The internal labour market and the employment of temporary help workers in Spain

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Abstract

Purpose – To ascertain whether any relationship exists between the main processes of human resource management involved in the internal labour market (training and internal recruitment) and the use of temporary help workers (THW) in Spain.

Design/methodology/approach – Take into account the perspective complementary between internal and external employment systems, a questionnaire was sending by mail to a selected sample of companies to get information.

Findings – The results confirm that a relationship does exist between the use of THW and training and internal recruitment. Also reveal the effects of the size upon these processes and the use of THW.

Research limitations/implications – The main drawbacks are that of not using a wider sample. The findings will not be fully extrapolable to other countries. Future works could be directed towards testing a model of the relationship between the use of THW and a greater number of parameters, and a wider sample of miscellaneous countries.

Practical implications – The training effort (TE) per employee and internal recruitment may be positively influenced by the employment of THW, which may be a source of motivation and increased productivity on the part of the regular staff.

Originality/value – This paper shows that the use of THW could favour the appearance and development of an internal labour market, supporting the perspective that internal and external employment systems are complements.

Keywords Temporary workers, Internal labour market, Training, Recruitment, Spain

Paper type Research paper

Introduction

According to figures for the period from 1995 to 2002 provided by the Spanish Ministry of Works and Social Services (2003a), the number of temporary contracts via an agency entered into in Spain in 2002 was 1,849,453, compared to 378,739 in 1995. With respect to the duration of these temporary jobs, the contracts registered by temporary help agencies with the Spanish Ministry of Works and Social Services (2002) reveal that during 2002, 48 per cent were for less than one month.

In view of the growing importance of temporary work for agencies and the short duration of these temporary jobs, along with the scarcity of empirical work on the relationship between external and internal labour markets, we have tried to ascertain the possible relationships between the main processes of human resource management involved in the internal labour market (training and internal recruitment) and the use
of temporary help workers (THW) in Spain, and also the possible influence of company size on these processes. We are interested in finding out whether the company, on adopting a strategy of externalising or subcontracting staff, is favouring the development of an internal labour market with regard to the most important practices of human resource management involved in this, as well as the possible influence of the size of the company both on these practices and also on the use of THW.

To throw more light on some aspects of these questions, we discuss the relationship between internal and external employment systems from the perspective that both systems are substitutes and complements. We formulate a theoretical model with hypotheses, and present the methodology, results and discussion of an empirical study. Finally, we present conclusions relevant both to future research and to the running of organizations.

The internal labour market and temporary help services. Theoretical considerations

The relationship between internal and external employment systems has been well explored in the literature from two perspectives: from the perspective that both systems are substitutes, whereby the growing use of contingent workers (among whom are included THW) is the result of the disassembling of the internal labour market (Appelbaum, 1987, 1989; Bellous, 1989a, b; Carre, 1992; Cappelli, 1995; Houseman et al., 2003); or from the perspective that these systems are complements, whereby firms use contingent workers to buffer their core employees from the vicissitudes of the labour market to get their commitment and cooperation. This commitment and cooperation can be linked to the development of internal labour markets, which usually assumes employers’ intentions to guarantee job security and to train core employees. From this perspective, researchers have inferred that there is a positive relationship between the proportion of contingent workers and the level of internalisation of employment practices in organisations (Abraham, 1990; Gramm and Schnell, 2001). Recently, Ko’s (2003) findings strongly support the complementary perspective. Thus, the present work is guided by this second perspective, but considering just the group of THW supplied by agencies.

The literature concerning the internal labour market has its roots in work by such authors as: Doeringer and Piore (1971), Piore (1971), Black et al. (1978), etc. Following these authors, the internal labour market can consist of any type of work satisfying three basic characteristics: it involves an itinerary of jobs to be occupied successively (a professional career); there is a single point of entry into the firm at the lowest level and upward mobility throughout the itinerary; and finally it is linked to a progressive development in knowledge and practices (Althauser and Kalleberg, 1981, p. 130). Thus, the main processes in manpower management involved in the internal labour market are training and internal recruitment. The former is important for the role it plays in producing prospective internal employees of sufficient calibre to occupy any vacancies which may arise within the organisation, and the latter for facilitating both the sideways and upward movement of staff from one post to another.

Staff training corresponds to a process by which staff are taught the skills and knowledge related to the job (Mintzberg, 1995, p. 126). For Guerrier and Lockwood (1989) and Dastmalchian and Blyton (1992), training has become an element of prime importance in many companies, due above all to a growing interest in task flexibility,
with staff being switched from one job to another according to the needs of the moment, bringing with it a concomitant loss of emphasis on job demarcation. This flexibility is only possible if the organisation gives its employees adequate training to allow them to move effortlessly from one task to another.

As far as investment in training is concerned, this would seem to depend largely upon the size of the company (measured by staff numbers). In Spain the statistics provided by the Spanish National Institute for Statistics, clearly show that company investment in staff training is closely linked to workforce numbers. In this report, it can be seen clearly that companies with the most employees invest the most in training per capita. Also evident is that the service sector makes the greatest effort to train its personnel, followed by the industrial and the construction sector.

