

# How Temporary Is Temporary Employment in Spain?\*



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*I use a multinomial logit model and the Spanish Active Population Survey (EPA) for the period 1987–1996 to study labor force transitions of temporary workers. These workers hold fixed-term employment contracts, which Spanish labor law distinguishes from indefinite contracts. Since the EPA questionnaire allows the identification of workers with either type of contract, I use matched EPA files to analyze transitions from temporary to permanent employment and explore the extent to which workers holding fixed-term employment contracts tend to be trapped in temporary employment relationships.*

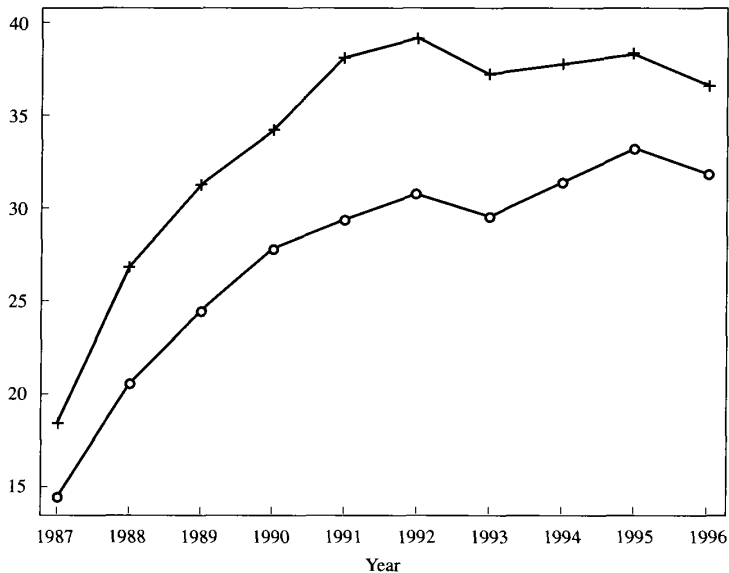
## I. Introduction

One third of wage and salary workers held fixed-term employment contracts in Spain in 1996, up from 15 percent in 1987, the first year for which data are available (Figure 1). Although this proportion has leveled off in the 1990s, it has become a worrisome feature of the Spanish economy. A dual labor market seems to have emerged. The use of fixed-term employment contracts, promoted for the sake of labor market flexibility and employment growth, may have caused side effects: Low job security and short employment relations can thwart training and lower labor productivity.

Given that temporary employment has grown rapidly and persists today at high levels, the question arises as to what extent temporary workers are trapped in temporary jobs. If firms use fixed-term employment contracts as a screening device, a large proportion of newly hired workers should become permanent employees. On the other hand, if firms hire temporary workers merely to perform temporary work, obtaining permanent employment with the firm is less likely. The high proportion of temporary employment in Spain suggests another reason, that firms use fixed-term employment contracts as an alternative to the employment rigidity of the indefinite contract. In this context, permanent employment prospects for temporary employees is dim.

I investigate temporary workers' mobility between the various labor force states and, in particular, their likelihood of obtaining permanent employment. I use matched files from the Active Population Survey (EPA) and a multinomial logit model to analyze transition probabilities from temporary employment to permanent employment, self-employment, and nonemployment. I find that the transition rate from temporary

Figure 1  
*Proportion of Temporary Workers*



Source: EPA's second quarter of each year, 1987–1996.

to permanent employment declined significantly from 1987 to 1992. Thereafter, similar to the proportion of temporary employment, the transition probability has been stable, although fairly low.

Section II presents the institutional background; section III provides the empirical framework; section IV describes the data; in section V I present and discuss the results; and, in the last section I conclude and interpret the main findings.

## II. *Institutional Background*

More than ten years have passed since fixed-term employment contracts became a crucial institution in the Spanish labor market. During this period, from the mid-1980s to the mid-1990s, the Spanish economy experienced a complete business cycle. Today, the rigidity and inefficiencies of the Spanish labor market are still debated.<sup>1</sup> It is widely accepted that Franco's economic system was paternalistic and based on low labor cost in exchange for secure employment. Hence, many reforms were needed to integrate Spain into the world economy. However, such reforms have been piecemeal,

without totally reducing labor market rigidities. As a consequence, in the 1980s and 1990s Spanish unemployment experienced two record highs — in 1985, when the unemployment rate reached 22 percent and in 1994 when it approached 25 percent.<sup>2</sup>

The Workers' Statute of 1980 gave some legal structure to the post-Franco labor market. However, employment guarantees were consolidated rather than modified. As unemployment soared, wage moderation obtained by economy-wide agreements between government, employer organizations, and labor unions was not enough to stop labor shedding. Sluggish job creation prompted the government to reform the Workers' Statute in 1984 in an attempt to foster employment by promoting fixed-term employment contracts. Other labor market reforms took place in 1992, 1993, and 1994. However, such legal changes do not appear to have significantly modified the institutional framework of temporary employment. The legal framework described below is valid for the period relevant to this article, except for the indicated legislative changes.

