The effect of outplacement services on earning prospects of unemployed

F. Alfonso Arellano

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Abstract

I use two administrative databases combining information about workers' characteristics and earnings to estimate the effect of outplacement services on wage prospects of unemployed workers. The results suggest that the impact of outplacement is positive, although the magnitude depends on the type of service and gender. On one side, the group with the best results is constituted by men who receive individual outplacement, increasing their average annual gross wage by around 42%. On the other side, women who receive group outplacement show small results, whose figures are near 17%.

Keywords: outplacement, wages, unemployed workers, (non-parametric) matching methods
JEL Classification: J31, J64, C14

Resumen

Se utilizan dos bases de datos administrativas que combinan información sobre las características de los trabajadores y sus ingresos para estimar el efecto de los servicios de recolocación en las perspectivas salariales de los trabajadores desempleados. Los resultados sugieren que el impacto de la recolocación es positivo, aunque la magnitud depende del tipo de servicio y del género del trabajador. Por un lado, el grupo con los mejores resultados está constituido por hombres que reciben el servicio de recolocación individual, aumentando en media su salario bruto anual cerca del 42%. Por otro lado, las mujeres que reciben el servicio de recolocación grupal muestran resultados pequeños, con un incremento cercano al 17%.

Palabras clave: recolocación, salarios, desempleados, métodos de emparejamiento (no paramétricos)

1. Introduction

One of the most significant sides in the definition of quality of work is the flexibility and security in the job. Both researchers and policymakers recognize that displaced workers experience costly unemployment spells in terms of duration and earning losses. The term "flexicurity" focuses on transitions to the workplace, support for those who lose their jobs or are seeking alternative and geographical mobility. The changes in wage the workers experience in job transition constitute an important measure of the level of flexicurity in the labour markets.

The conclusions of the mainstream politicians' agenda such as in the 2000 Lisbon European Council point out that the new strategic objective depends mainly on the private sector and public-private partnership. One of the most promising relationships between private and public sectors in labour markets is provided by the outplacement services.

The aim of the paper is to analyse the effect of the outplacement services provided by the private sector on the wage prospects of unemployed workers. To develop the picture, I create an unusual data set by merging administrative records covering workers' earnings with details on the employees and their firms. The resulting data set contains information on personal characteristics of the unemployed workers who received help from one of the most important outplacement firms in Spain, Creade, and workers who belong to the 2002 Wage Structure Survey from the National Statistical Office (INE).

To my knowledge, most analysis of outplacement services since the 1980's has been focused on entrepreneurial topics. The most recent research which follows and goes into this branch in depth is threefold. First, there are studies which describe particular application of outplacement services (e.g. Estache et al., 2000). A second option consists of papers whose aim is related to business and human resources theory, such as Challenger (2005). Other researchers mixed both prior branches, such as Kobayashi (2004), and Martin and Lekan (2008). Finally, there are studies which go beyond and also examine samples of workers who receive outplacement services using statistical techniques (e.g. Westaby, 2004).

The (applied) economic literature related to outplacement services focuses on different features of earnings and labour-market position during involuntary job disruptions, such as Jacobson et al. (1993), Ruhm (1994) and Ichino et al. (2007). All these earning losses may be reduced or limited by the use of outplacement services.

The research mentioned above does not provide much guidance to policymakers and others as to the magnitude and persistence of the unemployed workers' welfare involved in outplacement services. To answer such questions requires empirical work like that presented in this paper.

The contribution of the paper is threefold. First, I combine both ways of analysis (entrepreneurial and economic points of view) and go further with the assessment of outplacement services on reemployment criteria. Second, I provide information on one of the most innovative Active Labour Market Policies (ALMPs) implemented by the private sector in the last years, jointly with training programmes. I show partial evidence of the reality of these programmes in regulated labour markets, as occurs in Spain. Third, I analyse the monetary effect of this measure on unemployed workers, so the causal inference analysis may be supplemented by cost-benefit implications of the service, which is usually discarded in policy evaluations.

The main findings of the paper are briefly summarized as follows. I find that workers who receive outplacement services get jobs with higher earnings. However, each type of service is appointed to different professional levels, and the estimates are higher in the case of individual outplacement than group outplacement. The earnings also exhibit greater variability by gender. My estimates suggest that the growth represents between 17% and 26% of the average annual wage for women, depending on the outplacement service received. In the case of men, these figures rise to 28% and 42% for group and individual outplacement, respectively.

The rest of the paper proceeds as follows. Section 2 provides background on outplacement services and reviews for the literature of post-displacement earnings and outplacement processes. In Section 3, I describe databases and comment on their strengths and shortcomings. Section 4 presents the econometric structure and robustness comments for estimating the effect of outplacement. In Section 5, I show estimates and some concluding remarks follow in Section 6.

2.   Job disruption, earnings and outplacement

There is a loss arising from the social value the worker spends to find a job. The cost depends on search behaviour determined by the characteristics of the previous jobs and the use of help in the transition. The resources devoted to the passive labour market measures may be reallocated to set up institutions which become reality the provision of

suitable employment services, career advice and re-employment incentives to assist workers in the job transition process.

As Kobayashi (2004) points out, many workers have little idea about how outplacement firms work in the job transitions and usually get mixed outplacement services up with private job placement services. Hortal (1999) defines outplacement as "the set of services provided by a consultant to the firm (client) and the professional (candidate) when they negotiate the rupture of the contractual relationship (…) in order to facilitate consultancy and support to assure the continuation of the professional's career."

From a theoretical point of view, both the firm and the professional can enjoy several advantages of outplacement services, besides generating positive effects for policy-makers. The negative influence of firing on the relationship between the rest of employees and the firm is mitigated, motivation and productivity are maintained and the firm's image improves. The worker who leaves the firm will get help to be ready for a new labour stage. Public Sector obtains a cost reduction from working population's loss, especially for the case of early retirements. However, the use of outplacement services may be observed as a "bad signal" -lack of opportunities and low ability of the worker-, and they raise the reservation wage increasing the unemployment duration and public benefit spending. There is no argument to support which mechanism prevails.

