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# Determinants of training transfer in the wine industry: conceptual hypotheses and results for Rioja (Spain)

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## ABSTRACT

This paper takes the perspective of both managers and of employees to examine the determinants of training transfer in the wine industry. To that end, a number of conceptual hypotheses are formulated focusing on three factors: the design of the training, the characteristics of the trainees, and those of the organization, with these being tested using information from the Rioja wine industry (Spain). Three contextual characteristics are compared: the company ownership, its location, and its size. The results indicate that, from the perspective of management, transfer is related to the organizational environment; while from the perspective of the employee, transfer reflects their motivation for training. According to managers, significant differences exist among the three contexts, while, according to employees, there are no contextual differences.

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## 1. Introduction

There are more than 1 million wine producers in the world, producing approximately 2.8 billion cases of wine each year. The top three wine-producing countries (France, Italy, and Spain) account for 46% of all production, in such a way that the wine industry is a very important economic sector in these countries. Thus, the characteristics of this industry in these consolidated countries could be used as a practical guide, from the perspectives of both managers and employees, for other wine producers in the world (Mongan Stanley, 2013).

A major challenge for training management in every industry is the effective transfer of learning to the workplace, and the success of training lies particularly in the development of organizational goals (Sookhai & Budworth, 2010; Yamnill & McLean, 2001). Nevertheless, learning is not always an integral part of training, that is to say, training does not always lead to learning. Organizations may fail to provide the necessary infrastructure to support learning after training has taken place (Antonacopoulou, 2001). This issue has been identified as the primary problem in the transfer of training.

In their seminal work, Baldwin and Ford (1988) identified two key factors in the training transfer process: (1) maintenance over time of the knowledge and abilities acquired during training and (2) generation of new knowledge and skills in the context of work. In line with

Newstrom (1984) and Wexley and Latham (1981), Baldwin and Ford (1988) explain training transfer as 'the degree to which trainees effectively apply the knowledge, skills, and attitudes gained in a training context to the job' (p. 63). In this same vein, Broad and News-trom (1992) note that the positive transfer of training refers to the effective and permanent application of knowledge and skills acquired in training by trainees in the workplace. In these studies, one key element in the concept of transfer is the application of knowledge acquired in training to the workplace, which points to a means of measuring training effectiveness. Effectiveness is, in turn, defined as the degree to which training meets the objectives proposed in the organizational context.

It is within this framework that the determinants of training transfer are examined in this paper. The wine industry is the subject of this paper, for two reasons. The first arises from the important processes of change the industry has recently undergone, resulting in the 'new' wine producers, with the implication that training has become an instrument of organizational change (Antonacopoulou, 1999). The second is the significant investment of this sector in training, particularly in the afore-mentioned 'new' producers, which should translate into profitable returns (Velada & Caetano, 2007). Training issues in the wine sector have been specifically analyzed in Spain, with recent evidence obtained for the Rioja region, indicating the importance of training in the evolution of companies (Gil, García-Alcaraz, & Mataveli, 2015).

This paper formulates a number of conceptual hypotheses, focusing on three factors: the design of the training, the characteristics of the trainees, and those of the organization. These hypotheses are tested in one consolidated industry (Rioja, Spain), to determine whether the findings are applicable to other wine regions of the world (e.g. the USA, China, Chile, ...). Given that continuing training is designed by the company and experienced by the employees, it is crucial to collect information from enterprises through both managers and employees, so as to contrast data and attain a complete overview of the transfer problem. So far as is known, no prior study has attempted the comparative analysis of training transfer from the perspectives of both company and employees in the wine industry. The paper also investigates different contexts of the sector, such as capitalist and cooperative ownership, varied geographical locations, and a range of business sizes.

Section 2 addresses the theoretical framework of training transfer and proposes specific hypotheses, Section 3 includes a description of the Rioja wine sector, Section 4 develops the methodology, Section 5 shows the empirical results, and Section 6 presents the conclusions of the study.

## 2. Theoretical framework and hypotheses

Recently, there has been a significant increase in research into the transfer of training (De Grip & Sauermann, 2013; Gegenfurtner & Vauras, 2012; Gegenfurtner, Veermans, & Vauras, 2013; Gruber, 2013; Konkola, Tuomi-Gröhn, Lambert, & Ludvigsen, 2007; Segers & Gegenfurtner, 2013; Veillard, 2012; Volet, 2013; Weisweiler, Nikitopoulos, Netzel, & Frey, 2013), following two motivations: the significance of the benefits of an effective transfer of training offers for the company, and the need to accurately assess the effectiveness of training.

Regarding the first motivation, researching training transfer from an educational perspective is important as it provides a conceptual basis for the development of: (1) the design of training and labor practices (Gegenfurtner et al., 2013); (2) the effective

development of programs for personnel (De Rijdt, Stes, Van der Vleuten, & Dochy, 2013); (3) practices of social support in the workplace (Van den Bossche & Segers, 2013); and (4) effective tools to promote the transfer of learning at work (Weisweiler et al., 2013).