Collective dismissals require administrative approval by the labor authority.<sup>3</sup> If approved, each dismissed worker receives a severance pay of 20 days' salary per year of service, up to a maximum of 12 months. Individual dismissals are more costly for employers. Workers can be individually dismissed because of economic and technological reasons, changes in the organization of work, or other justified motives. Also, individuals can be fired for disciplinary reasons. In all cases workers can appeal before the labor court. There are two possibilities: (1) The dismissal is judicially declared fair and the worker receives a severance pay of 20 days' salary per year of service, up to a maximum of 12 months. This does not apply to disciplinary dismissals. (2) The dismissal is judicially declared unfair. In this case, the worker is entitled to either readmission or a severance pay of 45 days' salary for every year of service, up to a maximum of 42 months. Because all types of individual dismissals can be appealed, and there is always the possibility of being declared unfair, excessively high firing costs are a source of labor market rigidity in Spain.

Although the fixed-term employment contract was first introduced in the Spanish labor law in 1980, it applied only to temporary tasks. The Workers' Statute Amendment of 1984 permitted fixed-term contracts regardless of the type of work. Based on the principle of promoting employment, firms could hire unemployed workers registered at the Employment Office for a minimum of six months and for up to three years.

Under the Employment Promotion Program, after three years of holding a fixed-term contract with the same firm, continued employment meant that the employee automatically became permanent. If the fixed-term contract expired and the worker became unemployed, he or she received a severance pay of 12 days' salary per year of service. A worker whose contract had expired could not be re-employed by the same firm under the same scheme for one year. When a worker had been laid-off or unfairly dismissed, the firm could not replace that worker with a fixed-term employee until one year from the termination date. Moreover, the law prohibited filling a vacancy

with a fixed-term worker if the vacancy resulted from expiration of another fixed-term contract in the previous year that lasted the maximum duration.

Two Royal Decrees enacted in 1992 and 1993, together with an extensive reform of the Workers' Statute carried out in 1994 altered the regulation of fixed-term contracts in several respects. First, in 1992 the minimum duration of fixed-term contracts linked to the 1984 Employment Promotion Program was increased to one year. Second, a thorough revision of the Workers' Statute in 1994 defined specific reasons for hiring temporary workers. This implies re-establishing the legal requirement of hiring temporary workers only when the nature of the job so demands. Such reasons are: (1) to perform specific work or service, which will determine the duration; (2) to meet production needs, with a maximum duration of six months within a period of one year; (3) to replace a worker temporarily separated from his job; and (4) to initiate a new activity within the firm, with a maximum duration of three years. The new regulation abolished the fixed-term contracts as originally conceived in 1984, that is, to promote employment growth.

Regardless of these regulatory changes the fixed-term employment contract still offers a legal alternative to the presumed rigidity in the employment relationship due to the indefinite contract. In the midst of massive unemployment, fixed-term contracts were meant to ease adjustment costs and foster new hiring. Because firms make an intensive use of the fixed-term contract, job security has been greatly eroded, and labor turnover has significantly increased.<sup>4</sup>

The overwhelming use of fixed-term employment contracts by firms in Spain has emphasized the differences in working conditions between both types of employees. Permanent workers are employees engaged in long-term employment, enjoying the advantages of promotion ladders and other incentive schemes.<sup>5</sup> Temporary workers are usually hired for a short period. After their fixed-term employment contract ends, three outcomes are possible: The worker becomes a permanent employee; the contract is renewed; or the worker must leave the firm to seek work elsewhere after receiving a small severance payment.<sup>6</sup>

For the firm, however, two characteristics of fixed-term contracts are paramount. First, employers avoid the costs and potential liability of lay-offs, protecting themselves from onerous litigation and the adverse effect of frequent firing on their reputations. Second, in an economy where fixed-term contracts become available by law, there is little incentive to hire a new employee as permanent and recruiting policies are adapted to the new provision for fixed-term contracts. The corollary is that the costs of employment adjustment are much lower when a significant proportion of the labor force is under temporary employment.<sup>7</sup>

Although the increasing presence of temporary or contingent workers in the economy is particularly high in Spain, this phenomenon has also occurred in other countries.<sup>8</sup> The quest for greater flexibility is also common in economies where circumventing stringent job-security legislation is not a relevant issue. For the U.S., Abraham (1990) finds a growing importance of market-mediated work arrangements

which are attributed to buffering the costs associated with adjusting the regular labor force, to the advantages of increased wage flexibility, and to the need for specialized services. For a specific sector, as the temporary help supply industry, Laird and Williams (1996) find that both supply and demand shifts contributed to the expansion of temporary employment in the U.S. In addition, Lee (1996) emphasizes the role of public policy by arguing that firms respond to increased restrictions on firing and hiring by resorting to more flexible employment. Undoubtedly in Spain, both supply and demand forces are at work. However, as explained above, labor law has played a fundamental role in inducing employers to increase temporary employment.

