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TRAINING PROVISION AND REGULATION: AN ANALYSIS OF THE TEMPORARY HELP INDUSTRY*

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Abstract

This paper studies from an economic viewpoint the juridical rationality of mandatory training provisions on Temporary Help Agencies through the Spanish Law 14/94. No positive relationship is found between the improvement in Temporary Help Agencies' added value levels and their investments in temps' training. In analyzing this specific provision of Spanish Labor Law we adopt a positive focus with the aim of finding economic causes for its adoption and of explaining its effect on the functioning of the labour intermediation sector. The application of the non-market failure theory leads us to conclude that an efficient use of this legal prescription is limited. The investigated issue is of relevance in order to understand the economic effects of regulation from a Law and Economics perspective.

Keywords: Training, Temporary Help Agencies, Law and Economics, Non-Market Failure Theory

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1. Introduction

Temporary help agencies —or *Empresas de Trabajo Temporal*, THA for short— are private companies that hire temporary workers and send them out to do temporary work on the premises of, and under the supervision of, client firms solicited from the business world[1]. In Spain they were allowed to operate for the first time in 1994, through the 14/94 Law. This Law has established several constraints on THA's activities in a context where this regulation is non–existent in other Spanish sectors. Among those restrictions there exists a requirement that THA must compulsory allocate resources for general training of their workers above a minimum threshold. In this paper, we thoroughly discuss this particular form of public intervention aimed at the provision of the second-best optimal amount of general training for Spanish THA workers.

One of the motivations for this analysis is that the little evidence that we have for Spain indicates that THA investments in training have made no substantial dent either in the excellence of their services or in their rate of labour productivity. That is, studies so far do not demonstrate short–term improvement in client firm satisfaction with THA–training leavers (Sáenz, 1996). However, despite this lack of evidence on any positive effect of THA training investments in Spain, the Government has recently carried out reforms aimed at tightening training requirements on THA, based on a general belief about the need for more training (See the 29/99 Law).

[TAKE IN TABLE I]

Apart from the lack of evidence on the relationship between training and THA productivity enhancements, a second motivation is that in the last years, the use of THA workers by employers has increased tremendously. As can be seen in Table I, in Spain the proportion of temporary contracts managed by THA over the total of temporary contracts registered in the Spanish Public Employment Office —*Instituto Nacional de Empleo, INEM*— has almost multiplied by three between 1995 and 1999. Nowadays, almost 16 percent of all temporary contracts are being managed by THA. Moreover, even though this increasing trend has led to considerable investments in training by THA since the promulgation of the 14/94 Law[2], almost none of the literature explores the consequences of training regulation in the THA sector, and none, so far as we are aware, does so in an empirical context. This situation may be explained by the emergent nature of the temporary placement sector in Spain, so that difficulties to get data to support conclusions empirically discourage the effort.

Our study of the impacts of training regulation through the 14/94 Law is explicitly based on a Law and Economics perspective. By drawing on the theory of non-market failure it complements in a fruitful way the literature on the economics of training and institutions[3]. Although focusing on a specific type of provision in Labor Law is a rather infrequent

[1] Other intermediaries are also functioning in the private placement sector as well. Among the latter, we find such varied figures as, e.g., private employment agencies, search firms or casting bureaus. The basic difference between THA and these other intermediaries lies on the contractual design through which the economics of THA is based: workers contracted through THA remain on the THA's payroll while under the direction of the client firm, giving way to a triangular relationship between the client firm, the worker and the THA (see Muñoz-Bullón, 2002).

[2] According to the Spanish National Association of Temporary Help Agencies, THA training investments amounted in 1998 to more than 3100 million pesetas.

[3] See Parsons (1977) or (1986), and Mincer (1994) for thorough reviews of the human capital literature.

strategy research in economics,[4] studies on labor regulations should be done with a common focus coming from both Law and Economics in order to ascertain which aspects of the economic sphere need regulation aimed at improving their results (See Malo and Toharia, 1997). In our evaluation of the mandatory training provisions in the 14/94 Law, we wonder to what extent the incremental value of those training investments exceeds the cost impact arising from regulation. For this purpose, we must look more deeply than simply at the nominal volume of the investment, since, by itself, it gives little indication of the economic worth of such an investment. The range of issues in analyzing the training legal requirements must be expanded to include not only direct effects of training investments —such as, for instance, potential increases in THA productivity— but also indirect effects. That is, regulation's impact on THA and their client firms, and temps' aspirations.

By so doing, we put forward the idea that such regulation is very likely to fail to assure THA compliance with its own training objectives. Not only is the 14/94 Law itself flawed because of its emphasis on ambiguous training objectives, but also (as clarified later), it is encouraging negative externalities in areas directly related to the ones in which regulation is intended to operate. Thus, doubts arise on its effectiveness to attain its initial standards. Evidence is provided from a survey addressed to a sample of Spanish temporary help agencies and from data on the Spanish Business Register. Our analysis, therefore, presents relevant implications for public policy, given that formulation of an appropriate policy response requires a demonstration that regulation fails and, moreover, an understanding of why that failure occurs.

The remaining of the article is organized as follows. The paper begins by briefly considering the reasons why markets are not expected to supply the amount of training which is socially optimal. In particular, evidence on market failure in the THA sector is discussed. It follows with a description of the implementation of the 14/94 Law. Then, a model is presented to empirically analyze the relationship between THA training investments and THA productivity. This presentation leads directly to a discussion of non-market failure in training. The final section of the paper presents the conclusions and suggestions for future research.

2. Rationale for public intervention in the provision of training

2.1. Market failure in training provision

Training can be provided in different forms. It can be made available through the formal education system, or it can be provided within the firm, as on-the-job training or formal training. Job training is, therefore, the result by workers and firms. Following Becker (1962), we distinguish between general training and firm-specific training. The former are skills and knowledge that are broad enough to be applicable in other firms, while the latter refers to skills that are primarily useful in the firm where they are taught.

According to conventional economic theory, a worker may choose a certain level and amount of training in view of the potential future returns to be gained as a result of that

[4] Studies examining Government training programs do, indeed, abound (see, for instance, Green, 1999, Lalonde, 1995, or Ogbonna, 1999). Nonetheless, from a pure Law and Economics focus, economic literature has rather focused on tort, contract, environmental law, property law and antitrust. Some of the most notable exceptions should be noted: Campbell (1986), Epstein (1984) and Posner (1984 and 1998) in their respective analyses of Labor Law.

training. The worker will, then, pay for that training directly or through a decrease in wages during the training period. It is also possible for employees and employers to negotiate the terms of gainful employment, so that they will end up with satisfactory agreements to both parties. Job training can be part of those agreements as long as both parties consider this to their mutual advantage. In this respect, the financial returns to training for the firm or the worker constitute the incentive for training.