According to Gómez-Mejía et al. (1997, p. 136) staff recruitment is the process of creating a pool of candidates for a particular job. To achieve this objective the company can look for prospective candidates both inside and outside the organisation; i.e. to cover its vacancies it will resort to both internal and/or external recruitment sources. If it uses internal sources, the creation of a pool of candidates within the company may lead to the appearance of an internal labour market.

According to the theory of the dual labour market, there is a primary segment in which employment is stable, training is provided and possibilities of a successful professional career are offered, alongside relatively high salaries. In contrast to this, a secondary segment exists where employment is not guaranteed, little training is available, opportunities for a career are limited, salaries are relatively low and investment in human resources is scarcely recovered (Piore, 1971; Mangum et al., 1985; Appelbaum, 1987). Osterman (1982) considers that within the same organisation there may be three different job subsystems[1], to which different types of training are applied. Workers belonging to the manual and secondary subsystems are given little specific training by the company, while those belonging to the industrial subsystem receive much greater attention. In the same way, according to Atkinson’s model of the flexible firm (Atkinson, 1984, 1987 and Atkinson and Meager, 1986), it is possible to distinguish between three types of workers: core, or central staff, peripheral workers and outside employees, and each group is given a different type of training. The first group are encouraged through in-house training to become functionally flexible, multi-skilled workers, and thus the type of training offered must be concordant with these requirements. The company applies numerical flexibility and a policy of more precise training to the second group, aimed specifically at the job involved, in the hope that it will see a return on its training investment as quickly as possible, since many such peripheral workers remain with the company for only a short time. The third group depend for their training upon the firm which hires them out and the user company limits itself to giving them specific instructions concerning the tasks they are to carry out. If these subcontracted staff work for a temporary help agency, the agency itself tends to make sure that they receive a certain degree of training (Nollen, 1996)[2].

With regards the laws relating to temporary help services provided by agencies, we might mention the definition which the Spanish Parliamentary Act 14/1994 (1994)[3] confers upon employment agencies as managers and suppliers of this type of service. According to this act, temporary help services as supplied by an agency are defined as any such activity by which an agency “puts staff contracted by itself at the disposition of another user on a temporary basis” (article 1). The main characteristics of this type
of contractual agreement derive from the definitions in this act. One of these is the trilateral relationship implied and another, the temporary nature of the contract (Matías-Reche, 2001, 2003). The trilateral relationship springs from the separation between the entity which contracts the worker from the entity which agrees to make use of and benefit from the fruits of his labour. Thus, the three relationships which transpire are: that of the worker with the temporary help agency; that of the agency with the user entity; and that of the worker with the user entity[4].

Little empirical research has been done on the relationship between internal labour market practices and the use of contingent workers from the complementary perspective. Some exceptions include Davis-Blake and Uzzi (1993), who found that bureaucratised employment practices, seeking stable and committed employees, negatively affected the use of directly-hired temporary workers, but positively affected the use of independent contractors. Gramm and Schnell (2001) reported that core employees gained higher employment security through their employers’ increasing use of contingent work arrangements.

Moreover, there are very few references in the literature to the relationship between the demands of any particular job and the possibility of it being filled by a temporary worker supplied by a temporary help agency. Though as a rule, temporary staff are much less likely to be taken on for jobs which require skills specific to the company or industry than for jobs where general abilities and competence are sufficient (Mayall and Nelson, 1982, p. 49; Mangum et al., 1985). Therefore, in this work we attempt to make up for this lack of knowledge on the relationship between temporary help agencies and internal labour market practices.

Among the possible influential factors (context factors), we have only taken into account the size of the company and the sector of its activity.

We distinguished between sectors (industrial and services) because “different sectors are seen to carry different organisational design requirements” (Child and Smith, 1987, p. 567). This argument is supported by the growing body of studies and research that are based upon sector analyses (Huff, 1982; Miller and Friesen, 1984; Child, 1988, etc.). The central thesis upon which these authors base their arguments is that research into a group of organisations needs to consider the individual interactions of each entity with the context within which it develops its activities (Kikulis et al., 1995). Thus, in our work we have considered a priori the relationship between the sector and the size of the workforce in question.

**Theoretical model and hypotheses**

Bearing in mind the original objectives set out in this work, we formulated a series of hypotheses characterising the relationship between staff management processes directly affected by the development of an internal labour market, and also their relationship with the use of THW, while taking into account any possible effects of the size of the company upon these processes. The theoretical model to be tested empirically is shown in Figure 1.