The second motivation arises from the fact that only a relatively small percentage of training results are estimated to transfer into the workplace (Baldwin & Ford, 1988). In this regard, Wexley and Latham (2002) demonstrate that approximately 40% of training content is immediately transferred to the job. However, transfer rates fall to 25% after six months, and to 15% after one year. Thus, over time, the participants are increasingly unable to retain and use the information they obtained in training programs, and a significant portion of the time and money invested in training is not fully and effectively exploited (Velada & Caetano, 2007).

Two lines of research address the generic problem of training transfer (Pineda-Herrero, Belvis, Moreno, Duran-Bellonch, & Úcar, 2011). The first presents models that develop levels of evaluation for training, and the second proposes a number of factors involved in training transfer.

In the first, numerous authors have introduced models to evaluate training (Barzuchetti & Claude, 1995; Kirkpatrick, 1998; Meignang, 1997; Phillips, 1990; Pineda, 2000; Wade, 1994). The most frequently utilized model is that developed by Kirkpatrick (1998), which identifies learning results, in terms of transfer, as a key element in training evaluation. The author suggests an evaluation of training on four levels: (1) trainee reactions; (2) meeting educational objectives; (3) transfer of training to the workplace; and (4) effectiveness of the training. García Moreno (2002) adds a fifth level to this model: the efficiency of training, which he deems of great importance to organizations, and Phillips (1996) concurs. The objective of this additional level of evaluation is to quantitatively analyze the impact of training on the net results of an enterprise. Considering all five levels, the literature (García Moreno, 2002) suggests that at least the first three levels of evaluation be incorporated into the design of training activities (trainee reactions, meeting educational objectives, and the transfer of training to the workplace).

In the second, other authors have focused on the determining factors of training transfer, rather than specific models for evaluating results. In this context, the contributions of Burke and Hutchins (2008), Nijman, Nijhof, Wognum, and Veldkamp (2006), Holton (2005), Lim and Johnson (2002), Baldwin and Ford (1988) and Noe (1986) are of special interest. In general, studies of training posit three factors that affect transfer in the workplace (Baldwin & Ford, 1988; Huczynski & Lewis, 1980; Kontoghiorghe, 2004; Nicandrou, Brinia, & Bereri, 2009; Velada, Caetano, Michel, Lyons, & Kavanagh, 2007): (1) factors related to training and planning training programs; (2) factors related to trainees; and (3) organizational factors affecting transfer, as well as training and trainees.

The focus of this paper is now on three factors that influence training transfer from both company and employee perspectives: training design, trainee responses, and the work environment, with the aim of deriving testable hypotheses. The same hypotheses apply to each group, assuming that they have sufficient conceptual differences to provide different information and, in fact, the results do differ for each group. In this context, the Qualified Designation of Origin (QDO), reflecting the economic and social importance of the Rioja wine industry for the region, has allowed for the standardization of production processes and, consequently, the training regimes within the sector, thus suggesting the homogeneity of the three conceptual hypotheses.

## 2.1. Training design

The training process is conducted by means of a training plan, which is a document drafted by the company to provide personnel training for a specified period (Fernández-Salineró, 1999). A training plan embodies training in organizations, which ultimately respond to organizational demands, and aims to contribute to the continuous improvement of employee skills and qualifications. A training plan must establish the objectives and scope of the training, as well as the means and location of the training, both of which represent important elements of the process, in terms of efficiency and efficacy.

For Tres (2002), the design of training activities is a process in which training designers take a number of steps aimed at solving a training problem, and adapt the selected strategy to the organization's specific conditions, as well as those related to the target group in training. In short, the purpose of the design is to guide the process of conducting training activities.

Broadly speaking, training design refers to: 'the characteristics of the learning environment' (Noe, 2009, p. 147). Some characteristics of training design are implemented to improve learning motivation, such as compensation for training (Whitehill & McDonald, 1993), or other kinds of stimuli, such as distributive justice (Bell & Ford, 2007), or learner-centered learning (Nikandrou et al., 2009). Distributive justice refers to a fair training program that includes specific rules and information, a genuine concern for employee expectations, and the establishment of an ethical foundation conducive to moral behavior (Quiñones, 1997). Learning focuses on assisting individuals in acquiring strategies to enhance their opportunities for self-knowledge (Santibáñez, Adán, Gil, & Sáenz de Jubera, 2004), helping them, for example, to utilize means-centered didactic strategies, and seeking out dynamic models capable of adapting to the results, through which different areas of knowledge are passed on (Santibáñez & Gil, 2003).

The careful planning of training is vital to the success of training programs and consequently, to the transfer of training to the job (Nikandrou et al., 2009). In this regard, training design has been proven to stimulate training motivation (Gegenfurtner, Festner, Gallenberger, Lehtinen, & Gruber, 2009). The training program is also essential to the successful transfer of training to the workplace (Axtell, Maitlis, & Yerta, 1997; Kontoghiorghes, 2002; Rouiller & Goldstein, 1993).