To better understand the causes and nature of temporary employment, it is important to study its dynamics. Women, youth, and less-educated workers are over-represented among temporary workers.<sup>9</sup> However, little is known about the mobility between temporary employment and other labor force states — particularly the factors that affect the transition from temporary to permanent employment. Persons who are more likely to hold a fixed-term contract are less likely to obtain a permanent job. Of course, the stock of temporary workers is the net balance of flows in and out of temporary employment. But there are other aspects of employment transitions that can shed light on the dynamics of the labor market. Some of them are analyzed below.

### III. *Empirical Framework*

At what rate do temporary workers become permanent employees? What are the factors that affect this transition? To answer these questions I consider a sample of temporary workers at survey date and look at their labor force status one year later. The possible outcomes are that the temporary workers are observed in one of the following situations: (1) permanent employment with a wage and salary job, (2) other type of employment, mostly self-employment, (3) nonemployment, and (4) temporary employment in the same or a different job. To analyze the corresponding transitions I estimate the following multinomial logit model:

$$\lambda_{ij}(x_i) = \exp(\beta_j' x_i) / [1 + \sum_{j=1,2,3} \exp(\beta_m' x_i)],$$

where  $\lambda_{ij}$  is the conditional probability of a transition into state  $j$  (permanent employment, self-employment, or nonemployment) in the interval of one year, given that the individual  $i$  holds a fixed-term contract at survey date of the origin year;  $x_i$  is a vector of covariates for individual  $i$  that are considered to affect the transition rates; and  $\beta_j$  is a vector of parameters to be estimated. The indicated specification implies independence of the four possible labor force states, and temporary employment is taken as the base category. Thus, the estimated effects are obtained relative to the effect of the respective variable on the conditional probability of remaining in temporary employment status. The vector of covariates includes the following groups of variables.

(i) *Personal and household characteristics.* Gender, age, age squared, number of members in the household, dummies for five levels of education, a dummy for marital status, and a dummy that is equal to 1 if there are children in the household.

(ii) *Variables related to labor force attachment.* Dummy variables that are equal to 1 in each of the following respective cases: The worker is attending school; the person indicated that s/he holds a fixed-term employment contract because s/he could not find a permanent job; the worker reports to be looking for another job; and the person was unemployed or out of the labor force just a year before the origin year.

(iii) *Job related variables.* Tenure in the current (temporary) job; dummies for five brackets of work time; a dummy that equals 1 if the job is in the public sector; and dummies for five industries (farming/fishing, mining/manufacturing, construction, trade/hotel/restaurant, and other services).

(iv) *Other variables.* Four geographical areas,<sup>10</sup> and the unemployment rate in seventeen autonomous regions for the period 1987–1995. The latter variable is deemed to capture the state of the local labor market as well as the business cycle effect on the transition probabilities. Finally, among the explanatory variables, I include year dummies to adjust for trends in a flexible way and to control for institutional changes during the study period.

#### IV. Data

Data are obtained from the Spanish labor force survey, Encuesta de Población Activa (EPA), which is carried out every quarter on a representative sample of some 60,000 households. The questionnaire contains a variety of questions about current labor force status and labor market history. The EPA's major shortcoming is the lack of information on earnings. On the other hand, since the second quarter of 1987, the EPA questionnaire asks each dependent worker about the type of contract held, whether indefinite or temporary.<sup>11</sup>

Labor market transitions can be analyzed by using the EPA's panel structure. One sixth of households leave the sample every quarter; thus, each household can remain in the survey for a maximum of six consecutive quarters. Matched files on individuals have recently been made available by the Spanish National Institute of Statistics (INE). The place of residence and codes to identify members of the same household were initially absent from the matched files, but I was able to recover this information.

To study labor force transitions, I focus on a sample of 33,422 wage and salary workers who held a fixed-term employment contract in the origin year. This sample results from pooling persons who can be observed in the second quarters of two consecutive years, conditional on their temporary worker status in the origin year. The potential proportion of such people is two sixths of those present in the survey at the origin year. These are the persons interviewed for the first or the second time, given matching surveys one year apart. The resulting number of observations is reduced by attrition, which I estimated at an average rate of 15 percent in the one-year interval.