With regard to the relationship between the use of THW and training processes, companies rarely use temporary workers to fill jobs that demand high levels of training because the investment required would be difficult to recover (Pfeffer and Cohen, 1984; Wholey, 1985; Baron et al., 1986), and so the responsibility for training such temporary workers should belong either to the temporary help agency or the state, or even the
worker himself (Nollen, 1996). Therefore, it might be expected that companies which resort to THW invest relatively small sums in training, as they save training costs on those workers supplied by temporary help agencies. However, companies which use THW could be obligated to increase their investment in training their own core personnel in order to produce well-prepared, multi-skilled employees[5] who can guarantee the continuity of ability and know-how in the company. This increase in training expenses often exceeds the savings made by using THW. Thus, Forrier and Sels (2003) found a positive relationship between fluctuations in the number of employees (possibly by the temporary workers turnover) and the investment in training. Ko (2003) found strong support for the complementary perspective by demonstrating an association between the use of contingent workers (among whom are included THW) and internal employment system practices. Furthermore, Ko claimed that internalisation employment systems have benefits, but also costs such as higher wages, fringe benefits and training costs, and that firms can recover these costs by using contingent workers.

Thus, we formulate the following hypothesis:

\[ H1. \] The frequency with which a company resorts to hiring staff from temporary help agencies positively affects its training investments.

It is also possible that companies which most frequently employ temporary help workers tend to resort to internal recruitment sources rather than external sources to fill their vacancies because their personnel structure may be organised following the model of the flexible firm. By satisfying their temporary needs for peripheral workers employing temporary help workers they can offer stability and career prospects to their core staff via promotion and transfers, thereby increasing their motivation, job satisfaction, and commitment to the organisation (Deery and Jago, 2002; Purcell and Purcell, 1998; Procter et al., 1994; Atkinson, 1984). Therefore, to counteract the negative effects of diminishing job security, employers might use contingent workers (temporary help workers) to protect core staff in case of industry dislocation or business downturns (Abraham, 1990). Furthermore, Ko (2003) found strong support for the relationship between the level of formalisation of employment practices (or the level of job security) and the use of contingent workers. Also, Davis-Blake and Uzzi (1993) found a positive relationship between the level of formalised (bureaucratised) employment practices and the use of independent contractors, since independent contractors may operate outside the normal administrative structure of the firm (like THW), and organisations with bureaucratic employment practices may use

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**Figure 1.** Theoretical model of the relationships between the use of temporary help agencies, size, sector and the internal labor market.
independent contractors as a way of gaining flexibility without disrupting their routine practices. Houseman (2001) found that many employers used temporary help and part-time workers to screen employees for regular positions, demonstrating their intention to develop an internal labour market.

This allows us to formulate the following hypothesis:

H2. The frequency with which a company resorts to hiring staff from temporary help agencies positively affects the frequency with which it resorts to internal recruitment sources.

A close link might be expected between training and internal recruitment (Pfeffer and Cohen, 1984), such that internal recruitment will be found in those companies with a high investment in training and vice-versa, as the procedures relating to internal recruitment (staff promotion and transfer) will be favoured by the existence of a group of employees prepared by adequate training to fill vacancies as and when they appear within the organisation (Althauser and Kalleberg, 1981, p. 130). Furthermore, the fact that a company chooses to adopt internal promotion strategies obliges it to offer practical training in consonance with the skills required by staff to cover the posts that fall vacant. On the basis of these arguments we put forward the following hypothesis:

H3. Investment in training is positively related to the frequency with which a company resorts to internal recruitment sources.

The size of a company may have an effect upon its use of THW, as has been pointed out in the literature. Segal and Sullivan (1997), for example, suggest that small companies may find it easier to employ specialist staff from temporary help agencies if the cost of such an employee is spread among various firms. Davis-Blake and Uzzi (1993) consider that firm size has positive effects on the use of independent contractors and negative effects on the use of temporary workers. Gordon and Thal-Larsen (1969), however, are of the opinion that a company’s size bears no relation to its use of THW, while Mangum et al. (1985) and Houseman (2001) arrive at the conclusion that large companies have a greater propensity than smaller ones to take on temporary staff. Thus, in the light of the diversity of results and discrepancies which still abound in this subject, it may be reasonable to believe that larger companies with a greater number of staff will have a concomitantly greater need for THW, bearing in mind that staff on temporary leave of absence are not covered for by permanent staff. Thus, we can make the following hypothesis:

H4. The size of a company positively affects the frequency with which it resorts to hiring staff from temporary help agencies.

The size of companies normally appears in the literature related to their investments in training, with larger companies usually spending more (Albizu, 1997, p. 163). Some of the possible reasons for this phenomenon exposed by Alcaide et al. (1996, pp. 283-4) are that the larger the company, the higher the percentage of its employees that participate in training courses, and the bigger the state grant offered for staff training, which may be due to the fact that large firms have better access to training schemes funded with government grants than SMEs, since they are able to dedicate staff specifically to work to achieve this aid. Therefore, we have also taken into account the relationship between
the size of a company and its commitment to staff training, and so we put forward the following hypothesis:

\[ H5. \] The size of a company positively affects its investment in training.

Internal recruitment may also be affected by the size of the company, in that the larger the number of staff the easier it is for management to adopt internal recruitment strategies, because they will have a big enough internal labour market to fill any vacancy which may arise. In an analysis of how manpower management practices impinge upon perceptions of company performance, Delaney and Huselid (1996) reveal the close relationship between the degree to which the internal labour market is developed via internal promotion and the number of staff employed by a company. This leads us to our final hypothesis:

\[ H6. \] The size of a company positively affects the frequency with which it resorts to internal recruitment sources.