What is wrong with the conventional view? Why not leave the job training of workers to private decisions of firms and individual workers? The first part of the answer is that there are empirical indications that the market for training does not work as it should[5]. The little evidence that we have shows that the rates of return to the training of employed workers exceed that of other investments (Stern and Ritzen, 1991[6]). Thus, we suspect the existence of barriers in the supply of training which lead to under-investment. The second part of the answer puts forward theoretical reasons why it is highly unlikely that training of workers will be efficiently provided by means of markets. It is worth summarizing the essential points in the accepted theory, as a background for the subsequent discussion of non-market failure. Among the potential reasons why the quantity of training delivered by the market is too low, we underlie the following[7]:

- Uncertainty. The financial returns to general training are not certain, but risky at the time the worker decides whether or not to invest in training. For risk averse workers, this situation leads to under-investment in training. This holds even if the expected value of the risky return is the same as the certain return (see Levhari and Weiss, 1974; Eaton and Rosen, 1980). Cautious people would like to include a premium for the risk they take when engaging in risky training. They may also desire to insure themselves against "the vagaries of wage rates". However, insurance companies will not be involved in the insurance of human capital, due to moral hazard and adverse selection problems. If there is risk for which no insurance can be bought and if people are risk averse, markets are not efficient (Arrow and Lind, 1970).

- Liquidity constraints. First, the costs of training may be too high for the worker to pay out of savings or current income. Second, there may be few facilities to borrow for investments in training, since such a loan does not provide the lender with a security or a collateral to be sold in case of a loan default. Although financial institutions might well establish a mark-up on the interest rate, in this case only those workers sure enough about the investment returns will be willing to take up such high rates. As a result, this mark-up will be rarely acceptable. This argument is less convincing for white-collar workers as training is for them often relatively cheap. Liquidity constraints might be relevant, however, for blue collar workers[8].

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[5] The notion of "market for training" does not require the existence of formal markets. As has been indicated, training is an activity carried out within firms. In this paper, there is no market for training; rather, when the expression "failure of the market for training" is used, we make reference to a situation in which private agents take "wrong" decisions (as clarified later).

[6] Other authors have found a disparity between training expenditures and results, which has been the subject of much discussion (see, for instance, Hollister et al., 1984, Betsey et al., 1985, Levitan and Gallo, 1988 or Barnow and Aron, 1989).

[7] Economists have traditionally identified several sources of market failure —such as pure public goods, externalities, market power and economies of scale, inadequate information, resource immobility, and the unequal distribution of income and wealth. Given that some of these are pertinent to the provision of training, we briefly indicate them in this section.

[8] In addition, in view of the relatively low costs of training (compared to, for instance, the costs of regular youth-time education) and because of the fact that workers have a regular income, the explanation of under-investment by means of liquidity constraints and capital market imperfections carries less weight for general

- Pure public goods. Training yields positive externalities that cannot be captured by individuals who pay for their own training or by firms which pay for the training of their employees (Ritzen, 1989; Streeck, 1989; Wolf, 1988).

- Complementarity between general and specific training implies that general training pays off more if it is combined with specific training, and that specific training is more profitable when it is done jointly with general training[9]. Therefore, employers will not invest in specific training unless workers have sufficient general training. And workers will not invest enough in general training unless they know that specific training will follow (Streeck, 1989). Moreover, in a world with high turnover, this complementarity will lead to under-investment in general training: on the one hand, workers observe that general training only pays off if it is combined with specific training; on the other hand, firms are reluctant to provide specific training, because of high turnover[10].

- Information problems. On the one hand, employers generally lack information on the productivity gains which may arise from much of the general training completed in other firms. This information asymmetry renders general into specific training. Thus, a social loss is incurred, due to the transaction costs which are required to signal the importance of general training to other employers different from the one with which the training was completed. On the other hand, inadequate or limited information about the available training opportunities will restrict the ability of young people to obtain the appropriate training when preparing to enter the labour force.

2.2. THA and training provision

Is there any evidence on failure in training provision by THA in the Spanish case?[11] According to THA managers surveyed for this research, when explicitly asked about it, slightly more than one third of them would rather be investing less in training than they are actually doing[12]. Why do a substantial part of THA show this tendency to be reluctant investors in training? When one puts this question to THA, two types of answers are primarily cited (see Table II). Either the temporary assignment does not require training provision —for instance, the THA temporaries had previously been assigned to the same client and already had the proper skills, no complex abilities were required or the client decided to train the temps on its own. Or the THA can not afford to train temps more intensively —due to urgency in the assignment process, uncertainty on which client firm

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training than for other types of training (as regular youth-time education). In any case, public policy proposals have been put forward in order to counter liquidity constraints, by decreasing the costs of the investment. Those proposals have in general consisted of ensuring the availability of loans. Other proposals have arisen from "inverse insurance" (see, for instance, Ritzen, 1989).

[9] For example, to acquire the specific knowledge of the foundry of axle-casks for trucks, one needs a basic understanding of foundry in general.

[10] Employers might want to hedge against the risk of early departures of workers from the firm by means of contracts in which workers only receive specific training if they stay with the firm for a specified period. However, productivity which is commensurate with the specific training is not enforceable. As a result, such contracts provide little support for employers.

[11] «Training» is defined here as investment in acquisition of skills or in improvement of worker productivity before the job assignment begins. The concept, unless explicitly stated, excludes on–the–job training, which normally includes the notion of a paid or «on–the–clock» activity and is undertaken during work hours. Training by THA is given prior assignments during unpaid hours.

[12] Those data were obtained from a survey sent to the head office of 275 THA operating in May 1999 in Spain (Section 4 gives a full account of data sources).

the worker will eventually be assigned to, or the departure of trained employees to client firms at the end of the assignment.

[TAKE IN TABLE II]

Those indications of under-investment in training are conceivable in a context of high turnover rates. According to information provided through the survey, on average, respondent THA make 6.39 contracts to the typical worker, and the average duration of an assignment is around 48 days. In addition, most of temps address to THA because they have not been able to find a job elsewhere, and the ones willing to continue working for the THA at the end of the assignment represent a minority. Only 5 per cent of temps prefer temporary work to permanent work (see Suárez 1997:8). Given that training will only provide returns for the THA as long as the temp remains with the latter, clients can not generally rely on the intermediary to obtain workers with the appropriate skills. In fact, only 12.83 percent of workers receives skill improvement from their contracting THA[13].

3. A description of training regulation in the 14/94 Law

THA were allowed to operate in Spain for the first time under regulation provided for by the 1994 labor market reforms. The 14/94 Law —which rules those agencies— entered into force in June, after the approval by the Government of the 18/93 Decree–law on «urgent measures to promote employment», which introduced a series of changes aimed at improving placement services, stimulating part–time employment and creating job opportunities for young people. Prior to this date, THA had developed in Spain in fairly anarchical conditions, free of the constraints of a well–defined legal framework (see Rodriguez-Piñero, 1992 and 1994).

This Law has established several constraints in THA activities, based on the observation of abuses related to "social" dumping and encouraged employment precariousness traditionally associated to the historical experiences of this sector in Spain and in other European countries (EIRR, 1995). This situation has lead to legal restrictions never before existing upon a sector of activity in Spain. The Law assumes that Spanish temps need more training. Its premise is that training enhances labor productivity and that —without this requirement— temps contracted through THA will not be productive enough, due to inadequate training[14].

Certainly, a large number of options exist for enlarging the number of trained workers and for deepening their training. The public role in training should be based on the reasons why

[13] Although indications of failure in training provision in the THA sector have also been described for the United States —see, for instance, Granrose and Appelbaum (1986), Leighton (1984), Moore (1965) or Nollen (1996)— evidence on provision of general training by THA in the United States has recently been given by Autor (2001). Nevertheless, we cannot consider the Spanish and the American cases to be freely comparable, due to different institutional developments of the sector in both countries. While in the American case the market is nowadays characterised by vertical (quality) differentiation (see Autor, 2001: 1416) so that private information and screening constitute an explanation why THA offer training, in Spain the growth of the THA sector has basically been based in an employers' desire for flexibility. This situation has resulted from the anarchical development of the sector in Spain before the approval of the 14/94 Law (see Section 3 and Rodriguez-Piñero, 1992, 1994, for details), so that Government interventionism through regulation has emerged more naturally than in the American case.