## V. Results

Table 1 shows the transition rates over a one-year period which are defined as the proportion of temporary workers who are observed in each of the four indicated labor force states. The percentage of those holding a permanent contract in the destination year<sup>12</sup> declined from 23 percent in 1988 to an average of 12 percent in the period 1993–1996. The decline came to a halt at the beginning of the latter period. As a consequence, more temporary workers remain in that situation one year later. The proportion of persons entering nonemployment responded strongly to the business cycle, which was at its lowest in 1993. Note that 31 percent of temporary workers in 1992 became jobless in 1993, as compared to 25 percent one year earlier.<sup>13</sup>

The results of the parametric analysis are presented in Table 2, which contains the estimated coefficients for the specified model. Results are presented separately for men and women. The corresponding means or sample proportions together with predicted and marginal probabilities are shown in Table 3.<sup>14</sup> My research interest focuses on the factors that contribute to explaining the probability of moving into a permanent job in one-year interval, conditional on being in a temporary job at the origin year. Therefore, I pay particular attention to the results concerning that transition and discuss some findings regarding the transitions to self-employment and to nonemployment. I also estimated the multinomial logit for the total sample of men and women and found that some variable effects were enhanced and others canceled out. These results are not reported but commented on where appropriate.

Table 1  
*Proportions of Temporary Workers Becoming Permanent Employees (PE),  
Self-Employed (SE), Non-Employed (NE), and Remaining  
in Temporary Employment (TE)*

Origin Year	Labor Force Situation One Year Later					Number
	(PE)	(SE)	(NE)	(TE)		
1987	22.90	4.57	25.10	47.43	100	1,773
1988	20.44	4.15	20.06	55.36	100	2,892
1989	18.20	3.37	22.24	56.19	100	3,620
1990	15.19	3.03	20.79	60.99	100	3,930
1991	15.91	3.97	24.88	55.23	100	4,280
1992	10.89	3.66	30.82	54.63	100	4,316
1993	11.32	2.75	26.23	59.69	100	4,071
1994	12.50	2.85	23.06	61.59	100	4,072
1995	11.86	3.02	24.51	60.61	100	4,468

Notes: Pooled data from the EPA's second quarter of each year for the period 1987–1996. The transition rates are calculated comparing the labor force status as of the second quarter of two consecutive years.

Table 2

*Multinomial Logit Estimates of Transition Probabilities to Permanent Employment (PE), Self-Employment (SE), and Non-Employment (NE) among Temporary Workers*  
(Absolute value of *t*-statistics in parentheses)

	Men			Women		
	PE	SE	NE	PE	SE	NE
Constant	-3.090 (0.19)	-4.628 (8.77)	-.2788 (1.16)	-2.664 (6.88)	-4.533 (5.40)	-.4317 (1.47)
Age	.0763 (5.52)	.1044 (4.44)	-.0657 (6.09)	.0922 (5.17)	.0424 (1.13)	-.0270 (1.98)
Age <sup>2</sup> /100	-.0870 (4.93)	-.1087 (3.71)	.1060 (7.74)	-.1104 (4.61)	-.0216 (0.44)	.0343 (1.87)
No education	-.0916 (1.16)	.2280 (2.00)	.0631 (0.99)	-.0038 (0.03)	.0547 (0.24)	.1128 (1.24)
Primary			(omitted)			
Secondary (academic)	.1421 (2.53)	.0392 (0.38)	-.1448 (3.08)	-.0796 (0.98)	.0881 (0.50)	-.1838 (3.02)
Secondary (vocational)	.3451 (4.60)	.1550 (1.08)	-.3114 (4.57)	-.0846 (0.81)	-.0411 (0.17)	-.3124 (3.92)
University	.4821 (5.18)	.1006 (0.52)	-.6944 (6.54)	.0358 (0.35)	-.3541 (1.35)	-.7747 (8.59)
Married	.2395 (3.63)	-.0984 (0.86)	-.4016 (6.95)	.0087 (0.12)	.3195 (1.96)	.4145 (6.86)
# members in household	-.0195 (1.27)	-.0118 (0.45)	.0056 (0.45)	-.0438 (2.22)	-.0432 (0.98)	-.0285 (1.86)
Children (yes=1)	-.0665 (1.20)	.0019 (0.02)	.0368 (0.80)	-.0770 (1.15)	.2160 (1.45)	.0598 (1.15)
Attend school/training	.0106 (0.10)	-.1229 (0.59)	.2173 (2.58)	-.1282 (1.25)	.2808 (1.23)	.3647 (4.97)
Couldn't find permanent work	-.0654 (0.97)	-.2249 (2.02)	-.0059 (0.10)	-.1212 (1.51)	-.3502 (2.19)	-.1092 (1.70)
Search for another job	-.2879 (3.02)	.1856 (1.32)	.3458 (5.00)	-.2179 (2.09)	.0390 (0.17)	.1941 (2.61)
Non-employed a year ago	-.3280 (6.88)	-.1412 (1.71)	.3725 (9.76)	-.3137 (5.24)	.0930 (0.72)	.3869 (8.64)
Job tenure (years)	.0551 (7.95)	.0348 (3.54)	.0070 (0.81)	.0750 (6.07)	.0527 (2.38)	.0101 (0.76)
Hours worked per week < 35	.0084 (0.07)	.5330 (3.27)	.3382 (3.99)	-.0854 (1.16)	.2397 (1.52)	.0542 (0.94)
35–39 hours	.1394 (1.38)	-.2388 (1.11)	.0302 (0.32)	.1719 (1.73)	.3782 (1.60)	.0995 (1.18)
40 hours			(omitted)			
> 40 hours	.0214 (0.38)	.1132 (1.20)	.0083 (0.16)	-.1091 (1.20)	.1449 (0.75)	-.1147 (1.65)
Public sector	.1297 (1.59)	-.0636 (0.40)	.2246 (3.05)	-.1273 (1.45)	-.4258 (1.90)	.0094 (0.13)