**Methodology**

We explain in this section the methodological aspects of our empirical research to test the hypotheses put forward in the previous section: providing a description of the sample of companies selected for the study, the procedure for obtaining our data, the questionnaire and methods employed to evaluate the parameters taken into account, and the analytical techniques used.

The sample was obtained from the directory of the 3,000 companies with the largest turnover in Spain in 1996, published in the journal *Dinero* in 1997. We concentrated on two sectors: hotel, leisure and tourism, and food, drinks and tobacco industries.

Our decision to concentrate on companies within the sectors hotel, leisure and tourism, and food, drinks and tobacco industries is due to the fact that around 30 per cent of all the temporal help contracts entered into in Spain were in these sectors (Spanish Ministry of Works and Social Services, 2003b), and thus it is these companies that will provide the most reasonable tests with regard to our hypotheses.

The sample consisted of 385 companies operating in Spain: 326 in the food, drinks and tobacco industries sector and 59 in hotel, leisure and tourism. This imbalanced representation is due to the fact that company size is greater in the former sector. Of the 385 questionnaires sent out, 135 were returned completed, representing 35.1 per cent of the total. We considered 134 of these to be usable (34.8 per cent of the total sample).

The average number of workers per sample firm was 47.7 and the highest percentage of firms which replied to our questionnaire were those with a work force of between 250 and 499 (32 per cent of the whole sample). In the food, drinks and tobacco industries sector 34 per cent of the firms had work forces within this range, while in hotel, leisure and tourism the highest percentage came from those companies with a work force of between 100 and 249 (29 per cent of this subsample).

With regards our procedure, we sent a questionnaire by mail to the personnel managers of the companies selected. To obtain an acceptable response rate we included a letter with the questionnaire explaining who we were and the importance of our research, together with a stamped, addressed envelope. After four weeks we re-sent questionnaires to those companies who had not responded to our first initiative. During this time no important event had occurred which might have altered the type of answers given, and a later comparison revealed no significant differences in the
answers of those who responded immediately and those who responded at the second attempt.

As far as measurements and the questionnaire were concerned, we obtained the data about general aspects such as market sector and number of employees from the same directory from which we chose our sample.

The questionnaire contained two pages. Before being sent to the whole sample we carried out a trial run with five companies, which allowed us to detect and correct any ambiguities there might have been in our original questions.

First, we wanted to find out the degree to which the company in question resorted to temporary agency staff, for which we set a direct question which Deshpande and Golhar used in their survey in 1977: “Does your company use temporary help workers?” with responses ranging from “never”(1) to “very often”(5).

To determine a company’s training investment we used the indicator of training effort (TE) made by the company, as defined by Alcaide et al. (1996, pp. 279-80). According to these authors, TE is equal to the annual expense in training divided by the number of workers on the company’s payroll. According to the Survey of Labour Costs published by the Spanish National Institute of Statistics, training expenses include those costs:

... spent in the conversion and maintenance of any installations devoted to training, participation in courses, salaries and per diem payments to external trainers (i.e. those not already on the company payroll), the cost of buying and using didactic equipment and materials and any amounts payable to professional training bodies (Spanish National Institute of Statistics, 1995, p. 40).

Thus, in our questionnaire we asked the companies for their annual training budget in the following way:

Indicate the amount spent on training your employees during the year 1996, including in the total all costs arising from the conversion and maintenance of installations devoted to training, participation in courses, salaries and per diem payments to external trainers (i.e. those not already on the company payroll), the cost of buying and using didactic equipment and materials and any amounts payable to professional training bodies.

This total was divided by the number of staff on the payroll to determine the “training effort” (TE) per employee.

With regard to staff recruitment, to determine to what degree a company resorted to internal recruitment we asked a direct question based on that used by Deshpande and Golhar (1997): “Indicate to what extent your company resorts to internal recruitment to fill vacancies” with responses ranging from “never”(1) to “very often”(5).

As far as company size is concerned, Child (1973) states that this is measurable by the total number of employees, the number of localities owned, sales or net activities, with the three first parameters being the most important. More recently, Marsden et al. (1994) also suggest various indicators which may be used to measure the size of a company: either the total number of full-time staff employed or total staff including part-time employees, or else the annual turnover. Thus, given that the size of a company can be measured according to different criteria, it would seem reasonable to use the one which best suits the study being made (Kimberly, 1976). Bearing in mind the emphasis on manpower implicit in our survey, we chose to judge the size of the company by the number of staff employed, including both full-time and part-time,
because the data at our disposal did not distinguish between the two. To make this parameter more meaningful, we grouped the companies into the following sizes: up to 99 employees, from 100 to 249, from 250 to 499, from 500 to 999 and 1,000 employees and upwards[6].