[14] The belief that relatively modest economic performance is related to the relatively low level of skill is prevalent in other European countries as well. For instance, Haskel and Martin (1993) show for the U.K. that not only is skill level lower than that of several competitors, but also that a significant part of productivity growth can be accounted for by skill growth (See Chatterji, 1995).

the training markets may fail. Training policy can take place along a continuum extending from the State's role of acting as a signaling and informative services for labor market participants, to one in which high interventionism in planning for manpower resources is implemented. For instance, the State can publicize and make information available about training opportunities in the private sector, can choose to finance but not provide any training, may finance and provide the training, or can exhort individual employers to train their staff. Which of these various options is likely to be most effective in dealing with this market failure remains unclear.

In any case, public intervention to improve qualifications of young workers seems natural, given the worrying rise in unemployment amongst Spanish young people in the mid 90's, and the fact that temps hired by THA are mostly conformed by unemployed wishing to enter work. Intervention will presumably enhance the latter's possibilities to qualify for new jobs through training accomplished in THA. Therefore, the 14/94 Law is looking for the special protection of workers who are considered to be particularly vulnerable or disadvantaged members of the labor force.

In so doing, it is contemplated the requirement that THA must compulsory allocate resources for general training of their workers above a minimum threshold. The Spanish State legislative implementation is twofold:

- A tax on payrolls to help pay for training. The 0.7–percent payroll tax —0.6–percent charged to the THA and 0.1–percent to the employee— accrues to the Social Security system in order to provide income support for unemployed workers through State training programs (art. 12.1).

- THA's obligation to devote at least 1 percent of their payroll costs to training of workers sent to temporary assignments (art. 12.2). Payroll costs are defined as the monetary reward earned by THA temps, without including contributions to Social Security or indemnities due to workers' mobility, contract interruption or contract extinction. Those investments must create skills «as a generalized, polyvalent resource that can be put to many different future uses». Therefore, the Law is explicitly imposing that the investment should be in general training: «THA–provided training should provide broad skills at no out–of–pocket cost to workers, in order for the latter to be able to apply them at different employers».

The State conducts unannounced inspections to determine whether THA are in compliance. If the inspection discloses the violation of the training requirements, the THA is fined. However, the State has no control over what is taught or who is selected for training. As shown in Table III, both the number of inspections and the amount of sanctions has been increasing in the last years.

[TAKE IN TABLE III]

4. Impact of training on THA productivity

Regulation of training investments through the 14/94 Law was thus intended to provide THA workers with general qualifications that would help them improve their productivity at whatever firm for which they eventually end up working. If regulation had achieved its goal, then those workers receiving training should have been more productive on average than those who were not. Evaluation would therefore be empirically done by specifying some measure of workers' productivity and calculating the effect of regulation on this

impact variable. The training literature is, indeed, replete with empirical studies on the effects of training on labor productivity utilizing data on individual workers. Since data on labor productivity are very limited, these studies take an indirect approach, relying on the observed relationship between training and wages as evidence on the relationship between training and productivity (e.g., Armstrong, 2000, Brown, 1989, Fougere *et. al*, 2000, Lillard and Tan, 1986; Lynch, 1992, or Veum, 1999).

However, data for this test is not actually available in the Spanish labor market, as a result from its still developing nature. In particular, the scarce databases that allow the researcher to follow individual work histories along time do not include any information on whether the temp receives training from the THA (see Muñoz-Bullón, 1999, 2002). Our empirical analysis, therefore, instead of focusing on the individual level, will focus on the organizational level. That is, we analyze how labor productivity measured at the THA level is affected by the implementation of training investments. This approach is facilitated by the use of a database that contains information on the economic performance as well as human resource management policies of THA businesses.

4.1. Data and variables

Our analysis is based on data taken from two sources: official registers and a survey to THA. The first source is accounting records from the Spanish Business Register (*Registro Mercantil*). This register contains information on the main financial ratios, accounting records, and the balance sheet of every existing firm at the time the data are recorded. It allowed us to obtain information for 1997 and 1998 about THA that responded to the survey (described below) on the following variables:

- Number of employees hired by the THA (*EMPL*).

- Added value by employees (*VAL*). It measures the contribution of the labor force to the added value by the THA. It is defined as follows:

$$VAL = \frac{Added\ Value}{EMPL} = \frac{Sales - Costs\ of\ \ purchased\ materials}{EMPL}$$

- Total THA assets (*ASS*).

The main advantage for using this type of information relies on its availability. However, in those accounting records no information is available either on the resource volume devoted to training for temps, or on personnel policies which might be included as control variables in the analysis. For this reason, a survey of 275 THA was conducted between May and June 1999. It was addressed to the head office of Spanish THA in order to collect information on labor market effects of THA-provided training, and on THA behavior towards mandatory training requirements in the 14/94 Law[15]. The targeted sample included a comprehensive THA listing published in one of the magazines of the THA sector (*Capital Humano* no. 14, 1998: 31–110), plus those THA belonging to the most important association of THA at that moment —National Association of Temporary Help Agencies. It accounts for more than 80 per cent in collective annual revenues of the temporary placement industry.

[15] This section only describes the variables used in the econometric analysis. Therefore, it does not describe information obtained from the survey that will be analysed in the sections below.

The survey was conducted by mail, and it was followed over the phone, obtaining a response rate of 27 percent. It attempted to interview all of the respondents on two years: 1997 and 1998. Most of the respondents were the owner/manager of relatively small THA who were quite familiar with the THA performance. Sixty-nine percent of the establishments had less than one hundred employees, and only ten percent had more than four hundred. In large organizations, the primary respondent was the person in charge of human resources department, generally the personnel officer. If the primary respondent was unable to answer questions about the training received by temps, that part of the information was completed by asking by phone to a supervisor or someone else with line responsibility. Information obtained from the survey was completed and tested with several consultations with associations, experts and entrepreneurs, and with additional data on each THA achieved from the Business Register (as indicated earlier).

Respondents were asked to report the amount of investment devoted to temps' training, the number of assignment contracts managed by the THA, the THA age, whether or not the THA belongs to a multinational corporation (*MUL*), whether or not client firms pay for a part of the training costs of temps (*FIN*), and whether or not the training is suitably adapted to each specific client firm (*SPEC*). Finally, dummy variables derived on questions about three personnel policies are included. Those are the following: (i) THA work environment evaluations, which try to understand the intricacies of job tasks and personal characteristics required for particular assignments (*WORK*), (ii) THA safety and health programs addressed to temps (*SAFE*), and (iii) THA post–assignment evaluations, which consist of the performance evaluation of workers so that the THA fine–tunes its own interviewing, testing and selection systems (*POST*).

