factors, duality, generated by the coexistence of very different temporary and permanent employment contracts, contributes to increasing employment and unemployment volatility. In order to achieve this aim, it is necessary to analyse firms' decisions to make temporary employees permanent ones and to hire and fire both types of employees, so as to calculate the effects of different economic shocks on job creation and destruction flows and to compare them with the flows that would be recorded in a labour market with a single contract type.

The main findings of this analysis suggest, firstly, that contract duality exacerbates fluctuations in employment and unemployment. If the social costs of unemployment tend to grow more quickly the higher the level of unemployment is, this greater volatility has obvious costs in terms of social welfare. Similarly, contract duality tends to reduce productivity, even without taking into account the negative effects associated with a lower accumulation of experience and smaller investment in training by employees and employers which creates even more temporary employment. These effects cannot be recorded by the analytical model used. Lastly, for the lower volatility that would result from moving away from duality to also translate into a reduction in the average unemployment rate, it would have to be coupled with a reduction in average firing costs.

In any event, it is important to take into account that the analytical model, the results of which are summarised in this article, is not per se designed to act as a basis for a comprehensive proposal for labour reform. In order to draw up a proposal of this type it would be necessary to analyse, for example, other important factors within the regulatory framework of employment contracts and additional aspects on how the labour market operates, such as wage bargaining mechanisms and the management of active policies to boost employment which

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1. This article summarises some of the findings of Costain, Jimeno and Thomas (2010), which study the relationship between employment volatility and the system of employment contracts.



Source: Sample from the EPA (Labour Force Survey) with data from 2001 Q1 to 2008 Q3.

a. Quarterly flows as a percentage of status.

may influence the reduction in the unemployment rate over the cycle and its volatility. All of these matters are clearly beyond the scope of this article.

### ***Job creation and destruction in a dual contract system***

Two important characteristics of Spanish labour market dynamics are the prevalence of employees with a temporary contract in employment fluctuations and high worker turnover. As can be seen in Chart 1, from 2001 to 2008, and on average for every 100 participants in the labour market, 10.1 were unemployed, 29 had a temporary job and the remaining 60.9 had a permanent job. Unemployment inflows and outflows were mainly routed through temporary employment. Thus, in each quarter 7.9% of those employed with a temporary contract became unemployed in comparison with 0.9% of those employed with a permanent contract. Also, each quarter 22.9% of the unemployed moved into a temporary job, with only 3.2% moving into permanent employment. The quarterly rate of conversion of temporary employees into permanent ones averaged only 0.8% for this period.

A labour market model with three basic features is used to analyse the implications of duality for employment volatility. These features are: i) the fact that when the unemployed search for jobs and companies search for employees, there is a cost in terms of time and resources; ii) employers create jobs as they expect to earn a positive return from them, and iii) job destruction occurs when the return on the jobs turns negative as a result of adverse shocks. This type of conceptual framework has become the usual method for analysing the macroeconomic consequences of labour institutions.<sup>2</sup> In order to include duality, it is assumed that firms can

2. See Mortensen and Pissarides (1994) for the seminal work underpinning this type of model. Although existing literature has analysed labour institutions in relation to average unemployment levels, currently attention is being focused increasingly on the determinants of unemployment volatility. A recent paper by Sala and Silva (2009) analyses the impact of firing costs on cyclical unemployment volatility, concluding that the key issue is the average value of firing costs, not whether the latter differ on the basis of employment contract type.

only use two types of contract: permanent ones with high firing costs and temporary ones without firing costs but with the legal restriction that they have a pre-set term and, when they end, employment can only be continued through a permanent contract.

In view of these contractual arrangements, apart from deciding how many vacancies firms create, they must establish rules for deciding: i) when and with what type of contract they employ workers to fill the vacancies created; ii) whether or not they convert the temporary contract into a permanent one when it ends, and iii) when to fire workers, irrespective of contract type. Under very general conditions, it can be demonstrated that in this simplified framework the rules followed by firms to adjust the level and structure of their labour force are as follows. In order for employers to offer a job to the unemployed they contact, the productivity of the job to be created must exceed a certain threshold (the hiring threshold). Furthermore, all the newly-created jobs are filled with employees on temporary contracts.<sup>3</sup> Temporary employees whose contract has expired become permanent employees only if the productivity of the corresponding job at a given moment in time is higher than the conversion threshold; the higher the firing costs are, the higher the conversion threshold is. Temporary employees are fired either when their productivity decreases below the level corresponding to hiring or when their contracts expire and their productivity level at that time is lower than that required for conversion. Similarly, permanent employees are fired when their productivity decreases below another particular threshold (the separation threshold); the lower the firing cost, the lower the separation threshold. This productivity threshold, governing the separation of permanent employees, is lower than the hiring threshold that determines the hiring of temporary employees and which, in turn, is lower than the threshold for converting temporary jobs into permanent ones. During upturns, the three productivity thresholds are lower than in downturns and, consequently, more employees are hired and fewer are fired during expansionary phases.