The analytical techniques used to test our initial hypotheses were Pearson’s correlation coefficient, Pearson’s $\chi^2$ test, the (ANOVA) analysis of variance, the (ANCOVA) analysis of covariance, Student’s $t$-test and the biserial point correlation coefficient. The $\chi^2$ test was used to detect, on the basis of the combined frequencies, possible differences in the diverse HRM processes in function of the categories of use considered in this work and the use or not of THWs. Pearson’s correlation coefficient was used to determine the possible relations between variables and their sign. The biserial point correlation coefficient was used to determine the possible relation between a dichotomous variable (sector of economic activity) and the remaining variables. After detecting these correlations, an analysis of variance (ANOVA) was employed to test whether the use of THWs is related with the variables representing the internal labour market and if the size affects these and the use of THWs. In addition, the analysis of covariance (ANCOVA) was used to control for the variable (covariates) that might interfere in the results because of being correlated with the different parameters being studied, such as is the case with firm size.

The information supplied by the completed questionnaires, along with the data on company size and market sector taken from the database from which we obtained our sample, was processed using the SPSS programme.

Results
Our results concerning the use of THW show that despite the fact that we chose companies from the sectors which tend to resort most to this type of worker, a quarter of those who responded to our questionnaire had never employed them. This general proportion was as high as 47 per cent in the hotel, leisure and tourism sector. In general, those who had used the services of temporary help agencies had done so only on an occasional basis (THW = 2 represents 39 per cent of the total number of sample firms) (Table I).

The average use of THW according to sector and employment levels shows that THW are employed more in the food, drinks and tobacco industries sector than in hotel, leisure and tourism (Table II). In the light of these results we carried out an average difference test (Student’s $t$-test) for equal variances per market sector, which revealed no significant differences in the use of THW between sectors ($t = 0.97; p = 0.33$). Even the (ANCOVA) analysis of covariance concerning the use of THW

<table>
<thead>
<tr>
<th>Frequency of use THW</th>
<th>Food and drink and tobacco industries</th>
<th>Hotel, leisure and tourism</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$n$</td>
<td>Percentage</td>
<td>$n$</td>
<td>Percentage</td>
</tr>
<tr>
<td>1 = Never</td>
<td>28</td>
<td>24</td>
<td>8</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>48</td>
<td>41</td>
<td>4</td>
<td>23</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>14</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>9</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>5 = Very often</td>
<td>14</td>
<td>12</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>117</td>
<td>100</td>
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<td>100</td>
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</table>

Table I. Distribution of THW according to sector
<table>
<thead>
<tr>
<th>Sector</th>
<th>Company size</th>
<th>Number of cases</th>
<th>Means</th>
<th>Standard deviation</th>
<th>Levene's test (p)*</th>
<th>F</th>
<th>p</th>
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<tr>
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<td>0.99</td>
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<td></td>
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<td></td>
<td>100-249</td>
<td>35</td>
<td>2.37</td>
<td>1.19</td>
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<td></td>
<td>250-499</td>
<td>39</td>
<td>2.49</td>
<td>1.25</td>
<td>0.046</td>
<td>1.27</td>
<td>0.28</td>
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<td></td>
<td>500-999</td>
<td>13</td>
<td>2.31</td>
<td>1.60</td>
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<td></td>
<td>1,000a</td>
<td>10</td>
<td>3.20</td>
<td>1.62</td>
<td>0.046</td>
<td>1.27</td>
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<td>1.28</td>
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<tr>
<td></td>
<td>0-99</td>
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<td>2.00</td>
<td>1.41</td>
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<td>Hotel leisure and tourism</td>
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<tr>
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<td>Total</td>
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<td>1.36</td>
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<td>1.04</td>
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<tr>
<td></td>
<td>100-249</td>
<td>40</td>
<td>2.30</td>
<td>1.2</td>
<td></td>
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<tr>
<td>Overall</td>
<td>250-499</td>
<td>42</td>
<td>2.40</td>
<td>1.25</td>
<td>0.132</td>
<td>2.42</td>
<td>0.05</td>
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<td>1.52</td>
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<td>2.40</td>
<td>1.29</td>
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</tr>
</tbody>
</table>

Notes: *The sum of the number of cases according to company size does not tally with this value because there is one case in which the company did not supply us with the number of employees; *when Levene’s test is significant (p < 0.05), F value and ANOVA p are not reliable.
according to sector, with company size as the covariant, revealed no significant differences ($F = 1.1; p = 0.29$), on top of which, one of the premises for the application of this analysis is unfulfilled. Apart from this, it can be seen that in the food, drinks and tobacco industries sector the use of THW increases concomitantly with the size of the company, while in the hotel, leisure and tourism sector the opposite is true, except in the very largest companies. No significant differences emerge from an (ANOVA) analysis of variance of the use of temporary staff according to workforce numbers in either of the individual sectors studied, although differences do appear when the two sectors are analysed jointly. Thus, on the basis of our results we cannot rule out the hypothesis that company size is related positively to the use of THW. We should also keep in mind the discrepancy with results referring to each sector individually.