With this information, a training intensity index (*TR*) was constructed by the following ratio:

$$TR = \frac{\text{Re}\,sources\ devoted\ to\ training\ of\ temps\ by\ the\ THA}{Number\ of\ assignment\ contracts\ managed\ by\ the\ THA}$$

Table IV shows that THA spent on average in training 2.47 thousand pesetas per assignment contract, obtaining 19.31 thousand pesetas in added value. The average THA has been present in the market for 42 months. In addition, most of THA in our sample have developed post-assignment and work environment evaluations along the two years of observation. While more than seventy-five percent of THA have provided to their temporary employees training suited to specific client firms, just over half of the intermediaries in the sample have implemented safety and health programs for their temps. In addition, it is relatively unlikely that the THA belongs to a multinational group or that client firms finance a part of the training costs.[16]

.[TAKE IN TABLE IV]

4.2. Model specification

The value added by training is estimated by regressing the log of THA added value by employees (*VAL*) along years 1997 and 1998 on the log of training intensity index (*TR*) and a set of control variables. However, in econometric analyses of the incidence and

[16] These descriptive statistics include THA that presented only three or less missing variables in the survey. Data on missing variables have been completed with the longitudinal mean of the corresponding variable. This procedure allowed us to test our model with a wider sample than the one that was initially available. In particular, the procedure enlarged the sample up to 131 observations.

returns to training, unobserved organization attributes leads to biases in the estimation of these returns[17]. For instance, management decisions will affect the quality of labor supplied by the THA, the THA ability to match job seekers with job vacancies, and numerous THA operational procedures. All of these decisions will have some impact on how efficiently the THA is operated and as a result affect the productivity of the temps employed by the THA. Moreover, estimates of the coefficient on the variable *TR* will be biased if the error term is correlated with *TR*. High-productivity THA due to unobservables —such as unmeasured inputs, differences in input (or output) quality, differences in technology and management decisions— can have high values of training because those THA may be better able to pay for the latter. The converse might also be true: low-productivity THA due to unobserved characteristics may invest more in training, given that the investment can be used to raise productivity. It is therefore necessary to model unobserved attributes statistically. Given that two sequential observations on the same THA are recorded, unobserved variables can be eliminated by specifying a fixed effects or a random effects model.

Apart from the effort that the THA makes in training their temps (*TR*), a number of control variables are included in the model. This is important because an estimated positive relation between *TR* and *VAL* need not necessarily imply that *TR* "causes" *VAL*, but may merely reflect that both are affected by a third factor that has been omitted from the analysis. The choice of our control variables is motivated either by previous research or on theoretical grounds. The following control variables are included:

- The size of the establishment (proxied by *ASS*, the total THA assets). The assets in possession of the THA are a particularly important feature in order for the intermediary to multiply its presence in a sufficiently wide geographical area (Rodriguez–Piñero, 1994).

- The THA age, measured by months since the beginning of its presence in Spain, is included because of the theoretical and empirical evidence on the correlation between the age of the business and the level of labor productivity. Young businesses have low levels of labor productivity because their technology has not yet been well defined and their employees devote a significant amount of their time to designing and redesigning an appropriate production technology (see Bartel and Lichtenberg, 1987).

- Whether client firms finance a part of temps' training (*FIN*) and whether the THA develops training courses suited to the specific needs of client firms (*SPEC*) are expected to positively influence the THA added value. First, the financing of training by client firms will improve temps' ability and, subsequently, their added value for the THA. Second, specific training is likely to be of relevance in increasing client firms' satisfaction with THA services. This positive experience is expected to influence the client firm when considering whether addressing to the THA will be likely and desirable.

- THA productivity may be positively affected by the implementation of personnel policies such as work environment evaluations (WORK), safety and health programs (SAFE) and post-assignment evaluations (POST). Those three dummy variables are among the most-cited measures of productivity potential of THA according to sector's sources (Rodriguez-Piñero, 1994).

- Finally, the THA productivity can also be affected by whether the THA belongs to a multinational group, as long as the latter dispose of more efficient operational procedures than the Spanish intermediaries (at the time of the survey, the temporary

[17] See, for instance, Bartel, 1994.

placement sector was an emerging market in Spain, while it already had a larger history in other European countries).

In order to capture these effects, the panel data specification is written as[18]:

$$Log(VAL_{it}) = c + \mu_i + \beta_1 * log(TR_{it}) + \beta_2 * log(Age_{it}) + \beta_3 * log(ASS_{it}) + \beta_4 * SAFE_{it} + \beta_5 * POST_{it} +$$

$$+\beta_6 * WORK_{it} + \varepsilon_{it} \qquad (i=1,2,\ldots,N;\ t=1,2,\ldots,T) \qquad (1)$$

where the subscript *i* makes reference to the THA, *t* is the time period, *c* is a constant term, μ_i is a separate constant term for each THA (for the fixed effects estimates) or an individual specific disturbance (for the random effects estimates), and ε_{it} is a symmetrical error term that is independent and identically distributed with $E[\varepsilon_{it}]=0$ and $Var[\varepsilon_{it}]=\sigma_\varepsilon^2$. The model is specified with the natural log of the continuous variables to allow the estimated coefficients to be read as elasticities.

So far, we have assumed that the independent variables are exogenous. The analysis, however, could be affected by the endogenous nature of our variable of interest, *TR*. While panel data estimation techniques can help us account for unobserved heterogeneity across firms, they do not correct for endogeneity. Intermediaries suffering from falling added value are likely to compensate for it by investing more intensively in training. Alternatively, intermediaries which have experienced higher growth in added value may be increasing training and, at the same time obtaining higher added value. Direct estimation of (1) will then be inconsistent, as long as endogeneity bias emerges from the simultaneity of *VAL* and *TR*. To check for the possible effects of endogeneity, we can make use of instruments. A good instrument for *TR* is one that is correlated with the THA training effort but not correlated with the error term in equation (1). The analysis developed in Section 2.2. suggests, at least, two variables as valid instruments. First, the duration of a temporary assignment is expected to affect the THA training effort, but not directly to affect THA productivity levels: the longer the duration of the assignment, the higher the THA training intensity index is expected, given that incentives to provide training more intensively will be diminished when THA face the prospect of having their newly-trained workers hired away by other firms. Second, the aforementioned THA reluctance to invest in training is likely to be more relevant among those highly indebted THA. The latter will face a greater risk of being unable to meet its maturing obligations; thus, they may be less able to pay for the investment in training. Therefore, the following two variables are used as instruments. First, the average duration of a temporary assignment (*Dur*, collected from the survey). Second, the debt to total assets ratio, computed by dividing total THA debt (both current and long-term liabilities) by total THA assets (*Debt*). Descriptive statistics of those two variables are reported in Table IV. They are both highly correlated with the training effort but are otherwise unrelated to the dependent variable in equation 1 —a requirement for a valid instrument— as can be seen in Table V.

[TAKE IN TABLE V]

4.3. Empirical findings

Regression results are reported in Table VI. The model was estimated using several different procedures. As a reference point to analyze the subsequent panel data regressions,

[18] The variables MUL, FIN and SPEC are time-invariant regressors. Therefore, if they are not excluded from the above panel data specification, the fixed-effects estimator cannot be computed due to the non-existence of within-group variation in all variables.

in the first two columns of Table VI we estimate an instrumental variable regression on the pool data using two-stage least squares (2SLS) estimation in order to test whether *TR* is truly exogenous.[19] In both models 1 and 2 the training intensity index presents a non-significant impact on productivity. An important question, which we will get to later, is on what grounds this result may be justified. The estimated coefficient on the variable collecting the THA age is consistent with expectations: younger THA have less added value levels. This offers support for the hypothesis that older THA have already improved their technology, so that they exhibit higher-than-average added value levels; while, on the contrary, young THA may be relatively informal organizations which will have low net sales per employee while they are in the early stages of its activity.