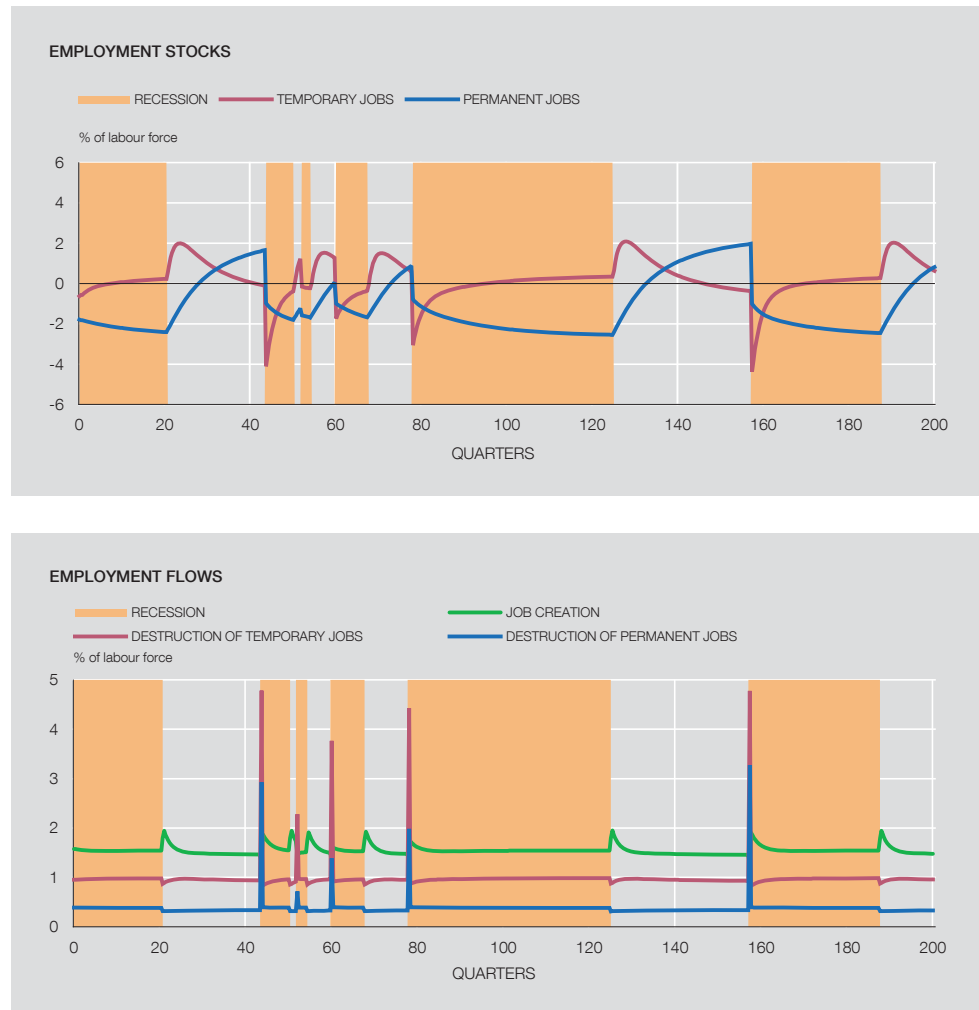
This behaviour has several important consequences for the functioning of the labour market. Due to the difference in firing costs, jobs occupied by permanent employees with lower productivity than that in newly created jobs are kept open, which has a negative impact on the economy's aggregate productivity. Likewise, if at the time the temporary contract expires productivity is high but not sufficiently so to justify conversion, inefficient firing occurs. As a result, the hiring and non-renewal of temporary employees gives rise to a very high labour turnover and, during upturns, fragile jobs build up, namely those jobs which, because they have relatively low productivity, would be destroyed immediately as soon as a cyclical downturn came about. Employees with temporary contracts are affected more by "fragility" than those with permanent contracts. This effect is sufficient for cyclical employment and unemployment volatility to be higher in a dual labour market than in a market with a single contract type, even if the latter has low firing costs.