To verify our hypothesis concerning the relationship between the use of THW and the processes of manpower management, we made use of analysis of frequency using Pearson’s $\chi^2$ test. Nevertheless, the contingency tables for the representative variables of these processes, according to the different categories formed by the use of THW[7], did not fulfil the premises for the application of $\chi^2$ to test the hypothesis in question. Given that we could not use the $\chi^2$ statistic to test our hypotheses we went on to re-codify the “use of temporary help workers” variable (THW) into two categories: companies which never use this kind of worker and companies which do, thus creating a new variable (THWr). We subsequently also codified the variables of human resource management involved in the internal labour market, in order to have fewer boxes in the contingency tables, allowing us to overcome the premises for the application of the $\chi^2$ test. Thus, we created three categories for each variable. For the frequency with which a company resorts to internal recruitment (IRE), the new categories correspond to the old ones as follows: 1 (never) = never; 2 and 3 = sometimes; and 4 and 5 (very often) = often. Given that the assignation into three homogeneous categories was not so easy in the case of TE, we used the normal distribution of points for each variable, establishing two borderline points, above and below which we considered that these cases were included either in the upper or lower category. These points left 33.3 and 67.7 per cent to the left, respectively. The choice of these cut-off points was made in such a way that the same proportion of the distribution was left above and below the centre, with the same proportion being assigned to the centre as to the sum of the sides, so that any observation would have the same probability of being assigned to any interval. This re-codification allowed us to fulfil the premises for the application of the $\chi^2$ test to check our hypotheses. Our results show significant and relatively significant differences with reference to the use or not of temporary help workers (THWr) for training effort (TEr) and frequency of internal recruitment (IREr), respectively, (Table III).

<table>
<thead>
<tr>
<th></th>
<th>Number of cases</th>
<th>$\chi^2$ value</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEr</td>
<td>93</td>
<td>8.02</td>
<td>0.02</td>
</tr>
<tr>
<td>IREr</td>
<td>133</td>
<td>5.36</td>
<td>0.07</td>
</tr>
</tbody>
</table>

Table III.
The correlation matrix (Table IV) shows how the frequency with which THW are used is related positively and very significantly to the use of internal recruitment (IRE). The size of the company (SIZE) is positively and quite significantly related to the frequency with which THW are used, thus confirming the relationship appearing in Table II, and very significantly related to internal recruitment (IRE). Thus, from here on we only consider this latter relationship, as company size does not appear to be related to TE, at least in this study. The sector (SECTOR) is related quite significantly with TE, in such a way that industries within the food, drinks and tobacco industries sector on average make a greater TE per employee than those in the hotel, leisure and tourism group.

Apart from these correlations, we also carried out variance (ANOVA) and covariance (ANCOVA) analyses of the variables in this study. TE per employee is not significantly different compared to the frequency of use of THW, even after carrying out ANOVA and ANCOVA analyses[8] according to sector, given the differences in TE according to the sector in question. The frequency of internal recruitment (IRE) does not differ significantly according to the use of THW, even after comparing the effects of company size (SIZE) on this parameter, and furthermore the premise of homoskedasticity is not fulfilled (Levene’s test is significant) (Table V). Internal recruitment is highly related to company size \( (F = 6.61; p = 0.01) \), and so this effect must be taken into consideration when considering the relationship of the former with other variables. This result also supports our original \( \text{H6} \). Nevertheless, company size appears not to affect TE, even when the analysis is made according to sectors, because when company size is used as a covariable in the covariance analysis of the TE by THW, the effect of company size (SIZE) is not significant \( (F = 0.34; p = 0.56) \). This does not provide support for \( \text{H5} \).

We then re-codified the “use of temporary help workers” variable (THW) to the dichotomous variable (THWr) as we did before. With this modification, we intended to find any possible new relationships between the use or not of THW and staff management procedures dealt with in this study, since by including the categories in fewer groups the distances between them could be wider, making the differences more apparent (Table VI).

As far as the relationship between the use of temporary help workers (THWr) and TE per employee is concerned, significant differences appear according to whether THW are used or not, since those companies which use THW invest more in training. Nevertheless, the ANOVA premise of homoskedasticity is unfulfilled, although when the test of differences in means for different variances is applied there are very

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th>Standard deviation</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>THW</td>
<td>2.40</td>
<td>1.29</td>
<td>1.5</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>TE</td>
<td>40.03</td>
<td>47.1</td>
<td>0-239.6</td>
<td>0.10</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>IRE</td>
<td>3.64</td>
<td>1.26</td>
<td>1.5</td>
<td>0.19 **</td>
<td>0.15 ***</td>
</tr>
<tr>
<td>4</td>
<td>Size</td>
<td>475</td>
<td>812</td>
<td>3-7.348</td>
<td>0.14 ***</td>
<td>0.04</td>
</tr>
<tr>
<td>5</td>
<td>Sector</td>
<td>1-2</td>
<td>0.08</td>
<td>0.21 ***</td>
<td>0.087</td>
<td></td>
</tr>
</tbody>
</table>

Notes: "In 1,000 pesetas (6.01$); "The values of this variable correspond to the biserial point correlation coefficient, and the degree of significance is obtained via student’s \( t \)-test; \( **p < 0.1; \) \( ***p < 0.01; \) \( *p < 0.05 \)
significant differences in TE according to the use or not of THW ($t = 2.85; p = 0.006$). In the light of the relatively significant relationship between TE and the SECTOR variable, we ran an ANOVA analysis by sectors, in which relatively significant differences appeared in TE according to the use or not of THW in both sectors, although in the food, drinks and tobacco industry the premise of homoskedasticity was fulfilled only relatively well (in hotel, Levene’s test gave ($p = 0.14$; ANOVA ($F = 5.06; p = 0.06$); and in food, drinks and tobacco ($p = 0.06$; ANOVA ($F = 3.29; p = 0.07$)).