The THA assets are positively related to productivity, which suggests that they are key to the THA operational procedures, as expected. There is also a positive connection between the implementation of work environment evaluations and productivity, supporting the idea that, through the latter, the THA has access to information on client firms in order to better match the temps to the latter's vacancies. The non-significance of the coefficients on the remainder variables collecting personnel policies (SAFE and POST) may be explained by the fact that those variables constitute an approximate way to estimate the extension of the THA personnel policies. THA belonging to a multinational corporation appear to be less productive, which indicates that the operational lag between national and multinational firms is not as wide as it might be expected. Finally, the fact that client firms finance a part of temps' training (FIN) exhibits the expected positive impact on productivity levels.

[TAKE IN TABLE VI]

As explained before, those least squares estimates will be biased in case that firm effects exist. In this case, panel data provide consistent estimates of the coefficients. The Hausman statistic indicates that the fixed effects and the random effects models' parameters are statistically different. Therefore, exogeneity of the THA-specific effects is rejected, and the fixed-effect estimates are preferred because the fixed-effects estimator is always consistent. For this reason, in the third column of Table VI only the results obtained with the fixed-effects instrumental variable regression are reported[20]. They show that the estimated coefficient on the training intensity variable is statistically non-significant. The fixed effects do not correct this non-significance. Thus, the first conclusion that can be drawn is that no support is found for a causal direction from *TR* to *VAL*. Moreover, this result for *TR* is found to be robust to a variety of specifications and estimation procedures of the model. The justification for this finding will be largely discussed in next section. The results for the remainder regressors also confirm the previous findings —in particular, productivity of labor is positively influenced by the THA assets and by the THA age, after controlling for training effort and unobservable factors.

5. Non-market failure in public intervention

[19] The first stage regression demonstrates that the instruments have sufficient power for identification. Both identifying variables are significant in both specifications (Model 1 and Model 2 in Table VI). The F-statistics are 4.50 and 6.58 respectively. The R-squared statistics are 27.26 and 27.24. These first-stage regressions are not shown, but are available from the author upon request.

[20] Since we have data on firms for a two-year period, it seems reasonable to assume that the variables collected in the fixed-effect of the THA are more or less constant along this time horizon. As well as in the pool estimations, the variables *Debt* and *Dur* are highly significant predictors of the training intensity effort in the first stage of the fixed-effects regressions with Log(*TR*) as the dependent variable. Furthermore, the first-stage results uniformly generates an F-statistic for the joint significance of the instruments equal to 2.68, which is significant at the 6 percent level. The estimates for the random-effects model are available from the author upon request.

On the basis of the aforementioned results, one has to wonder why has the Spanish public intervention in the training market not been more successful in dealing with the private market failure. Assistance in answering this difficult question comes from focusing on non-market failure —i.e., why the public response to perceived private market failure may go awry. This approach requires us to draw explanations for non-market failure and to apply these explanations to training provided by THA.

The concept of non-market failure is a relatively new matter in economics, having evolved in the late 1970s and 1980s. Wolf (1979, 1988) has been one of the first authors in setting out this concept as a direct parallel to the concept of private market failure. For each type of private market failure there is an approximate counterpart in non-market or government failure[21]. This suggests that government activity to offset private market failure may be undercut by the prevalence of non-market failure. In particular, training regulation has been the output produced by public policy in order to compensate for THA training market inadequacies. To explain why producing this output is likely to result in specific types of non-market failure, we need to examine the distinctive supply and demand characteristics that differentiate non-market outputs from market outputs. That is, the conditions under which non-market failure can exist and indeed flourish need to be reviewed before describing the various types of non-market failure in the THA sector.

5.1. The conditions for non-market failure in THA training regulation

In order to explain how is non-market failure related to THA training provision obligations, it is helpful to begin with the supply and demand characteristics of the market for training provision in the temporary placement sector.

On the supply side there are several such characteristics:

- Measurement difficulties. Non-market outputs are hard to define and extremely difficult to measure. This is particularly exemplified in the 14/94 Law, since no agreement has been reached about what should be the output of THA training provision. At best, the minimum 1 percent threshold is a remote proxy for the "real" or final intended output. Units for measuring the final product are non-existent. Consider the difficulty of measuring training "worth", specifying "quantities" of job training, as is indeed the case in the 14/94 Law. Measuring outputs by their inputs has become accepted because measuring outputs directly is rather difficult.

- Performance evaluation. Evidence of output quality is also elusive. Certainly, regulation for training is supposedly designed to improve the functioning of labor markets. However, what kind of information should be reported and thus used as a basis for assessing regulation quality? Should it increase workers' earnings, shorten their unemployment spells, improve job quality, THA productivity or something else? It might be argued that since all of these benefits (may) result from public intervention, its evaluation should account for the contribution from each one. However, there is little evidence which can be generalized to show the extent to which each of them operates. Moreover, the fact of attempting to measure each of them in any specific case would be too lengthy, if not impossible. For instance, intangibles such as "job quality" are difficult to measure, and cannot be directly evaluated economically. A closely related question concerns the time span over which the effects are to be monitored. Consider the difficulty

[21] Wolf outlines four classes of non-market failure: internalities and private goods, derived externalities, concentration of market power and unequal distribution of power and prestige (see Wolf, 1979, 1988).

of determining whether the "quality" of training regulation is "better" or "worse" now than five or six years ago. Is follow-up data for the first year or even the two first years adequate to allow for an evaluation of the effects of THA training provision? It should be taken into account that these effects may presumably be viewed as long-term human investments rather than current expenditures. The essence of the approach is not simply to find identifiable targets, but to have targets that are also amenable to economic evaluation. To the extent that some of the benefits derived from regulation are unpredictable and immeasurable, they cannot be used to justify economically any public intervention in training. Finally, evidence of output quality is also elusive in part due to the fact that information that would in the market be transmitted by workers' behavior is frequently missing. In addition, such signaling as may be provided concerning their reactions tends to be too little and possibly non-representative[22], or too gross and too late to be an effective means of monitoring output quality. To assess output quality requires precise, representative and regularized feedback, which is hard to realize for non-market output.

- Lack of "competition". The non-market output has been produced by a single Government agency —i.e., the Ministry of Labor— whose exclusive cognizance in the particular manpower field is legislative mandated. This absence of sustained competition is another factor contributing to the difficulty of evaluating output quality.

- Monitoring. Finally, how effective is the Spanish Ministry of Labor in controlling the providers of training? Do the institutional conditions under which training must effectively be provided take into explicit consideration the efforts of providers? How can providers be rewarded or penalized for their performance so as to simulate some kind of "bottom line" concept (i.e., to some extent comparable to the profit-and-loss statement of market output)? The limited impact of THA in meeting training quality objectives is evident from studies in the THA sector showing the overall lack of qualifications gained by trainees: client firms give the lowest ranking to THA–based training among other items related to their satisfaction as users of temporary placement services (See Sáenz, 1996: 37)[23].

There are also distinctive characteristics that apply to the demand of THA training regulation and to the process by which these demands become effective:

- Public awareness. Increased awareness of market failure in the THA sector —as a result of the activity of information media and unions— has resulted in intensified and politically effective demands for remedial action by Government. Indeed, these pressures in Spain have expanded THA training requirements recently implemented through the 29/99 Law.