The outplacement constitutes an interesting example of partnership between private firms and public sector in the field of the ALMPs. As occurs with other ALMPs, the evaluation of outplacement services depends on micro databases available. These services have belonged to the unobserved part to assess the effect of pre-notifications on wages in subsequent employment. Taking into account the comments of Ruhm (1994) about displacement, the pre-notifications of plan closings may be accompanied by assistance efforts of the firm that raise post-displacement earnings, such as the outplacement services.

The firm that dismisses the professional usually pays the cost of the programme. This expenditure is not related to the dismissal compensation of the worker. The outplacement firms move between the client and the candidate, knowing the restrictions of each party. They cannot guarantee the candidate a new job. If the programme concludes and the candidate does not have found a job, the contact between the worker and the outplacement firm does not get lost, since the prestige of the firm will be clearly committed. The failure may take place, but only a small percentage of candidates gives up the methodology before achieving the goal.

According to De Ramos and Hernández (2000), the programme is applied to a professional (individual outplacement), the candidate's spouse, or a set of workers. In the latter option, the workers usually belong to similar organization levels and economic areas, and the service is defined as group outplacement.

The basic causes of individual outplacement are related to personal motivations, as inadequacy to the position or irreconcilable differences. The reasons in favour of group outplacement are not only associated to economic difficulties of the firms, but mergers, takeovers and strategic plans of the firms. Hence, group outplacement implies a bigger activity and complexity than individual outplacement does. The firm that finances the programme has the initiative to choose the type of service. The candidate's influence is bigger in the individual case, since the service constitutes a soft and conventional solution between both parties.

Individual outplacement is designed to managers. They hold further financial resources and time does not represent an important restriction to examine the available options. Nevertheless, the supply of similar jobs to the last one is smaller and age plays an outstanding role to intensify the job search. Group outplacement is associated to sets of workers in the medium-low level of firms, who make redundant for reorganization reasons. Time is a key factor, not only for financial reasons but the labour supply is wider.

A great part of the literature on labour market has focused on job displacement and the subsequent effects on workers' welfare (Jacobson et al., 1993; Eliason and Storrie, 2006; Ichino et al., 2007). Although earnings are not the unique measure to analyse social costs of displacement process (Hamermesh, 1987), the short-term costs in terms of forgone earnings, loss of firm- and industry-specific human capital (measured by the tenure with the employer) and other productivity factors have been analysed more profoundly than long-term effects. Neal (1995) focuses on the importance of industry-specific knowledge to get a new job for unemployed workers and analyses the consequences of specific skills and tenure in terms of post-displacement earnings. Ruhm (1994) analyses the causal effect of advanced notice on post-displacement earnings. However, Ruhm cannot distinguish the pre-notification from other adjustment assistance such as outplacement services, so the policy implications of the results become complicated.

This literature has considered outplacement marginally, in part due to the lack of detailed information. Research on outplacement services has greatly analysed the managerial and entrepreneurial point of view, studying the difficulties of employees to

face up to the job transitions, describing the mechanisms and consequences of the outplacement services, and providing new details to improve the matching between labour demand and supply. Estache et al. (2000) describe the labour redundancy in the Brazilian Federal Railway prior to privatization in order to be competitive. Challenger (2005) justifies the use of (high-quality) outplacement programmes and measures the cost reduction derived from using these services. Kobayashi (2004) describes the situation of outplacement in Japan and explains with several examples how the workers face up to job transitions and the importance of their attitudes and relationship with the outplacement firm to get the goal. Martin and Lekan (2008) point out the risk of providing standard services that do not address circumstances of the displaced executive. They emphasize the significance of adjusting service delivery to the particular needs describing cases. Feldman and Leana (2000) show the problems and difficulties of downsized executives who search a job due to the existence of underemployment and assistance of the firing firm not only in terms of outplacement services that should take into account in layoffs. Westaby (2004) uses a sample of managers and executives to assess the outplacement services on employment and earnings perspectives. He carries out a variance-covariance analysis and evidences that outplacement facilitates high-level professionals the return to employment situation. Apart from these sets of references, Arellano (2007) provides an overview of the main characteristics of outplacement and assess the effect of these services on employment perspectives, comparing a group of unemployed workers with outplacement services with a control group not receiving the programme.

3.   Data

The sample used to analyse the effect of outplacement on wages is created from two different databases. The data collection strategy leads to combine flow sampling for the outplacement group and stock sampling for the comparison group. With respect to the former group, the workers who receive outplacement services come from the database of the firm Creade.

Creade is one of the most important outplacement consultant companies in Spain joint with Lee Hecht Harrison, MOA Groupe BIS, Right Management Consultants and Uniconsult. They are related to international professional service firms which helped almost 7,000 professional from 800 firms to get a job in 2003. Creade is integrated in the Human Resources firm Adecco Enterprise.

The database of Creade shows information on the candidates in the outplacement programmes, covering sociodemographics (age, gender, education level, language skills, way of getting the new job); outplacement process (location of the office in charge of the worker, beginning date and ending date of the process, type of outplacement programme); and labour market conditions (wage, economic sector and position of the previous job and the new job, reasons for job search and seniority at the firm) between 1999 and 2003.

This group is compared to the workers included in the 2002 Wage Structure Survey (WSS), created by the INE. The WSS is a four yearly statistical operation (based on 2002 survey results) carried out in the framework of the European Union (EU) with common methodology and content criteria. The aim of the WSS is to obtain comparable results on the structure and distribution of wages among its member states. The survey investigates the distribution of wages based on a large variety of variables such as gender, occupation, branch of activity, seniority, type of contract and company size. Three surveys of this type have been done in Spain, in 1995, 2002 and 2006. The WSS belongs to a type of databases that the INE does not provide standardised files of individual data for confidentiality reasons, but depending on the study that the researcher wishes to conduct, customised anonymity may be requested.