With regard to the relationship between the use or not of temporary help workers (THWr) and the frequency of internal recruitment, the results of our analysis of variance show significant differences in this latter variable according to the former. An analysis of covariance with company size (SIZE) as covariable shows quite significant differences in the frequency of internal recruitment according to the use or not of THW, despite the very significant differences in internal recruitment according to company size ($F = 6.65; p = 0.01$). Nevertheless, the premise of homoskedasticity is unfulfilled, although the test of differences of means for different variances gives a value of relative significance ($t = 1.85; p = 0.07$). In a study with reference to company sizes, the only segment in which internal recruitment according to the use or not of THW is significant is in the 100 to 249 employees group (Levene’s test gives

### Table V.
Relationships between the frequency of use of temporary help workers and internal labour market processes

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>THW</th>
<th>$n$</th>
<th>Means</th>
<th>Standard deviation</th>
<th>Levene’s test ($p$)</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = Never</td>
<td>23</td>
<td>21.52</td>
<td>30.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>36</td>
<td>51.17</td>
<td>59.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>15</td>
<td>40.06</td>
<td>50.61</td>
<td>0.02</td>
<td>1.46</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>39.12</td>
<td>25.15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 = Very often</td>
<td>9</td>
<td>46.13</td>
<td>28.31</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 = Never</td>
<td>36</td>
<td>3.28</td>
<td>1.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>51</td>
<td>3.61</td>
<td>1.33</td>
<td>1.54</td>
<td>0.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>4.00</td>
<td>0.87</td>
<td>0.00</td>
<td>(1.29)</td>
<td>(0.27)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>3.86</td>
<td>1.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 = Very often</td>
<td>15</td>
<td>4.00</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: *In 1,000 pesetas (6.01 €); *bWhen Levene’s test is significant ($p < 0.05$), F value and ANOVA $p$ are not reliable; The figures in brackets indicate the values of $F$ and $p$ in the (ANCOVA) analysis of covariance with company size (SIZE) as the covariable.

### Table VI.
Relationships between the use of temporary help workers and internal labour market processes

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>THWr</th>
<th>$n$</th>
<th>Means</th>
<th>Standard deviation</th>
<th>Levene’s test ($p$)</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>21.52</td>
<td>30.48</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>70</td>
<td>46.42</td>
<td>50.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>36</td>
<td>3.28</td>
<td>1.45</td>
<td>0.011</td>
<td>4.17</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>97</td>
<td>3.77</td>
<td>1.16</td>
<td>(3.23)</td>
<td>(0.07)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: *In 1,000 pesetas (6.01 €); *bwhen Levene’s test is significant ($p < 0.05$), F value and ANOVA $p$ are not reliable; the figures in brackets indicate the values of $F$ and $p$ in the ANCOVA analysis of covariance with company size (SIZE) as covariable.
(p) = 0.32; ANOVA (F = 4.53; p = 0.04)). The premises for the use of the ANCOVA analysis of covariance for internal recruitment (IRE) according to the use or not of temporary staff (THWr) with company size (SIZE) as a variable are fulfilled (Table VI).

Finally, we carried out an analysis of variance with regard to investment in training according to the frequency with which internal recruitment practices were adopted. The results do not support our original hypothesis concerning this relationship, because although there are differences in TE according to the frequency of internal recruitment, they are not in fact significant (F = 1.24; p = 0.3). These results are not even significant when applied by sector (F = 1.05; p = 0.39 in the food, drink and tobacco industry and F = 0.90; p = 0.51 in the hotel, leisure and tourism sector).

Discussion
The TE per employee appears to be significantly different according to whether THW are employed by the company or not. Pearson’s χ² test, Student’s t-test and the ANOVA analysis of variance by sectors all confirm this relation, although the latter test gave less significant results. Nevertheless, when we compare the frequency of use of THW and the TE, the results concerning the relationship of these two parameters are not confirmed either by Pearson’s correlation coefficient or ANOVA analysis, even when the analysis is made by individual sector. Furthermore, the sign of this relationship is not different from that of H1, in that companies who resort to THW supplied by agencies invest in training on average more than double the amount spent by those companies who do not use THW. Thus, we cannot reject the hypothesis concerning the effect of the use of THW on TE.