- Political benefits. In the political process, which mediates these demands, rewards often accrue to legislators from articulating and publicizing problems, and legislating proposed solutions, rather than assuming responsibility for implementing them.

- Time horizons. In part as a consequence of this reward structure, there is often an appreciable disjuncture between the time horizons of political actors and the time

[22] For instance, letter writers may be cranks, but the non-writers are not thereby implying approval.

[23] This study analyses the use of THA by client firms in Spain through a survey directed to the latter in 1996. THA services were highly valued regarding the quick availability of temps, the relation between the overall service provided and its price, and the match between temps and job positions. However, the training received by temps was the least valued item of all.

required to analyze, experiment, and understand a particular market inadequacy in order to see whether a practical remedy exists at all. In particular, THA training obligations have found easy support by Spanish politicians, knowing that the effectiveness of their implementation is certainly difficult to be judged for years to come.

Those supply and demand characteristics of the non-market sector are fundamental to the theory of non-market failure (Wolf, 1988). They open the way to non-market failure, and allows us to provide a basis for analyzing why training regulation in the THA sector has failed to live up to the expectations surrounding it when it was initially proposed.

5.2. Types of non-market failure in THA training regulation

How have these characteristics manifested themselves in non-market failure in the Spanish context? Which types of non-market failure have been most prevalent in public intervention in the provision of training by THA? Although hard evidence on this issue is certainly difficult to come by, a preliminary set of judgments is presented in this section.

Four types of non-market failure can be found resulting from THA training obligations.

5.2.1. Internalities

Survival of market organizations is jeopardized in case that their internal standards are disconnected from market performance indicators. However, the goals of government agencies are hardly related to any market test. Their situation is different because the supply and demand characteristics associated with their output are different. Because measures of output are often hard to define, because feedback and signaling from market participants are lacking or are unreliable, internal standards for non-market organizations cannot be derived from market forces. Furthermore, because there are usually no competing producers, the incentive to devise internal standards that will control costs is weakened. Under these circumstances, Government agencies develop "internalities" that do not bear a very reliable connection with the public purpose which their regulation is intended to serve. As defined by Wolf, internalities are the goals that apply to guide, regulate and evaluate Government performance. Whereas externalities are central to the theory of market failure, internalities are central to the theory of non-market failure.

What determines the specific internalities developed by Government's training regulation in the THA sector? Our basic hypothesis is that the Government has tried to maximize net political support of regulation. That is, the difference between support and opposition of constituents. In general, the Government that promulgates the 14/94 Law has a conception of THA as necessary "bad" intermediaries in the labor market that have to be regulated due to the high Spanish unemployment rate, but which generate negative externalities, such as insecurity of the worker and several disruptions in the usual application of Labor Law. There is substantial evidence that participants in the labor market were aware of those pervasive effects. Throughout the 1990s, professional law journals published a flurry of articles warning employees of the risks imposed by those intermediaries[24]. Unions activities have also called attention to these developments in the THA sector, often in

[24] Despite the legislative provisions and formal definition, THA have thrown into question the whole nature of the employer-employee relationship. See for instance, CES (1996: 203), Ramos (1996), Soler (1993) or Rodriguez-Piñero (1992 and 1994).

hyperbolic terms[25].Given the ideological thrust against those intermediaries, the cost of a "too" permissive regulation would have eventually been very high for the Government.

5.2.2. Redundant and rising costs

Public policy in the form of THA training regulation presents a tendency to exhibit redundant costs (i.e., "x-inefficiency"). The source of this non-market failure has lied in the demand and supply characteristics previously described. As public awareness of the inadequacies of THA training provision grows, demands for remedial action intensify. Moreover, with rewards frequently accruing in the political arena to publicizing the problems and initiating action labeled as a remedy, regulation with somehow internally inconsistent objectives has been the result, as we explain below.

Job skills required by THA typically depend on the nature of the assignment at client sites. In Spain, according to data from 1997, 59 percent of occupations filled by THA required non-qualified workers; 28.9 percent corresponded to clerical/sales occupations; 5.6 percent accounted for white-collar occupations (professional specialty, technical and managerial occupations), and 3.2 percent were blue-collar occupations (Muñoz-Bullón, 1999: 46). In this setting, it seems natural that few THA firms would be in compliance with Law standards in the absence of Law enforcement activity. The reason is simple: their intermediation in the labor market does not generally require training. The fact that almost 32 percent of the THA surveyed for this research would rather be investing less in training than they were actually doing (see section 2.2 above) is therefore, non-surprising[26]. It follows, then, that for those THA, training investments required by the Law might be largely unnecessary. In other words, even though possibilities exist for lowering these THA cost functions and, thereby, raise their productivity, these opportunities are ignored by regulation. The result will be non-market failure, in the form of inefficient "production" and redundant costs. Moreover, these redundancies may well rise over time, as it follows from the recent reforms carried out by the Spanish government aimed at tightening training requirements on THA (as established in the 29/99 Law).

Redundant costs in the form of inefficient production also result from the excessive concentration on formal training programs. The Law has failed to recognize informal skill acquisition (i.e., on-the-job training) procedures as valid alternatives. The legal concern is ignoring that informal skill method acquisitions are actually responsible for much skill learning in the temporary placement sector: the majority of jobs filled by THA necessitate medium–low academic qualifications (i.e., under secondary education; see Table VII)[27]. As a consequence, rather than complex skills requiring detailed instruction and supervised practice, it will be commonly required more simple skills, for which little instruction but plenty of practice is needed (indeed, this is the third ranked issue in Table II).

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[25] The popular press have also covered stories in this similar vein. For example, a 1999 *El País* story —one of the most important newspapers in Spain— entitled "Unions and the employers' association ask the Ministry of Labor to act against pirate temporary help agencies" warned that "it is necessary to shut down those intermediaries that do not comply with Labour Law" (*El País*, January the 18th, Monday, 1999). Similarly, the business newspaper *Expansión* stated in an article published in 1998 titled "The bad image of the THA sector" that "Temporary Help agencies do not in general offer enough training to their workers" (*Expansión*, November the 30th, Monday, 1998).

[26] This proportion of THA as reluctant investors is even understated, given that THA are prone to overstate their efficacy and propensity to train (see Autor, 2001: 1414).

[27] Similar figures are obtained when addressing to data on education levels from the Ministry of Labor. For the year 1997, 61.8 percent of workers hired through THA had primary or no education, and 30.1 percent were in possession of secondary education. Only 8.1 percent were above secondary education.

[TAKE IN TABLE VII]

Finally, another reason for inefficient production of training lies on the fact that training by THA is given prior or between assignments. Not always, therefore, does the THA know to which client site the worker will be assigned before undertaking the investment. Even though the consequences arising from this situation of imperfect foresight has been recognized by European directives on atypical work through THA, this fact has been disregarded by the Spanish legislator[28]. This will be particularly inefficient, given the inability to supply training suitably adapted to the client firm's specific demands.

5.2.3. Derived externalities

In general, government intervention to correct market failure may generate unanticipated side effects. There is a high likelihood of such derived externalities because government tends to operate through large organizations using blunt instruments whose consequences are both far-reaching and difficult to forecast. The likelihood of externalities is further enhanced by both demand and supply characteristics associated with non-market output. Strong political pressure for non-market intervention may create an effective demand for action before there is adequate knowledge or time to consider potential side effects. Furthermore, derived externalities are generally more likely to occur later than sooner. Hence, short time horizon and high time discounts of political actors predispose them to overlook potential externalities. And, finally, the frequently ill-defined nature of both quantity and quality of non-market outputs limits the motivation, as well as the means, for thinking seriously about their potential unintended side effects.