The selection criteria depend on the characteristics of the Creade database. I consider workers in the WSS that are geographically close to those in the Creade database. In this particular case, I consider Andalusia, Aragon, Catalonia, Galicia, Madrid, Valencian Community, and Basque Country by regions. The rest of regions are aggregated in one group.

I reduce the size of the firm to three intervals (from 10 to 49 workers, from 50 to 199 workers, and 200 or more workers), following the Commission Recommendation 2003/361/EC of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises in terms of the number of employees. The reduction process also affects the collective agreement (by sector, geographic and the rest of options) and the scope of market (local, national, and international market).

The sample with complete information is composed by 404 workers who receive outplacement services (233 workers received group outplacement and 171 workers were included in individual outplacement) and 16,565 workplaces and 152,200 workers in the WSS, which represent above 75% and nearly 71% of the total number of workplaces and workers, respectively.

These administrative databases have several advantages over data used in other studies. First, I have detailed information of a set of workers who receive outplacement. The private outplacement firms are very reluctant to give databases of their clients. Second, I use annual wage as outcome variable because it is available in both samples. Third, the size of the comparison group is very high in terms of observations, so the costs of creating a set of workers similar to the outplacement group are limited. Finally, the scope of the samples represents at least a great part of Spain, because the regions included in the databases are the most populous. Following information of the INE, these regions represent above seventy percent of the total population of Spain in 2002.

Of course, there are also disadvantages associated to these data. Although the firm Creade is one of the most important outplacement firms in Spain, lack of data from other outplacement firms prevents me from a more general analysis. Another disadvantage is the small size of the outplacement group. However, this fact is positive for the evaluation framework I adopt, because outplacement participation does not affect the outcome of non-participants.

The data collection strategy depends on information about earnings. There is a combination of flow sampling from the Creade database and stock sampling from the WSS. The period studied between 1999 and 2003 is relatively stable in terms of economic growth, so the potential bias due to the macroeconomic context is not relevant. The use of this stock sampling is the unique available solution to get a sufficiently large number of comparison units with information on earnings. The differences in terms of information between both samples should not affect seriously the analysis of the case.

Obtaining information on wages is a very sensitive and difficult task question. The difficulties established by institutional setting and the complexity of the definition have prevented the use of this variable in Spain. Although the information on wages in the databases comes from the worker, and many of them in the Creade database do not provide the information on the new job, the variable represents the best option available.

Finally, there is only information up to the end of the job search, so only short run effects are analysed. The time limit may be a serious problem in the context of displacement effects on earnings (Jacobson et al., 1993). However, these services are focused only on the transition from unemployment to employment, so the potential long run effects should not represent the main argument for the measure.

Even given the data limitations, I am able to provide a substantially more complete assessment of the determinants of earning losses than it has previously been possible.

I use several sub-samples in order to get success in constructing the best comparison group with almost identical characteristics to the outplacement group and minimize the shortcomings previously commented. Dropping these observations is other step in the process of getting a common support between the outplacement and comparison group. The selection criterion is twofold, elimination of individuals with non-compatible characteristics and selection by the Bayesian approach.

For the former case, a more restrictive version of the WSS is achieved by the use of information on the workplace and the worker. I do not consider people in workplaces outside the regions commented above, owned by the public sector, with fewer than two hundred workers or whose target market is small (local or regional market).

I also eliminate the workers who belong to economic activities and professional areas not included in the Creade database, such as agriculture, fishing and forestry, public administration, defence, Social Security, private households and extra-territorial organizations. Moreover, the workers who get a fixed-contract or a part-time job do not usually take part in the outplacement processes, so they are also excluded. This restriction eliminates the potential bias derived from the existence of several levels of risk aversion among workers in terms of job security. The selection in professional status and contract type eliminate individuals whose earnings are very different from the annual wage provided by the WSS, following the spirit of Bound and Krueger (1991) to avoid high measurement error in earnings data.

Also workers with low education level are eliminated from the sample because individuals in the Creade database have some kind of education. As Eliason and Storrie (2006) suggest, the transition from / to temporary employment is more sensitive to changes in economic cycle. The own characteristics of the WSS prevent the existence of self-employed workers, because the sample only includes workers in firms whose staff is constituted by more than 10 employees. Finally, the INE database is composed by 20,032 workers. Despite the difficulty in matching the data sets and the imposed sample restrictions, the process is necessary to get a matched comparison group.

Taking into account available information, other homogeneity process takes place, calculating a new set of probabilities and modifying initial probabilities. The study of individual characteristics conditional on belonging to the treatment group

fosters the discovery of distinctive features about workers who receive outplacement services.

Let A_k be a combination of observable characteristics for a worker, and let D be the event of interest (the binary variable indicating outplacement status). D happens under any hypothesis A_k, where $A_k \in A$ countable, disjoint class of events with positive probability. Using Bayes' theorem, the probability of having a combination of characteristics given that the worker belongs to the outplacement group is:

$$P\left(A_k \middle| D=1\right) = \frac{P\left(D=1 \middle| A_k\right) \cdot P\left(A_k\right)}{P\left(D=1\right)}$$

The inference of elements of Bayes' rule comes from the complete information sample. The denominator represents the proportion of workers who receive outplacement service in the sample. The probability of the combinations (or prior probability) is derived from the values of the variables which are used in the matching process. The conditional probability is estimated by a discrete choice model.

Taking the complete information sample as reference and posterior probability as instrument, a second subset of observations with the same size as the reduced sample (20,032 workers) is created. The new sub-sample (known as Bayesian approach sample) includes comparison workers who show the highest posterior probability values.

The variables available in both two databases covers sociodemographics (birth date, gender, education level and nationality), labour market information (occupation of the worker following the main groups of the National Classification of Occupations and annual wage) and information related to the firm (responsibility charges and seniority of the worker in the firm, and region). As Jacobson, Lalonde and Sullivan (1993) suggest, information on firms constitute an important factor in the analysis of job transitions on earnings.