Table 2 — *Continued*

	Men			Women		
	PE	SE	NE	PE	SE	NE
<i>Farming/fishing</i>	-.4802 (5.70)	.8005 (5.88)	-.0113 (0.16)	-.4903 (2.83)	.2363 (0.84)	.2111 (2.04)
<i>Mining/manufact.</i>			(omitted)			
<i>Construction</i>	-.5163 (8.39)	.3105 (2.62)	.2140 (4.11)	.3881 (1.64)	-1.173 (1.15)	.2009 (1.09)
<i>Trade/hotel/ restaurant</i>	-.0095 (0.14)	.4232 (3.25)	.0217 (0.37)	.1714 (1.91)	.0019 (0.01)	-.0610 (0.93)
<i>Other services</i>	.0205 (0.29)	.2331 (1.63)	-.0234 (0.35)	.3862 (4.40)	-.0789 (0.42)	-.0656 (0.98)
<i>North</i>			(omitted)			
<i>South</i>	.3947 (4.24)	.3284 (1.99)	-.0028 (0.03)	.4382 (3.73)	-.4264 (1.56)	.0282 (0.29)
<i>Center</i>	.1685 (2.48)	.0287 (0.23)	-.1364 (2.29)	-.0519 (0.57)	.0853 (0.43)	.0842 (1.17)
<i>East</i>	.0446 (0.69)	-.0151 (0.13)	-.1469 (2.61)	-.1628 (2.01)	-.2110 (1.18)	-.1166 (1.78)
<i>Regional unemployment rate</i>	-.0029 (0.42)	-.0155 (1.27)	.0350 (5.67)	-.0256 (2.87)	.0355 (1.70)	.0220 (3.04)
<i>Year 1987</i>	1.001 (9.62)	.1755 (1.01)	-.5295 (5.71)	.9940 (7.08)	.0835 (0.26)	-.0438 (0.38)
<i>1988</i>	.7531 (8.34)	.0804 (0.54)	-.8093 (10.04)	.6491 (5.42)	-.0296 (0.11)	-.3204 (3.32)
<i>1989</i>	.5717 (6.65)	-.2214 (1.51)	-.6852 (9.41)	.5711 (4.98)	.1216 (0.50)	-.0250 (0.28)
<i>1990</i>	.2963 (3.37)	-.3862 (2.58)	-.5959 (8.40)	.1386 (1.20)	-.0910 (0.37)	-.3652 (4.21)
<i>1991</i>	.3169 (3.64)	.0143 (0.10)	-.2756 (4.10)	.3870 (3.51)	.1653 (0.70)	-.0372 (0.44)
<i>1992</i>			(omitted)			
<i>1993</i>	-.0719 (0.74)	-.2936 (1.88)	-.4642 (6.46)	-.0234 (0.18)	-.7519 (2.64)	-.2331 (2.63)
<i>1994</i>	-.0456 (0.45)	-.4160 (2.45)	-.7059 (9.00)	.1382 (1.08)	-.4273 (1.56)	-.4002 (4.19)
<i>1995</i>	-.0854 (0.90)	-.3530 (2.30)	-.5983 (8.42)	.0857 (0.70)	-.1768 (0.71)	-.2479 (2.81)
Sample size		20,966			12,456	
Log likelihood		-21,107			-12,583	
Pseudo $R^2$		.048			.040	
Sample's transition rates	14.85	4.00	22.19	14.36	2.36	28.16

*Notes:* The sample is composed of temporary workers at the origin year for the period 1987 to 1995. The transition rate is measured by considering temporary workers' labor force state one year later. Data are obtained from matched EPA files for the period 1987–1996.