Regulation to provide training to THA workers has, indeed, generated unanticipated side effects. If regulation's purpose is to produce a better trained and more flexible labor force, then it should be considered as pertinent. However, it is unlikely that this flexibility has been achieved, given that the Law gives THA a considerable degree of discretion in the exercise of training. THA behavior in overseeing and providing job training has played an important role. This situation has lead to different forms of opportunistic behavior that certainly depart from the intention of the legislator. In the first place, worker mobility after training is limited, as THA establish sometimes clauses in the assignment contract which avoid the temp being poached by the client firm —in case of non-compliance, penalties must be provided for, either from the worker or from the client firm. In other cases, applicants are purposely kept on temporary assignments for unnecessarily prolonged periods before losing them to permanent jobs (second issue included in Table VIII below)[29]. Moreover, the extent of skill transferability obtained by trainees is also limited, as long as training courses are designed for the specific needs of each particular client (instead of completely general training; see Table VIII)[30]. In this same line, given the high turnover of temps (see Section 2) the practice of "creaming" —i.e., selecting into training those individuals who are less likely to be poached by client firms at the end of the temporary assignment— is a likely THA strategy. While this selection effect can be seen

[28] Rodriguez–Piñero, 1992: 199. For instance, according to article 100 directive: "Part–time and temporary workers should have access to vocational training operations initiated by the undertaking in which they work under conditions comparable with those enjoyed by workers employed full–time on open–ended contracts...". And, according to article 118A directive: "Before temporary workers take up any activity requiring special occupational qualifications or skills or special medical supervision, they must be informed by the client firm of the risks involved, and, where necessary, receive appropriate training" (*vid. EIRR*, 1990: 14-15).

[29] See Hidalgo (1995: 41), Moore (1965: 567). The existence of mobility costs contradicts the evidence available for the United States (see Autor, 2001: 1414).

[30] In fact, 52.70 per cent of the respondents had signed partnerships with their clients through which client-firm specific skills are more easily developed than in the classical supplier/client relationship.

as an indication of training efficiency in that fewer training resources are expended on those least reliable by the THA —who might well be the least motivated for the assignment—, it does certainly not do much to increase work force flexibility —which, as above indicated, is one of the Law's objectives.

[TAKE IN TABLE VIII]

Finally, an artificial training "loophole" consists of the THA engaging in 'in–house' training, given that the latter may be speculative in nature and serve only to justify the minimum investment threshold. In addition, since economics of scale in training provision can be reached by means of contracting forms, this method of bypassing the job–training market is especially inefficient when used as a means for training provision by the smallest THA, which are in general ill–suited to provide effective training for lack of adequate staff. More than half of small THA allocate training expenditures to internal training despite this overall lack of training expertise (see Table IX).

[TAKE IN TABLE IX]

These examples represent a type of non-market failure derived from regulation intended to compensate for an existing market failure. They have in common the characteristic of not being foreseen at the time regulation was imposed. Clearly, policy choice would be improved if such derived externalities could be taken into account when regulation is under way.

5.2.4. Regulation inequities

The role of non-market activities in producing inequities derives from specific demand and supply characteristics associated with non-market output. On the demand side, the principal causal characteristic is heightened public awareness of the inequities generated by the market and the resulting clamor for regulation, often without prior consideration of the inequities that may be generated by the latter. On the supply side, regulation inequities result from the monopoly non-market output in the training field and the related absence of a reliable feedback process to evaluate THA performance. In the absence of competing producers, those who feel adversely affected have notably less direct and less effective means of expressing their dissatisfaction than is available to participants of marketed output who can withhold purchases or shift them to other producers. By contrast, those who derive special benefits from particular non-market activities are likely to have, or to create more direct and more effective means for expressing their support, through organized lobbying and advocacy, than is available to participants in the marketplace.

In particular, THA training regulation has increased the demand for some groups, and has levied costs on others. Among the former we encounter the professionals offering job training services —who have been benefited by this public policy measure because more demand for training has been created. They can be expected to urge that more compensation is needed to bring about a socially optimal outcome than would otherwise be estimated.

Among the latter, we encounter the smallest THA. It is well-known that training is more prevalent in large than in small firms (Bartel, 1994, and Bishop, 1982). Indeed, as stated above, the smallest THA in our dataset tend to invest less intensively in training[31]. There is

[31] The smallest THA spend in training, on average, less resources per contract than middle range and larger THA. The average training intensity index (*TR*, see Section 4) of those THA belonging to the first quartile of

as a result more under-investment in training for workers in small THA than for larger THA. This is not surprising, if one notes that larger firms have more possibilities to pool the risks of investments in training (Ritzen, 1989). One might say that, especially for the largest firms, the risk in the return to the training of one worker offsets that of the next worker. Another explanation for this finding is that for the smallest THA, the ease of internal financing is lower and technological possibilities to realize economies of scale are less likely to be exploited than for the largest THA (Krueger, 1993, Segal *et al.*, 1997). In fact, the former are less able to provide training through own training centers or through subsidiaries, which the largest THA do more often (see Table IX). This will lead small THA to rely more on satisfying immediate skill needs by hiring workers who already have the requisite skills from outside, instead of trying to produce the necessary skills through potentially risky investment on training from within the THA. Finally, while training costs are borne individually by each THA, it is the largest ones which benefit more from dissemination of benefits of training across the whole sector through inter-THA mobility of labor. Thus, it is no surprise that the large THA had provided support for training regulation through collective bargaining, and it is reasonable that they continue doing so[32].

6. Conclusion

This article has analyzed training requirements imposed on THA through the Spanish 14/94 Law. At the heart of this Law is the notion that training investments by THA will enhance labor productivity of temps, by creating a positive externality in the Spanish labor market. If, as a result of the introduction of mandatory training on THA, productivity is found to be predictably influenced by training investments, it should be possible to use it as its economic justification. Nonetheless, empirical support for such externalities needs to be adduced before one can rely too much on this hypothesis. In our analysis, by utilizing data on economic characteristics of businesses in the temporary placement sector, our major finding has been the absence of empirical support for the hypothesis that THA's investment in training leads to significant increases in productivity.

Therefore, a relationship between training and labor productivity does not necessarily exist at the organizational level. The Law is encouraging and enforcing an increase in THA training levels without any economic assessment of whether the additional investment in training by THA might be put to better use in other productive activities. An understandable concern about unemployment and qualification of temps in the early nineties has, then, produced an institutional structure in which (a) more THA training is equated with economic improvement, (b) ambiguous training objectives are put forward, and (c) negative externalities are encouraged in areas directly related to the ones in which regulation is intended to operate.

The central point in our discussion is that debates on how much resources should be spent on training of THA temps must take into account both the supply and demand conditions for non-market failure in training regulation. Certainly, the current debate in Spain does not reflect such considerations. When this analysis is done, one realizes that the rationale for regulation such as the one exemplified in the 14/94 Law provides only a necessary, not

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the total asset distribution in our sample is 72.44 percent of the training intensity index of the THA in the fourth quartile.