Tables 1 and 2 include selected descriptive statistics for several samples by gender. Both tables show differences on average between outplacement and comparison groups (second and third column, respectively) for the complete information sample, constituted by 152,604 workers (404 individuals belong to the treatment group).

The average results of the matched control group by sample reduction present better values than the comparison group. Age and nationality show similar figures in

TABLE 1:
Descriptive statistics for outplacement and (matched) control groups, only men

Variables	Total	Outplacement	Comparison	Sample Reduction Matched control	Bayesian Approach Matched control
Birth year	1,964	1,962	1,964	1,962	1,966
	(11.01)	(8.21)	(11.01)	(10.66)	(9.51)
Spaniard	96.60	98.11	96.60	99.28	100.00
EDUCATION					
No Education	1.46	0.00	1.46	0.00	0.02
Pre - Primary Education	28.46	5.30	28.53	20.50	29.16
Primary Education	0.85	9.47	0.82	0.97	1.89
Initial and Intermediate Vocational Training	30.36	4.92	30.43	26.07	19.81
Secondary Education	9.23	7.96	9.23	11.43	9.78
Advanced Vocational Training	14.47	7.20	14.49	19.35	14.32
Intermediate Degree - University Education	6.02	13.26	6.01	7.84	6.16
Superior Degree - University Education	8.84	42.80	8.75	13.40	18.68
Master and Doctorate	0.31	9.09	0.28	0.44	0.18
RESIDENCE - REGION					
Andalusia	7.87	0.00	7.89	0.00	0.04
Aragon	3.83	11.36	3.81	7.08	0.00
Catalonia	12.39	73.86	12.22	36.40	59.77
Valencian Community	7.90	0.38	7.92	17.94	0.00
Galicia	4.53	0.00	4.54	0.00	0.00
Madrid	9.75	12.88	9.74	28.06	9.62
Basque Country	4.90	1.52	4.91	10.51	0.00
PROFESSIONAL STATUS IN LAST JOB					
Managers	2.96	28.41	2.89	5.11	1.98
Professionals	8.47	24.24	8.43	10.07	11.02
Technicians and Associated Professionals	13.35	29.55	13.31	21.91	21.18
Clerks	7.32	2.65	7.33	9.47	12.31
Service, craft and related trades workers, operators and assemblers	56.59	6.06	56.73	49.34	31.42
Elementary occupations	11.08	9.09	11.09	4.08	22.09
JOB CHARACTERISTICS					
Responsibility charges in the job	28.72	40.15	28.68	38.26	7.22
Seniority in the firm (in years)	8.51	8.90	8.51	12.88	7.54
	(9.84)	(7.80)	(9.84)	(11.17)	(8.75)
EMPLOYMENT QUALITY					
Annual Gross Wage (in euros)	19,690.17	46,081.64	19,621.01	29,635.15	20,192.98
	(15,395.63)	(32,825.68)	(15,264.20)	(21,954.64)	(13,906.93)
Permanent contract	73.83	100.00	73.76	100.00	77.31
Number of observations	97,581	264	97,317	13,809	13,809

Notes: The table reports averages and percentages for the indicated group. Standard deviations are in parenthesis where appropriate. Professional status in the last job follows the National Classification of Occupations (CNO-94).

both samples. Women are underrepresented in the matched control groups, according to the outplacement group. Average education level and region of residence approaches figures of the outplacement group but the differences are still significant, especially for university education and Catalonia. The convergence is also incomplete for the professional status and annual wages. The dissimilarity on responsibility charges becomes smaller and it increases slightly for firm's seniority. The Bayesian approach shows figures of education level and residence which are nearest to the outplacement group, but they are worse in terms of professional status, responsibility charges and

employment quality. These comments are common regardless of gender, although matched controlled women show slightly better average figures.

TABLE 2:
Descriptive statistics for outplacement and (matched) control groups, only women

Variables	Total	Outplacement	Comparison	Sample Reduction Matched control	Bayesian Approach Matched control
Birth year	1,966	1,966	1,966	1,965	1,966
	(10.26)	(7.32)	(10.27)	(9.55)	(9.24)
Spaniard	97.57	93.57	97.58	98.80	100.00
EDUCATION					
No Education	1.21	0.00	1.22	0.00	0.00
Pre - Primary Education	21.15	15.00	21.16	17.42	25.74
Primary Education	0.70	10.72	0.67	0.74	1.25
Initial and Intermediate Vocational Training	25.22	5.72	25.27	23.96	13.76
Secondary Education	10.68	18.57	10.65	15.38	9.64
Advanced Vocational Training	16.34	13.57	16.35	16.20	15.78
Intermediate Degree - University Education	12.07	7.14	12.09	7.65	9.18
Superior Degree - University Education	12.32	22.14	12.30	18.17	24.65
Master and Doctorate	0.31	7.14	0.29	0.48	0.00
RESIDENCE - REGION					
Andalusia	6.77	0.00	6.79	0.00	0.00
Aragon	3.26	14.29	3.23	4.51	0.00
Catalonia	14.73	68.57	14.60	39.31	79.74
Valencian Community	7.17	0.71	7.18	15.49	0.00
Galicia	4.86	0.00	4.88	0.00	0.00
Madrid	12.62	16.43	12.61	35.90	8.10
Basque Country	4.21	0.00	4.22	4.79	0.00
PROFESSIONAL STATUS IN LAST JOB					
Managers	0.96	4.29	0.95	1.90	0.64
Professionals	14.94	10	14.96	9.25	10.70
Technicians and Associated Professionals	14.00	19.29	13.98	28.59	24.94
Clerks	17.65	45.71	17.58	19.04	25.99
Service, craft and related trades workers, operators and assemblers	33.03	2.14	33.11	33.31	15.51
Elementary occupations	19.38	18.57	19.38	7.91	22.22
JOB CHARACTERISTICS					
Responsibility charges in the job	20.59	9.29	20.62	25.28	1.96
Seniority in the firm (in years)	6.60	9.29	6.59	9.90	6.62
	(8.23)	(8.38)	(8.23)	(10.05)	(8.08)
EMPLOYMENT QUALITY					
Annual Gross Wage (in euros)	13,511.71	21,080.59	13,492.40	20,812.35	14,518.35
	(10,053.03)	(12,974.39)	(10,037.35)	(13,224.58)	(9,767.29)
Permanent contract	71.40	100.00	71.33	100.00	77.94
Number of observations	55,023	140	54,883	6,223	6,223

Notes: The table reports averages and percentages for the indicated group. Standard deviations are in parenthesis where appropriate. Professional status in the last job follows the National Classification of Occupations (CNO-94).