### ***Duality and employment volatility***

In order to estimate the contribution of duality to employment and unemployment volatility, several simulations were performed based on a version of the model described in the previous section. The parameters of the model were chosen so as to reproduce the basic characteristics of the Spanish labour market. Thus, in the baseline scenario, the average unemployment rate is around 10%; temporary employees account for one-third of total numbers employed; labour flows between unemployment, temporary employment and permanent employment are of a similar magnitude to the flows in the Spanish labour market (see Chart 1), and the volatility of the unemployment rate is also similar to that seen in the case of Spain in the 1987-2008 period.

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3. Intuitively, if the only difference between the two types of contracts is the firing costs, employers always prefer to offer a temporary contract. As a result, in the model there are no direct flows from unemployment to permanent employment. This is shown in Chart 1 where the flow from "Unemployment" to "Permanent employment" is represented by a coloured line.

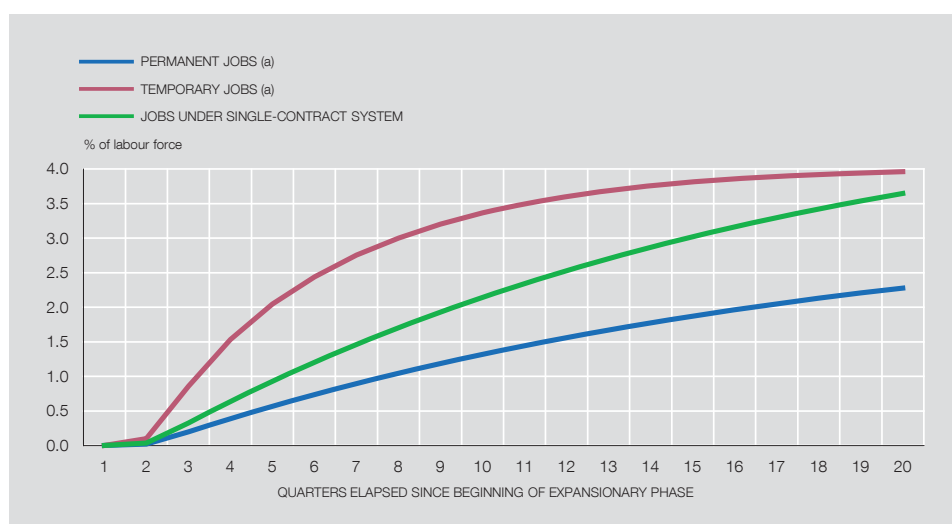


SOURCE. Costain, Jimeno and Thomas (2010).

a. Standard deviations.

The two panels in Chart 2 illustrate the cyclical changes in employment and in the corresponding flows of job creation and destruction which occur in a dual labour market. At the beginning of each recession both temporary and permanent employment decrease sharply with the elimination of fragile jobs.

The fall in temporary employment is particularly steep, despite representing only about half of permanent employment prior to the recession. At the beginning of expansionary phases, temporary employment begins to grow more strongly since all the new jobs are filled with employees on temporary contracts and only after some time has elapsed does the number of temporary jobs converted to permanent jobs begin to build up. Consequently, there are three reasons which explain high temporary employment volatility. First, new hires are always temporary before attaining permanent status. For this reason, at the beginning of an expansionary phase, temporary employment always rises above its long-term level. Similarly, some temporary jobs are fragile from the moment they are created because firms will offer work even to low-productivity workers with the knowledge that they will probably last for a short time as employees. Conversely, newly-created permanent jobs have relatively high productivity and only become fragile in the event of a sufficiently adverse productivity shock. Consequently, fragile jobs build up more slowly among permanent contracts than among temporary ones (as the comparison of the blue and red lines in Chart 3 shows). Consequently, the wave of lay-offs at the beginning



SOURCE: Costain, Jimeno and Thomas (2010).

a. Fragile job stocks during an expansionary phase.

of a recession centres on temporary employees following a short or average-length expansionary phase and only affects many permanent jobs after a particularly long growth period. Finally, fragile temporary contracts are terminated for two reasons: because a sufficiently negative shock occurs or because the temporary contract expires. Fragile permanent contracts have a much longer expected duration because they are only terminated if there is an adverse shock. And since such contracts have a much longer expected duration than temporary employment, cyclical productivity variations have a smaller effect on the firing threshold for employees with a permanent contract than on the corresponding threshold for temporary employees, with the result that during recessions the firing of permanent employees increases less than that of temporary employees.