Table 3  
*Predicted Probability, Sample Means, and Marginal Probabilities  
for Temporary Workers' Transitions to Permanent Employment*

Predicted probability for the reference worker	Men		Women	
	10.38		12.13	
	Sample Mean	Marg. Probab.	Sample Mean	Marg. Probab.
<i>Age</i>	31.62	.00886	29.56	.01065
<i>Age</i> <sup>2</sup> /100		-.01116		-.01294
<i>No education</i>	.1145	-.01136	.0802	-.00473
<i>Primary</i>	.3502		.2477	
<i>Secondary (academic)</i>	.3709	.01777	.3994	-.00211
<i>Secondary (vocational)</i>	.1115	.04166	.1388	.00254
<i>University</i>	.0526	.06702	.1336	.03345
<i>Married</i>	.4782	.03565	.3998	-.01542
<i># members in household</i>	4.395	-.00196	4.311	-.00346
<i>Children (yes=1)</i>	.5240	-.00739	.4938	-.01121
<i>Attend school/training</i>	.0490	-.00563	.0989	-.02805
<i>Couldn't find perm. work</i>	.8973	-.00511	.8693	-.00760
<i>Search for another job</i>	.0643	-.03865	.0915	-.03047
<i>Non-employed a year ago</i>	.3765	-.04210	.4227	-.04790
<i>Job tenure (years)</i>	.8665	.00477	.9056	.00743
<i>Hours worked per week</i>				
<i>&lt; 35</i>	.0464	-.01204	.2524	-.01199
<i>35–39 hours</i>	.0426	.01282	.0931	.01325
<i>40 hours</i>	.7426		.5323	
<i>&gt; 40 hours</i>	.1682	.00133	.1220	-.00798
<i>Public sector</i>	.0895	.00500	.1689	-.01230
<i>Farming/fishing</i>	.1211	-.04708	.0552	-.06087
<i>Mining/manufacturing</i>	.2231		.1813	
<i>Construction</i>	.2942	-.05604	.0139	.03846
<i>Trade/hotel/restaurant</i>	.1785	-.00307	.2679	.02049
<i>Other services</i>	.1828	.00186	.4815	.04386
<i>North</i>	.1747		.1695	
<i>South</i>	.3482	.03566	.3062	.04729
<i>Center</i>	.2020	.02000	.1889	-.00893
<i>East</i>	.2749	.00897	.3352	-.01230

Table 3 — *Continued*

Predicted probability for the reference worker	Men		Women	
	10.38		12.13	
	Sample Mean	Marg. Probab.	Sample Mean	Marg. Probab.
<i>Regional unemp. rate</i>	20.0	-.00136	19.5	-.00367
<i>Year 1987</i>	.0547	.10971	.0502	.10723
<i>1988</i>	.0877	.09602	.0844	.08101
<i>1989</i>	.1108	.07617	.1039	.06132
<i>1990</i>	.1170	.04823	.1185	.02846
<i>1991</i>	.1276	.03836	.1286	.04198
<i>1992</i>	.1292		.1288	
<i>1993</i>	.1203	.00939	.1242	.00886
<i>1994</i>	.1192	.02010	.1261	.03097
<i>1995</i>	.1330	.01269	.1347	.01886

Notes: Given the reference-worker transition rate to the state  $j$ ,  $p_j$ , and the estimated coefficients in Table 2, marginal probabilities are obtained by applying the formula:  $p_j(\beta_j - \sum p_k \beta_k)$ , where  $k=1,2,3$ . The reference-worker's characteristics are indicated in note 14 of the text.

When I estimated the model for the full sample, women appeared less likely to move into permanent employment (and into self-employment), and much more likely to become jobless. According to Table 2, age has a strong, although decreasing effect on the probability of obtaining a permanent job for both men and women. Higher levels of education are associated with increasing transition rates to permanent work only for males. Surprisingly, education has no effect on women's probability of obtaining permanent work. However, education reduces the transitions to nonemployment for both men and women. Marriage increases the probability of obtaining an indefinite contract, and the number of household members diminishes such a probability. The former result holds only for men and the latter only for women.

Variables that yield particularly interesting results are those included in group (ii) described above. If the temporary worker indicated that s/he was searching for another job (6.4 percent of men and 9.1 percent of women), the likelihood of obtaining a permanent job is significantly lower than that of the reference worker (by 38.6 percent for men and 25 percent for women). If the worker had been jobless a year before the date of the survey (37.6 of men and 42.3 of women), the transition to permanent employment declines by 42 percent among men and 39 percent among women. This variable indicates a recent history of nonemployment, and can be taken

as a proxy for previous working instability or high job turnover. On the other hand, the negative and significant coefficient for the dummy that is equal to 1 if the person is searching for another job may indicate that s/he already foresees a gloomy future in the current job. In fact, both of the referred variables strongly affect the probability of becoming jobless.

Regarding the variables that refer to job characteristics, tenure in the current job has a positive and very significant effect on the probability of becoming a permanent employee. For the reference worker, an additional year in the current job increases the probability by 4.6 percent among men and 6 percent among women, so staying in a temporary job beyond a certain threshold strongly increases the likelihood that the temporary contract will be converted into a permanent one. The same variable obtains a positive and very significant coefficient in the equations for transition to self-employment. One is tempted to interpret this result as suggesting that if a worker remains with a particular firm for enough time and does not obtain permanent status, s/he may become an independent contractor with the same firm. This interpretation seems to be consistent with the finding that people working part time — less than 35 hours per week (4.6 percent of men and 25 percent of women) — are more likely to become self-employed.<sup>15</sup>

Persons employed in farming/fishing and construction show the lowest probability of becoming permanent — a not surprising result because temporary workers in those activities are the most likely to be engaged in more contingent, discontinuous work. Note that the sector “Other services,” where 48 percent of temporary women are employed as compared to 18.3 percent of temporary men, is associated with the highest probability of transition from temporary to permanent employment among women. According to Table 3, a woman who is employed in the indicated sector is 36 percent more likely to obtain a permanent job than another woman with the same observed characteristics employed in the “Mining/Manufacturing” sector.