With respect to the types of outplacement services (Table 3), the workers who receive individual outplacement are usually men, aged near fifty, highly educated and belong to high level professionals, with responsibility charges in the firm. The workers who have participated in group outplacement programmes are also men and on average five years younger. Education level is lower and their profession is usually related to the

medium-low level of firms' structure. These results are similar to those presented by the reviews made by the outplacement firms.

TABLE 3:
Descriptive statistics for individual and group outplacement

	MEN		WOMEN	
OUTPLACEMENT	**INDIVIDUAL**	**GROUP**	**INDIVIDUAL**	**GROUP**
Birth year	1,959	1,964	1,965	1,966
	(7.55)	(8.19)	(7.33)	(7.32)
Spaniard	97.14	99.19	83.87	96.33
EDUCATION				
No Education	0.00	0.00	0.00	0.00
Pre - Primary Education	1.43	9.68	0.00	19.27
Primary Education	4.29	15.32	12.90	10.09
Initial and Intermediate Vocational Training	5.00	4.84	3.22	6.42
Secondary Education	7.86	8.07	9.68	21.10
Advanced Vocational Training	5.00	9.68	16.13	12.85
Intermediate Degree - University Education	13.57	12.90	9.68	6.42
Superior Degree - University Education	49.28	35.48	25.81	21.10
Master and Doctorate	13.57	4.03	22.58	2.75
RESIDENCE - REGION				
Andalusia	0.00	0.00	0.00	0.00
Aragon	2.86	20.97	0.00	18.35
Catalonia	75.71	71.77	61.29	70.64
Valencian Community	0.71	0.00	3.23	0.00
Galicia	0.00	0.00	0.00	0.00
Madrid	17.86	7.26	35.48	11.01
Basque Country	2.86	0.00	0.00	0.00
PROFESSIONAL STATUS IN LAST JOB				
Managers	44.29	10.48	9.68	2.75
Professionals	26.43	21.78	19.35	7.34
Technicians and Associated Professionals	24.28	35.48	19.36	19.27
Clerks	1.43	4.03	51.61	44.04
Service, craft and related trades workers, operators and assemblers	2.14	10.49	0.00	2.75
Elementary occupations	1.43	17.74	0.00	23.85
JOB CHARACTERISTICS				
Responsibility charges in the job	56.43	21.77	16.13	7.34
Seniority in the firm (in years)	8.70	9.13	9.04	9.36
	(7.73)	(7.90)	(7.97)	(8.53)
EMPLOYMENT QUALITY				
Annual Gross Wage (in euros)	59,070.21	30,527.36	29,339.56	18,731.70
	(36,118.84)	(19,750.20)	(18,338.89)	(9,903.78)
Permanent contract	100.00	100.00	100.00	100.00
Number of observations	140	124	31	109

Notes: The table reports averages and percentages for the indicated group. Standard deviations are in parenthesis where appropriate. Professional status in the last job follows the National Classification of Occupations (CNO-94).

4.   Methodology

The theoretical approach is based on the terminology of Heckman, Lalonde and Smith (1999) about Roy and Rubin model. Workers belong to one of two mutually excluding states at the same time, *"1"* denotes the treatment state and *"0"* denotes the

non-treatment state. In the paper, the treatment group is constituted by those workers receiving outplacement service; the comparison group is represented by the WSS. Let Y be the outcome variable (i.e., the annual worker's wage), so Y_{it}^1 is the value of the outcome variable for the individual i at time t if the worker has received the treatment, and Y_{it}^0 in the case of non-treatment. The impact for individual i at period t of the measure is $Y_{it}^1 - Y_{it}^0$. However, this difference is unknown because these two terms cannot be observed for any individual at the same time:

$$Y_{it} = D_i \cdot Y_{it}^1 - (1 - D_i) \cdot Y_{it}^0$$

where D_i is a dummy variable equals to one if the individual i receives the treatment and zero otherwise. This difficulty is known as the Fundamental Evaluation Problem. The solution depends on the available databases. In this case, the alternative consists of using non-parametric matching methods and multiple assumptions that allow identifying and estimating the effect of outplacement services. Lechner (2000) comments the advantages of the non-parametric matching methods versus other parametric and non-parametric methods. With respect to the first group, matching methods are robust to functional forms of the conditional means, so the individual causal effect is free of restrictions, as well as the unobserved heterogeneity of the population. Comparing to other non-parametric methods, matching methods are easy to use and intuitive.

The aim is to determine the average treatment effect on the outcome variable Y. The value of the outcome variable for individual i is assumed to be independent of the rest of individuals and the assignment mechanism to the treatment. If there exist interactions among individuals or idiosyncratic effects, the changes of the outcome variable could be motivated by the treatment, the influence of other individual or other external effects. This condition devised by Rubin (1980), is known as stable unit treatment value assumption.