Internal recruitment turns out to be very significantly related to the use of THW. Even when we include the effect that company size has upon the use of this source of worker, relatively significant differences appear with regard to the use or not of THW, to the extent that the companies who use THW are also those who resort most often to internal recruitment, although in this case the ANOVA premise of homoskedasticity is not fulfilled. Notwithstanding, Student’s t-test shows relatively significant differences in the frequency with which this source of recruitment is used versus the use of THW and similar results derive from using Pearson’s χ² test. Thus, we cannot reject the hypothesis put forward with regard to the relationship between the use of temporary staff and the frequency with which a company fills vacancies by internal recruitment (H2). This relationship may be due to the high seasonal component in the activity of both sectors of our sample (hotel and foodstuffs), which might induce them to cover a considerable part of their temporary staff needs by resorting to temporary help agencies, thus giving stability and promotion opportunities to their core staff, thereby keeping them adequately motivated.

With regard to the frequency with which a company resorts to internal promotion and its TE, our results do not allow us to rule out H3, because despite the fact that the ANOVA analysis of the latter parameter according to the former contributes no significant values, Pearson’s correlation coefficient does give relatively significant results.

In relation to the size of the company by the frequency with which a company resorts to hiring staff from temporary help agencies (H4), the analysis of variance reveals significant differences in the employment of THW according to the size of the company. Pearson’s correlation coefficient shows a positive relationship between both values, which also supports our original hypothesis.
With regard to the influence of company size upon TE (H5), the original hypothesis is untenable. Nevertheless, we cannot reject the hypothesis concerning its effect upon the frequency with which the company resorts to internal recruitment sources (H6).

Conclusions, limitations and directions for future research

We discuss in this section our main conclusions and the implications that this study might have for staff management and the development of the internal labour market, in the light of all the results set out above. Firstly, TE per employee may be positively influenced by the employment of THW. This is because companies who resort to THW may need to increase their investment in training, since the increase in core staff training often exceeds the decrease which the use of THW might imply. Secondly, the employment of THW may accompany an increase in the frequency with which a company fills vacancies from its own internal staff resources, which may be a source of motivation and increased productivity on the part of the regular staff. All this implies that the use of THW could favour the appearance and development of an internal labour market, supporting the perspective that internal and external employment systems are complements. Thirdly, company size can have a positive effect not only upon the use of THW but also upon the frequency with which regular company staff are promoted to fill vacancies. Thus, larger companies have more need for an adequate management of their temporary employment as they will have more cases which require the use of THW, and furthermore they are more likely to have suitable personnel to be transferred or promoted to fill vacancies as and when they arise within the firm.

As for the limitations that this study has revealed, we must recognise that one of the main drawbacks was that of not using a wider sample, which would have given us more consistent information about practices in different sectors and branches of economic activity, as well as extending our survey to include small-sized businesses, since the average size of the sample firms is not extrapolable to all Spanish firms. Another serious limitation is the supposition implicit in some conclusions that the companies included in our study have a flexible personnel structure, an assumption which we have not tested empirically. Moreover, Atkinson’s model of the flexible firm has limitations (Kalleberg, 2001).

Other limitations are that we have based our analyses on responses that may be somewhat biased as they depend upon staff managers’ subjective opinions and perceptions on the use of THW, and a poor opinion of the use of temporary agencies may have influenced their replies. Furthermore, some values were measured via direct questions, which may have left certain aspects unanswered. In addition, we must remember that the use of THW can be explained differently according to each country’s regulatory context, so that our findings will not be fully extrapolable to other countries. One final limitation is the use of a sense of causality (e.g. the use of temporary agency staff affects staff management practices), when in fact the direction may be the reverse.

One limitation which may give rise to a future line of research is that in our empirical study we have only considered company size as being a context variable which might affect the processes of staff management dealt with here, when it may have been useful to introduce other values such as management policy, individual behaviour, innovation, dynamism, exports and so on. Therefore, future surveys could...
be directed towards testing empirically a model of the relationship between the use of THW and a greater number of parameters, both internal and external to the company (staff management practices, strategies developed, the degree of legislative restrictions in the use of such workers, availability of potential staff, etc.), as well as those relative to personal behaviour (satisfaction and work place environment, attitude and so on). This would not only provide information about the direction and magnitude of the relationship, but might also be used for predictive purposes.

Notes

1. Industrial workers are included in “primary employment”; the term “manual workers” refers to those who show greater loyalty to their profession or skills than to their firm; “secondary workers” refers to those with no career prospects (Osterman, 1982).

2. According to the Association of Temporary and Staffing Services of the USA, during 1993 temporary help workers received from 11 to 12 hours’ training from their agencies (Nollen and Axel, 1996, p. 167).

3. This act has been modified by Spanish Parliamentary Act 29/1999 of 16 July.

4. The Act 29/1999 of 16 July obliges firms to pay the same kind of salary or wages to all employees, regardless of whether they have been hired through a temporary help agency or not.

5. Ensuring that staff are multiskilled requires extra training, which might involve greater training costs than with specialist workers (Valle, 1995, pp. 108-109).

6. In this case we follow the group criterion used by Alcaide et al. (1996), albeit taking into account one category: up to 99 employees, as we should have few cases available if we were to break up this group.

7. The categories formed by the “frequency of use of temporary help workers” variable (THW) are: 1 = never, 2, 3, 4 and 5 = very often.

8. Company size is used as covariable (SIZE).

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