Living in the southern regions of Spain has a positive and significant effect on the probability of transition to permanent employment. Such probability is also positive for those residing in the central areas of the country, but significant only for men. These regional differences may have something to do with characteristics of workers, jobs, and the local labor markets for which I do not control. The effect of the regional unemployment rate on the transition to permanent employment is negative and significant only for women. It has a positive effect on the transition to self-employment, although significant only for women; and, not surprisingly, a higher unemployment rate strongly increases the probability of transition to nonemployment.

The effect of year dummies confirms what was observed in Table 1, namely, that the probability of obtaining an indefinite contract diminished up to 1992, and stayed virtually constant thereafter. As indicated earlier, that same year marks the beginning of a leveling off in the proportion of temporary employment. On the other hand, while total permanent employment decreased between 1987 and 1994, an increase has been observed in 1995 and 1996. This does not seem to be caused by a

higher probability of transition from temporary to permanent employment; instead, it can result from more people being initially hired by firms as permanent employees.<sup>16</sup>

Despite a lower transition rate in 1995 than in 1987, the number of workers going from temporary to permanent employment has stayed roughly constant. But a larger number of temporary workers in the economy means that more temporary workers are increasingly trapped in that situation, rotating from one temporary job to another. The extent to which recurrent temporary employment relationships prevent people from ever becoming permanent in their working life remains an issue for future research. In this article, I obtained some evidence to support that previous nonemployment experience diminishes the probability of obtaining an indefinite contract and increases the jobless rate among temporary workers.

## VI. *Conclusions*

Factors linked to public policy go a long way in explaining the growth of temporary employment in Spain. At present, the issue is to define what policy will bring down the percentage of temporary workers. I documented how the proportion of temporary employment increased rapidly from 1987 to 1991, declined in the 1992 recession, and increased slightly since. Then I studied the transitions of temporary workers to various labor force states and focused on the probability that they obtain permanent employment status. Such probability was significantly lower for women, youth, and less-educated men. Moreover, job tenure has a strong positive effect on the probability of obtaining a permanent job. However, this probability is significantly lower for workers who were nonemployed a year before the date of the initial survey.

These main findings provide information about the employers' hiring preferences as well as workers' type-of-job opportunities. As opposed to more attractive long-term employment relationships there are more flexible short-term employment arrangements. For those who are less likely to obtain permanent employment, there is the risk that they become increasingly trapped in temporary work. In Spain, pervasive temporary employment has much to do with labor market institutions. The use of fixed-term employment contracts was encouraged by public policy to increase labor flexibility, while maintaining high dismissal costs associated with the indefinite contract. Under these conditions, employers are reluctant to hire permanent workers, and those obtaining indefinite contracts are carefully screened. As a consequence, there are disadvantaged workers whose prospects for gaining employment stability appears rather low. My results suggest that *institutional changes can improve such prospects*.

The two-tier labor market created by indefinite and fixed-term employment contracts results from instituting the latter as a more flexible alternative to the former. Lack of a timely reform of the indefinite contract has caused the expansion of temporary employment to its present high level. Only a substantial reduction of individual dismissal costs can motivate employers to use open-end contracts and long-term employment relationships in Spain. Despite several recent labor market reforms, no

one has tackled the high costs of firing employees with indefinite contracts. The aim to protect workers from unjust dismissals and trade unions' opposition have dissuaded the government from modifying the law.

However, unions and employers recognize that increasing labor turnover and a more segmented labor market cause long-term negative economic effects. If temporary workers lack any attachment to the firm, they are less likely to receive training than permanent workers. This, in turn, makes temporary workers more prone to continue temporary employment relationships. Their work precariousness and low commitment to an employer can have a negative impact on the country's labor productivity. For these reasons, new labor market reforms are likely in the near future. In any case, further research is needed to better understand employers' behavior regarding fixed-term employment contracts — in particular, how temporary employment influences the wage determination process and productivity growth at the firm level.

## NOTES

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<sup>1</sup>Some studies of labor market rigidities and unemployment in Spain are Dolado et al. (1986), Bentolila and Blanchard (1989), Andrés et al. (1990), Bentolila and Saint-Paul (1992), Bentolila and Dolado (1994), and Blanchard et al. (1995).