One of the most important parameters of interest is the average treatment effect on the treated (ATT). This effect determines the average treatment value of the treatment group in the hypothetical case that the control group had also received the treatment:

$$E(Y_1 | D = 1) - E(Y_0 | D = 1)$$

Notwithstanding, the second term is unobserved. An alternative to overcome the problem is the Conditional Independence Assumption (CIA). CIA settles down that the assignment to the treatment or control group is independent of the potential values of the outcome variable, conditioning for the observed characteristics (X):

$$Y_1, Y_0 \perp D \mid X$$

CIA is satisfied if the outcome variable and the variables having influence over the selection process are used in the matching process. Lechner (2000) shows empirically the importance of a database with enough information in order to satisfy this property. The sensibility of the results to lack of information is high. Frölich (2004) demonstrates that including the variables affecting the treatment choice or the outcome variable as well as those influencing to both factors is necessary to achieve consistent estimates. Considering the CIA then,

$$E\left(Y_0 \mid D = 1, X\right) = E\left(Y_0 \mid D = 0, X\right)$$

Selection bias prevents the equality, since there would be some unobserved reason to justify the membership to the treatment group. The alternative to this bias is the use of matching techniques among elements of each group. Workers may be assumed to be similar enough to minimize the unobserved characteristics, although the condition is restrictive. A more suitable option is to accept that available characteristics are enough to capture unobserved information, at least partially.

Given the previous conditions, the treatment effect is defined as the difference of two observed terms:

$$E\left(Y_1 \mid D = 1, X\right) - E\left(Y_0 \mid D = 0, X\right)$$

The value of the outcome variable for individual i is assumed to be independent of the rest of individuals and the assignment mechanism to the treatment. If there are interactions among individuals or idiosyncratic effects, the changes of the outcome variable could be motivated by the treatment, the influence of other individual or external effects. In a similar setting, treatment participation is also assumed to be not affecting the outcome of non-participants. The fraction of treated workers on the total reference population is very small (see Table 3), so the assumptions are more plausible in this case.

The matching method requires an object which allows comparison among characteristics of the individuals and a selection criterion. The object used is the propensity score:

$$P(X) = \Pr(D = 1 \mid X) = E(D \mid X)$$

The choice of the probit or logit model as discrete choice model to estimate the propensity score is not a crucial question in this case of binary treatment, as Caliendo and Koepinig (2005) point out. Considering several conditions[1], the average treatment effect is equal to the difference:

$$E[Y_1 \mid D = 1, P(X)] - E[Y_0 \mid D = 0, P(X)]$$

With respect to the selection criterion, let define $C(i)$ as the set of control units matched to the treated element i. The matching method incorporated to the paper is the Kernel method. This method qualifies the trade-off between matching quality and quantity in the estimates.

The Kernel method considers the matching of each treated unit with a weighted mean of the control units. This weight is inversely proportional to the distance of the propensity score. Taking into account the Kernel method, the parameter of interest (τ^K) is estimated using the following formula:

$$\tau^K = \frac{1}{N^1} \sum_{i \in T} \left\{ Y_i^1 - \frac{\sum_{j \in C(\cdot)} Y_j^0 G\left(\frac{P_j - P_i}{h_n} \right)}{\sum_{k \in C(\cdot)} G\left(\frac{P_k - P_i}{h_n} \right)} \right\}$$

where $G(\cdot)$ is the kernel Gaussian function N^1 is the number of treated workers and h_n is a bandwidth parameter. The standard errors are derived using bootstrapping.

Robustness remarks

Before the presentation of the estimates, several comments are required to justify their validity. The comparison group might include workers who went through an outplacement experience in the unemployment period prior to the actual job. If the outcome is affected by an outplacement experience in previous period, the analysis would just generate more conservative estimates of the effect of the outplacement

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[1] For further details about the propensity score, see Arellano (2007) and Rosenbaum and Rubin (1983).

services. Although there is not any way of identifying workers in both samples, the (relative) small sample of treated individuals mitigates the potential comparison of the same worker in both samples and problems in identification of the treatment effect.

If the firms fire employees on a non-random basis, the estimates can be affected by endogeneity bias. Taking into account the arguments of Ruhm (1994) about displacement, the pre-notifications in plant closings are provided on a more random basis than in partial layoffs. The reasons of losing the prior job for the workers included in the Creade database are multiple: (plant) closings, reorganizations, merges, takeovers and relationship problems. The most common options in the sample are related to the first two options, which represent near 21% and 68% of the total number of workers, respectively. This information can provide a "natural" experiment to test the importance of endogeneity[2].

One of the advantages of this type of ALMP is the limited influence of the locking-in effect, due to the trade-off in terms of time between the realization of the ALMP and job search. In the outplacement activities, several parts of the services, such as elaboration of curriculum vitae and job interview training, are common in the job search process for both treated and non-treated workers, so the potential bias affecting earnings will be negligible.

The annual earnings of the outplacement group are expressed in euros and deflated by the 2002 Harmonized Index of Consumer Prices, in which expenses from visiting foreigners must be included as well as those that residents in group households incur and exclude the costs made by Spaniards outside the country (INE). The wages in the Creade database are converted into euros (166.386 pesetas = 1€) and deflated by the 2002 consumer price index.

With respect to the source of information on earnings, the worker in the Creade database answered the question by him- or herself, and this may influence the accuracy of the response, and because the likelihood of self-response may differ systematically across groups of population, this is a potentially important omission.

I cannot control for the pre-displacement earning losses (Jacobson et al., 1993). However, one of the most important characteristics of the labour market in Spain has

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[2] Other subsamples used by Ruhm (1994) to test endogeneity are the existence of highly unionized industries and differences among states in employment regulations. However, there is no evidence and information confirming that unionized industries use more frequently outplacement services. Moreover, there are not differences in employment regulations affecting outplacement services among regions in Spain.

been the downward nominal wage rigidity (Holden and Wulfsberg, 2007), so this effect should be minimized in this case.

Neal (1995) points out the importance of industry-specific human capital in job searching and future earnings. The existence of industry wage premiums may represent labour market rents affecting the outcome variable. Unemployed workers who find a new job in their pre-displacement industry get higher returns that those who switch industries after displacement. Moreover, the wage losses may be greater for experienced workers and their cost of obtaining a new job is higher. Although I cannot distinguish which part of the earnings corresponds to these characteristics and the detailed industry code, information on characteristics of the occupation and firm seniority (at least partially) this effect.