[32] For instance, the association representing the smallest THA (FEDETT, *Federación Española de Empresas de Trabajo Temporal*), was highly vociferous in its opposition to the II Collective Bargain (this agreement included a 0.25 per cent increase in the percentage of the annual payroll costs dedicated to training; *vid.* art 43.2 of the agreement).

a sufficient, justification for public policy intervention. Sufficiency requires that specifically identified market failure be compared with potential non-market failures associated with the implementation of public policies.

Many issues remain open for further research, however. Certainly, much work needs to be done to analyze the various dimensions of THA training. For instance, time spent by temps in training, the percentage of temps occupational groups for which a formal training program exists, etc. Secondly, the data have not, unfortunately, permitted an analysis of the long-run effect of the implementation of training investments. The collection of more complete data on training by THA constitutes a promising avenue for future research in this respect, since it would allow the impacts of training to be gauged with greater precision.

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Appendix: Tables

Table I. Temporary contracts managed by THA in Spain

Year	Temporary contracts (1)	Temporary contracts through THA (2)	Proportion [(2)/(1)] *100
1995	5,519,350	361,633	6.55%
1996	8,273,175	748,601	9.05%
1997	9,386,084	1,260,524	13.43%
1998	10,692,315	1,707,842	15.97%
1999	12,017,063	1,892,284	15.75%

Source: Spanish Ministry of Labor.

Table II: Relative Ranking of Factors Explaining Why Training is Not Provided

Factors	*Mean Ranking*	*Standard Deviation*	*Number of respondents*
(i) The sollicited temp had previously been assigned to the same client	4.61	1.27	73
(ii) Urgency in the assignment process	4.42	1.76	71
(iii) No complex abilities were required for the assignment	4.35	1.52	73
(iv) Worker had already the proper skills to succesfully tackle job responsibilities'	4.15	1.25	73
(v) The client decided to train the temp in its own plant	2.93	1.66	72
(vi) Ignorance of what client the worker would eventually be assigned	2.73	1.87	73
(vii) Likelihood of the temp being hired directly by the client at the end of the assignment	2.38	1.33	73
(viii) No availability of an own training center	2.04	1.62	70

Notes: (i) The scale of the ranking ranges from 1 (not important or considered) to 6 (very important). (ii) These data come from the following question: "For the cases when your THA does not invest in training of temps sent to missions, how important are the following in your decision?"

Table III: THA infringement indicators to 14/94 Law

	Year 1995	Year 1996	Year 1997	Year 1998
Number of labor inspections	498	1566	2142	1555
Number of THA infringements	30	158	150	103
Amount of sanctions (millions of nominal currency)	7.7	29.5	32.1	28.2

Source: Spanish Ministry of Labor.

Table IV

Descriptive Statistics

Parameter	*Mean*	*Standard Deviation*	*Min.*	*Max.*
Value Added by Employees (VAL)	19.31	17.30	.0009	117.89
Training Intensity Index (TR)	2.47	2.30	.12	25
Age in months (Age)	42.00	20.01	12	132
Total assets (ASS)	368.11	1417.94	.597	14076.24
Safety and health programs (SAFE)	.67	0.47	0	1
Post–assignment evaluations (POST)	.96	0.20	0	1
Work environment evaluations (WORK)	.80	0.39	0	1
Multinational group (MUL)	.12	0.32	0	1
Client firm finances training (FIN)	.22	0.42	0	1
Training suited to specific client firm (SPEC)	.77	0.42	0	1
Average duration of an assignment (Dur)	48.58	23.96	3	180
Debt to total assets ratio (Debt)	88.58	38.69	22.25	473.12

Notes: The training intensity effort (TR), total assets (ASS) and added value (VAL) by employees are measured in thousand pesetas. The average duration of an assignment is measured in days. Number of observations = 131.

Table V

Correlation coefficients. Significant levels in parentheses

	Value Added by Employees	Training Intensity Index	Average Duration of an assignment	Debt to total assets ratio
Value Added by Employees	1.00	-	-	-
Training Intensity Index	-0.1673	1.00	-	-
	(0.0381)			
Average Duration of an assignment	-0.0542	0.4261	1.00	-
	(0.5045)	(0.0000)		
Debt to total assets ratio	0.0647	-0.1591	-0.0034	1.00
	(0.4255)	(0.0487)	(0.9664)	

Table VI

Estimation Results. Dependent variable: Log(VAL)

	Pooled estimates				*Fixed effect estimates*	
	Model 1*(a)*		***Model 2****(a)*		***Model 2(b)***	
	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
Constant	3.809	0.000	3.195	0.001	2.573	0.010
Log (TR)	-.295	0.307	-0.201	0.487	-0.437	0.428
Log(Age)	0.461	0.03	0.274	0.068	0.438	0.090
Log (ASS)	0.207	0.012	0.179	0.030	0.204	0.088
SAFE	0.039	0.857	0.019	0.933	-.162	0.325
POST	0.067	0.890	0.018	0.971	-.354	0.379
WORK	0.466	0.080	0.490	0.070	.112	0.679
MUL	-0.644	0.062		—		—
FIN	0.439	0.069		—		—
SPEC	0.089	0.726		—		—
F-statistic	1.85	0.067	3.67	0.052		—
Wald χ^2		—		—	3976.71	0.000
Hausman χ^2		—		—	22.21	0.001

Notes:

Number of observations =131.

(a) Two-stage least squares estimates (2SLS). Instrumented variable: Log(TR). The instruments are the average duration of a temporary assignment and the THA debt ratio (the ratio between the THA debts and total liabilities). The F-statistic tests the joint significance of the regression.

(b) Fixed effects (within) instrumental variable regression. Instrumented variable: Log(TR). The instruments are the average duration of a temporary assignment and the THA debt ratio (the ratio between the THA debts and total liabilities). The Wald Statistic tests the joint significance of the regression.

Table VII: Percent Distribution of Education Levels Required for the Assignment

Education Level	*Reported as the first most frequently required level*	*Reported as the second most frequently required level*
Without studies	10.96	—
Primary education	61.64	5.97
Secondary education	23.29	62.69
Medium graduate degree	2.74	20.90
Graduate degree	1.37	10.45

Notes: These data come from the following question: "Which two of the following education levels are more frequently required for success in the assignment?"

Table VIII: Relative Ranking of Issues and Effects of Partnerships

	Mean Ranking	***Standard Deviation***	***No. of observation***
Issues included			
(i) Training courses specifically designed for the particular client	4.43	1.41	39
(ii) Minimum assignment periods for temps	3.00	1.57	39
(iii) Wages for temps above the ones agreed in collective bargaining agreements	3.79	1.47	39
Effects			
(i) Improved THA knowledge of the culture and work procedures of clients	4.67	1.13	39
(ii) Increase in training investments for temps	4.61	1.33	39
(iii) Improved control by the client over the quality of the THA contracting services	4.49	1.17	39
(iv) Integration of temps in the client's staff at the end of the assignment	4.26	1.35	38

Notes: Scale 1 to 6 where 1=not important or considered; 6=very important.

Table IX: Percent Distribution of Training "Make/Buy" Decision by Size

Total THA asset quartiles	*'In–house' training*	*Outsourcing training*
1st.	53.84	91.66
2nd.	70.00	88.89
3rd.	69.23	78.57
4th.	69.69	70.59

Notes: These data come from the following questions: "Does your THA ever outsource training of temps to external contractors? Does your THA ever provide training of temps internally (e.g., through subsidiaries or associated firms)?". Sample size=69 firms.