Apart from illustrating the reasons for higher cyclical temporary employment volatility, this conceptual framework makes it possible to perform simulations to compare employment volatility in various firing cost regimes. Specifically, it is possible to analyse whether duality alone, considered independently of the level of firing costs, triggers higher employment volatility. Table 1 compares the results in the dual labour market (column 1) with different cases of labour markets with a single contract type. Firstly, in column 2 it is assumed that the labour market has no temporary contracts and the high firing costs of employees with a permanent contract in the baseline scenario are applied to all employees. Secondly, in column 3 it is assumed that there is a single contract with firing costs that are the same as the average for the dual labour market in the baseline scenario. Thirdly, in column 4 it is assumed that the labour market has a single contract type and that firing costs are such that the total firing costs paid as a percentage of GDP are the same as in the baseline scenario. Lastly, in column five it is assumed that the average unemployment rate is the same as in the dual labour market in the baseline scenario. The results show that the dual labour market causes volatility in the unemployment rate that is around 20% higher than that in all the scenarios considered in labour markets with a single contract type. The results also allow us to conclude that in order to reduce employment volatility and cut the average unemployment rate at the same time, it is necessary that the process of unifying contracts involves a mean decrease in firing costs.

The main reason why employment fluctuates less in a labour market with a single contract type is that, in this case, job creation and destruction is determined through two productivity thresh-

	DUAL MARKET		SINGLE CONTRACT			
FIRING COSTS	2.1	(permanent)	2.1	1.4	1.1	0.4
	0.0	(temporary)				
	1.4	(average)				
Costs paid (% of GDP)	0.8		0.9	0.9	0.8	0.3
Unemployment rate (average) %	10.1		12.0	12.2	11.9	10.1
Standard deviation of unemployment rate	1.1		0.8	0.9	0.9	0.8
Standard deviation of job creation	0.2		0.1	0.1	0.1	0.1
Standard deviation of job destruction	0.6		0.3	0.3	0.3	0.4

SOURCE: Costain, Jimeno and Thomas (2010).

olds: one that refers to the hiring of new employees and another that refers to firing them, at a lower productivity level than the hiring threshold. This means that the above-mentioned effects relating to cyclical temporary employment volatility in a dual labour market disappear. Specifically, while in the dual labour market some workers are employed directly in fragile jobs, in a scenario with a single contract type, jobs only become fragile if their productivity declines after they are filled and, consequently, their numbers build up more slowly. Furthermore, while in the dual labour market the low expected duration of a temporary contract implies that the job's productivity is relatively lower and, consequently, the cyclical fluctuations in the firing threshold are sizable, in a labour market with a single contract type this cyclical volatility is lower since the firing threshold varies in a similar way to that for permanent employees in a dual labour market. In short, employment in a labour market with a single contract type behaves like the *permanent component* of employment in a dual labour market. This result is valid for a very wide range of firing costs which includes plausible values for such costs in most countries.

Furthermore, the simulations performed may underestimate the negative effects of duality. The existence of mechanisms which either generate unemployment persistence or lead to labour stability being favourable for productivity make the employment and unemployment volatility generated by duality even more harmful for social welfare.

## Conclusions

From the above-mentioned findings it can be concluded that a dual labour market generates higher volatility than a labour market with a single contract type. These findings are important on several fronts. As for regulatory implications, it can be argued that employment and unemployment volatility is, in itself, negative for social well-being. While the social costs of unemployment increase more quickly, the higher the level of unemployment is, a labour market which causes higher volatility is less socially desirable than a labour market which gives rise to lower volatility. As for its implications for macroeconomic stabilisation policies, employment volatility complicates their implementation and increases their costs. Duality also affects labour productivity negatively, even when, as in this analytical framework, temporary employment were not to adversely influence employees' accumulation of experience and training.

However, it should be pointed out that the findings of this analysis of different abstract contract regimes refer to their long-term properties and that in order to obtain their practical implications it would be necessary to also take into account the complexities of the transition from duality to a new contractual system. In any event, according to this analysis, attempting to reduce labour segmentation in the current setting by penalising temporary hires and at the same time maintaining the current conditions for permanent hires would notably harm the

outlook for a recovery in employment. Conversely, introducing a new common contract type for new hires with a firing cost lower than that of a permanent contract currently in force would increase job creation and reduce labour market volatility both in the short and long term.

Lastly, it should not be forgotten that the analytical model, the findings of which are summarised in this article, is designed to analyse in detail one specific aspect of the labour market but not to act as a basis for a sufficiently comprehensive proposal for reform. For this purpose, it would be necessary to analyse other very important aspects which, like wage bargaining arrangements or active employment policies, are beyond the scope of this model.

17.3.2010.

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