Gibbons and Katz (1991) points out that firms firstly lay off workers who are less productive. Based on this idea, Neal (1995) analyses only displaced workers who are laid off in establishment closings, because the displacement does not depend on worker's characteristics.

Eliason and Storrie (2006) emphasize the importance of identifying early and late leavers in a final shutdown. They consider that closure process requires a huge amount of time and two options can prevail: workers with high initiative and good outside options will abandon earlier the firm but the firm will try to discard those less valuable employees in a first step of the closure process. I do not have information on these topics because the workers who leave the firm before the outplacement process are not in the Creade database. The sample of Creade constitutes a non-random set of workers affected during the displacement process, but I consider that the problem Pfann and Hamermesh (2001) argue does not have special relevance in this paper. Moreover, analysing the descriptive statistics, this result does not seem to be confirmed.

The outplacement services can prevent or mitigates the larger proportion of displaced workers with low tenure who may be hired by new businesses which are more likely to shut down (Eliason and Storrie, 2006). The use of firm tenure and worker's labour market history also reduce the effect of the bias. Neal (1995) considers that the displaced worker may suffer higher earning losses if the individual finds a job very different from the previous one, due to the existence of general, and firm and industry-specific skills associated to seniority. Although the complete information on labour market transition is not available in the WSS, I have data of firm seniority to control this effect in both samples partially.

5.   Results

Only variables that are not affected by outplacement process are included in the estimation process. Variables fixed over time and those determined before the application of outplacement services satisfy this condition. The use of two different sources of data can prevent the validity of assumptions in the matching process because the quality of information in data is seriously jeopardized, as Heckman, Lalonde and Smith (1999) notice. Furthermore, the differences in descriptive statistics and potential problems of endogeneity and unobserved heterogeneity due to gender and type of outplacement service support the idea of evaluating these groups separately.

Men and women do not necessarily behave in the same way when faced with unemployment. As shown by data from the INE and the National Public Employment Service (INEM) on the Spanish labour market in 2001, the female unemployment rate remained around twenty percent and accounted for nearly sixty percent of total unemployment, while the male unemployment rate was below ten percent.

Along with outplacement status, distinction by type of service is also done in the estimation process. Individual and group outplacement services focus on specific target groups (Table 3). The sample size argument prevents a more specific classification of the outplacement programmes in the estimation process.

Moreover, the use of different sub-samples allows the comparison and analysis of multiple estimates. Given the comments of the previous section, several set of estimates are elaborated depending on the final sample, the complete information sample, the reduction by personal characteristics and the generation of a sub-sample by the Bayes' theorem.

Tables 4, 5 and 6 present the estimates of the average increase of the annual wage (in euros) of the outplacement group compared to the comparison group for each sample. These tables present the following structure: The first and second rows show the ATT estimate and the corresponding standard error. The third and fourth rows include the number of observations in the treatment and control groups used in the estimation process, respectively. The last row incorporates information about the balancing property (BP). The columns represent the type of outplacement process analysed.

As Arellano (2007) emphasizes, the BP is required to accept consistency of the estimates. Only the first moment condition of the property is analyzed in the paper, so

this weaker version is necessary but not sufficient. As commented above, the BP is required to validate the estimates, so those which do not satisfy the condition only constitute a reference for the rest. The more homogeneous the sample is, the easier it proves to fulfil the BP. In several cases, the elimination of one particular binary variable helps meet the BP (only if the variable is not statistically significant).

The estimates confirm the positive effect of outplacement services on earnings of unemployed workers. Table 4 shows the ATT estimates by gender and outplacement type in the complete information sample. The estimated increase of the average annual wage compared to the control group in the complete information sample seems to be around 20,000 euros. However, the result is not valid because the BP is not satisfied. Considering each type of outplacement separately, the assumption is satisfied. The effect of individual and group outplacement is positive and four times higher for the former type (near 33,500 euros versus 8,400 euros in the group outplacement).

The qualitative differences among outplacement types are repeated in the case of men and women. The magnitude of the effect is higher for men, who double the result of the group outplacement (12,000 euros versus 5,600 euros) and triple in the case of individual outplacement (36,500 euros versus 10,300 euros)[3].

The sample reduction using similar characteristics to the outplacement group (Table 5) produces also positive but modest results. The general conclusions among outplacement types and gender keep constant, but the best result does not surpass the worst figures in Table 4. The increase for individual outplacement is at most significant when gender is not considered. The effect is negligible in the case of group outplacement, positive for men and negative for women.

The estimates using the sample created by the Bayesian approach appear in Table 6. The main conclusions are confirmed and the results show higher and more significant values than Table 5, although the BP is not satisfied in more cases. The values for men double those of women, as also occur between individual and group outplacement.

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[3] With respect to the individual outplacement for women, comments are seriously affected by the small size of the group, which endangers the robustness of the results.

TABLE 4:
ATT estimates for the complete sample by gender and outplacement service

		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	18,730.469***	33,477.961***	8,371.041***
	(1,420.697)	(2,991.764)	(1,112.149)
Control group	152,200	152,200	152,200
Treatment group	404	171	233
Balancing property	NO	YES - 0.001	YES - 0.001

ONLY MEN		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	22,614.285***	36,462.902***	11,852.195***
	(2,251.342)	(2,984.274)	(1,779.948)
Control group	97,317	97,317	97,317
Treatment group	264	140	124
Balancing property	NO	YES - 0.001	YES - 0.001

ONLY WOMEN		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	5,459.028***	10,255.861**	5,584.870***
	(1,507.272)	(4,091.405)	(1,275.376)
Control group	54,883	54,883	54,883
Treatment group	140	31	109
Balancing property	YES** - 0.001	YES***	YES* - 0.005

Notes: * Significant at 10%, ** significant at 5% level, *** significant at 1%, standard errors in parenthesis. The last row indicates whether the weak version of the BP is satisfied or not. For affirmative responses, significance level of the test is also included. The usual value is 0.01, otherwise the value is presented. The symbol * in this row represents the number of non-significant binary variables dropped in the estimation process to accept the BP. Further information is available upon request.