<sup>2</sup>Over the relevant period for this article's empirical work (1987–1996), the average unemployment rate was 15.9 percent for men and 27.6 percent for women. The minimum unemployment rate was experienced by both men and women in 1991, at 12 and 23.4 percent, respectively.

<sup>3</sup>The 1994 reform of the Workers' Statute defined collective dismissals as those which in a period of 90 days affect ten workers in firms with less than 100 employees, 10 percent of workers in firms with 100–299 employees, and 30 percent of workers in firms with 300 or more employees.

<sup>4</sup>A recent report by the Ministry of Labor, *La Contratación y el Paro Registrado en 1996*, shows that only 4 per cent of the contracts registered with the Public Employment Office in 1996 were indefinite. More striking is the finding that only 1 percent of total contracts indicated a duration of one year or longer.

<sup>5</sup>According to the labor force survey (EPA), for the period 1987–1996 the average job tenure of a temporary worker was 10 months. On the other hand, the average tenure of workers in permanent jobs was 13 years among men and 9 years among women.

<sup>6</sup>Differences in working conditions between permanent and temporary workers have raised the issue of labor market segmentation in Spain. The extent to which the dual labor market theory (Doeringer and Piore, 1971; Dickens and Lang, 1985; Rebitzer and Taylor, 1991) can contribute to a better understanding of the effects of fixed-term contracts on the Spanish labor market has yet to be investigated.

<sup>7</sup>By employing temporary workers firms can make greater investments in permanent workers. One reason for this is that there is less uncertainty associated with such investments, particularly when employment adjustments in slumps can be carried out inexpensively through termination of fixed-term contracts.

<sup>8</sup>See, for instance, OECD (1993) and Meulders et al. (1994).

<sup>9</sup>It is also well known that temporary jobs are more common in farming/fishing and construction than in other economic sectors (Alba-Ramírez, 1996).

<sup>10</sup>The 17 autonomous communities are grouped as follows. South (Andalusia, Canary Islands, Extremadura, and Murcia); Center (Castile-Leon, Castile-La Mancha, and Madrid); East (Aragon, Balearic Islands, Catalonia, and Valencia); North (Asturias, Cantabria, Galicia, Navarre, La Rioja, and the Basque Country).

<sup>11</sup>Up to the fourth quarter of 1991, the EPA distinguished three different types of fixed-term employment arrangements: (1) training or apprenticeship contracts, (2) seasonal contracts, and (3) other contracts which can be those under the 1984 Employment Promotion Program. Since the first quarter of 1992, the EPA splits the “others” category in four categories: (1) contracts for a provisional period, (2) contracts to replace total or partially another employee, (3) contracts for specific work or service and, (4) other fixed-term employment contracts. This new set of options for classification within the group of temporary workers is not comparable to the original one. For this reason, I only distinguish between permanent and temporary workers.

<sup>12</sup>Because I ignore whether the transition to permanent employment takes place in the same firm or not, I cannot say that a temporary contract is converted into a permanent one. A temporary worker may leave the job to obtain permanent employment with other firm, with or without an intervening spell of unemployment.

<sup>13</sup>I also calculated the rate of permanent job to permanent job transition. For the period 1987–1996, of workers holding a permanent contract in the origin year, 88.7 percent of the men and 87.6 percent of the women remained in the same state one year later. The transition to temporary employment was similar for men and women, at 3 percent. Moreover, the transition from permanent employment to unemployment was 5.2 percent among men, as compared to 7.5 percent for women.

<sup>14</sup>For the transition from temporary employment to the  $j$ th situation, the marginal effect of an exogenous variable,  $x$ , is obtained at a set of characteristics of a reference worker in the sample as follows:  $\delta p_j / \delta x = p_j (\beta_j - \sum p_k \beta_k)$ , where  $k = 1, 2, 3$ . The reference-worker's characteristics are: age = 30, primary education, non-married, # members in household = 4, no children, does not attend school/training, does not report that the reason for temporary employment is that s/he could not find permanent work, does not search for another job, was employed a year ago, job tenure = 1 year, hours worked per week = 40, works in the private sector, works in mining/manufacturing, lives in the north, regional unemployment rate = 20 percent, and year = 1992.

<sup>15</sup>The extent to which some employees become self-employed, while continuing to perform similar work for the same firms, remains to be investigated. An alternative explanation for the indicated result could be that some temporary employees working part time are also self-employed, and what I observe in the one-year interval is that they have lost or quit their wage and salary job while keeping the self-employment situation.

<sup>16</sup>I calculated the proportion of permanent employees among those in the job for three or fewer months. For the second quarter of each year, I obtained 34 percent in 1987, 16.5 in 1989, 11 percent in 1991, and a fairly constant percentage for the period 1993–1996, at about 7.4 percent. Thus, the relative increase in permanent employment since 1994 seems to be explained by a drop in the outflow from permanent employment rather than by a change in employers' attitude toward hiring permanent employees.

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