TABLE 5:
ATT estimates for the reduced sample by gender and outplacement service

		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	6,451.993***	14,649.649***	-300.845
	(1,738.224)	(2,674.401)	(1,229.104)
Control group	20,032	20,032	20,032
Treatment group	404	171	233
Balancing property	YES - 0.001	YES** - 0.001	NO

ONLY MEN		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	8,038.827***	15,178.789***	2,584.288
	(2,097.637)	(3,663.469)	(1,813.570)
Control group	13,809	13,809	13,809
Treatment group	264	140	124
Balancing property	YES - 0.001	NO	YES***

ONLY WOMEN		OUTPLACEMENT	
	Outplacement status	Individual	Group
ATT	-509.673	115.959	-939.653
	(1,849.502)	(4,735.738)	(1,152.485)
Control group	6,223	6,223	6,223
Treatment group	140	31	109
Balancing property	YES - 0.001	YES	YES* - 0.001

Notes: * Significant at 10%, ** significant at 5% level, *** significant at 1%, standard errors in parenthesis. The last row indicates whether the weak version of the BP is satisfied or not. For affirmative responses, significance level of the test is also included. The usual value is 0.01, otherwise the value is presented. The symbol * in this row represents the number of non-significant binary variables dropped in the estimation process to accept the BP. Further information is available upon request

TABLE 6:
ATT estimates for the Bayesian
approach sample by gender and outplacement service

		OUTPLACEMENT	
	Outplacement status	**Individual**	**Group**
ATT	13,048.218***	26,202.279***	7,151.188***
	(1,287.594)	(2,811.272)	(1,098.465)
Control group	20,032	20,032	20,032
Treatment group	404	171	233
Balancing property	NO	NO	NO

		OUTPLACEMENT	
ONLY MEN	**Outplacement status**	**Individual**	**Group**
ATT	16,840.264***	23,222.123***	10,770.252***
	(1,768.835)	(3,434.603)	(1,685.740)
Control group	13,809	13,809	13,809
Treatment group	264	140	124
Balancing property	NO	YES - 0.001	YES - 0.001

		OUTPLACEMENT	
ONLY WOMEN	**Outplacement status**	**Individual**	**Group**
ATT	5,980.977***	12,551.042***	4,632.137***
	(971.698)	(3,188.688)	(919.770)
Control group	6,223	6,223	6,223
Treatment group	140	31	109
Balancing property	YES* - 0.001	NO	YES****

Notes: * Significant at 10%, ** significant at 5% level, *** significant at 1%, standard errors in parenthesis. The last row indicates whether the weak version of the BP is satisfied or not. For affirmative responses, significance level of the test is also included. The usual value is 0.01, otherwise the value is presented. The symbol * in this row represents the number of non-significant binary variables dropped in the estimation process to accept the BP. Further information is available upon request.

The estimates supplement the arguments Arellano (2007) suggests about the existence of the reservation wage effect in outplacement services: men are more demanding to find a job and they increase their unemployment spell to get better labour market conditions, as they seem to achieve in terms of earnings. In the case of women, this conclusion also holds but magnitudes are smaller in both outcome variables. The unemployment spell is slightly higher or even decreases, but women get new jobs which do not represent a chance to increase the prior earnings.

6. Conclusions

The Lisbon European Council in 2000 established the objective to convert the EU in the most competitive and dynamic knowledge-based economy, capable of a sustainable economic growth with more and better job and higher social cohesion in the following ten years.

In order to achieve this objective, the EU fostered social and labour market policies to promote quality of work, one of the most important instruments in the modernization process of the European social model to face up to the challenge of globalization and the technological, social and demographic movements. Among these measures, the outplacement services represent an interesting instrument whose importance is growing in job transitions.

To develop this detail picture, I create an unusual data set by merging records of earnings of workers from the 2002 Wage Structure Survey (WSS), created by the National Statistical Office (INE) with workers who participated in outplacement services provided by the firm Creade, one of the most important professional services organizations in Spain.

The scope of the paper focuses on the short-run effects of outplacement on earning prospects. Given the nature of these services, outplacement firms face up to the trade-off between finding high-quality matches and quickly finding new jobs, as occurs with employment services. It is not possible to assure that outplacement services can deal with the lasting and latent scars in the long-run established by Eliason and Storrie (2006).

My findings bear on the importance of several alternative theories of the outplacement services. First, outplacement services should not be used as a panacea for any potential unemployment situation, because positive and high results are not guaranteed. Second, the reservation wage effect generated is compatible with the results Arellano (2007) present about the effect of outplacement on unemployment spell: the outplacement services increase unemployment duration in order to get a job with higher wages. This relationship is more intensive in men. Third, these conclusions are not against research related with post-displacement earning losses, but the paper confirms that the lack of information on outplacement processes in these studies may generate important biases, underestimating the consequences of job losses in terms of earnings.

The service cost depends on type, complexity and duration, albeit the mean rate is around fifteen percent of the worker's gross wage for programmes with unlimited duration (De Ramos and Hernández, 2000). In order to get a conclusion in terms of cost-benefit analysis, the difference between the results obtained and the cost paid by the firm represents the benchmark in this process.

Finally, Eliason and Storrie (2006) consider that age is an important argument in the displacement process, because older workers have more firm-specific capital, longer

tenure and less recent formal education than younger workers, so the former group is less valuable for new employers. Moreover, personal and familiar reasons make this group to be more reluctant to job changes. Although these personal characteristics are included in the estimation, a specific analysis of these employees will be extended in future studies.

Other important point for future research is the decomposition of wages in different levels of seniority that Neal (1995) points out and how outplacement can take into account in the re-employment process to reduce earning losses. Moreover, there is a need for more research on this topic in other countries, especially in the EU whose members show a wide range of institutions to compare the results.

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