Based on these findings, the following hypotheses are proposed:

H1a: From the company perspective, training design has a positive effect on the transfer of training.

H1b: From the employee perspective, training design has a positive effect on the transfer of training.

## 2.2. Trainee responses

The characteristics and responses of employees to their training are known to be important elements in the transfer process. For example, trainee personality can affect both the training and transfer processes (Ford, Quinones, Sego, & Sorra, 1992; Warr, Allan, & Birdi, 1999). An individual's abilities to learn, synthesize, and connect to learning have been identified as factors of transfer (Robertson & Downs, 1979), and self-efficacy has also been demonstrated to be an essential variable for training transfer (Budworth, 2011; Tannenbaum, Mathieu, Salas, & Cannon-Bowers, 1991). Social cognitive theory (Bandura, 1986)

provides a theoretical basis for understanding social and psychological motivation, self-regulation, effort, perseverance, choice, and performance. Self-efficacy reflects the judgments that individuals have regarding their own abilities to organize and complete the actions necessary to achieve the desired results. This is not a matter of individual ability, but rather, the individual's perception of his/her abilities (Bandura, 1986). Other influential aspects (Nikandrou et al., 2009) are:

- (1) Trainee perceptions of opportunities to apply new abilities acquired in training (Noe, 1986)
- (2) The development of individual career objectives (Tziner, Haccoun, & Kadish, 1991)
- (3) Trainee perspectives regarding the career objectives addressed in training, as well as the objectives directly related to the present job (Clark, Dobbins, & Ladd, 1993)
- (4) Organizational commitment (Facteau, Dobbins, Russell, Ladd, & Kudisch, 1995; Kontoghiorghes, 2002)

The literature has focused on individual motivations to learn as an essential component in transferring new-found skills and knowledge to the workplace (Aziz & Ahmad, 2011; Facteau et al., 1995; Kontoghiorghes, 2002). Kontoghiorghes (2004) shows that motivation is the most important prognostic factor in training transfer, relative to other factors. Axtell et al. (1997) identify the factors that predict immediate training transfer, as well as over the long term, through a longitudinal approach. In this study, data were collected during three different terms: term 1 (immediately upon completing training), term 2 (one month after completing training), and term 3 (one year after completing training). Through a multiple regression analysis, this study found that trainee motivations are an important factor in the transfer of training over time, throughout the three terms.

Satisfaction with training, which is defined as 'a specific desire of the trainee to learn the content of the training program, and use the knowledge and skills mastered in the training program on the job' (Noe, 1986, p. 743), is deemed one of the factors with the greatest influence on motivation for training transfer (Gegenfurtner et al., 2009).

Additionally, as noted above, authors such as Kirkpatrick (1959, 1996, 2000) tend to evaluate training effectiveness on four levels: trainee reactions, learning, behavior, and results, and the reaction of the trainee is measured in terms of satisfaction. Thus, the following hypotheses are proposed:

H2a: From the company point of view, satisfaction with training has a positive effect on transfer of training.

H2b: From the employee point of view, satisfaction with training has a positive effect on transfer of training.

### 2.3. Work environment

Various authors (Alvarez, Salas, & Garofano, 2004; Baldwin & Ford, 1988; Holton, 2005; Holton, Bates, Seyler, & Carvalho, 1997; Tannenbaum & Yukl, 1992) have analyzed the variable of work environment in the study of transfer of training. These studies have considered two specific dimensions of the work environment: culture and the organizational climate of transference (Rouiller & Goldstein, 1993; Tracey, Tannenbaum, & Kavanagh, 1995; Velada et al., 2007). Two transference climate indicators are identified:

mutual support among workers, and the supervisor's support for transference (Holton, Bates, & Ruona, 2000; Seyler, Holton, Bates, Burnett, & Carvalho, 1998).

Supervisor support can be defined as the extent to which supervisors reinforce the use of knowledge and skills learned in training in the workplace (Holton et al., 2000). In this regard, the workplace itself has been noted as an influential element in either preventing or improving transference (Rouiller & Goldstein, 1993), and managers and supervisors especially can play a crucial role in the success of training transfer (Nijman et al., 2006). In most cases, the supervisor affects transference results directly, by supporting the employee in the learning experience; or the supervisor is involved indirectly, motivating trainees to transfer training (Cromwell & Kolb, 2004). Thus, according to many prominent authors (Baldwin & Ford, 1988; Elangovan & Karakowsky, 1999), supervisor support is one of the most powerful tools in improving the transfer of training.

Several studies relate supervisor support to transfer of training, and a significant portion of the results reveals a positive relationship between the two. For example, Xiao (1996) performed a quantitative study of women working in production groups in electronics manufacturing companies, and found the extent of supervision to be the most important predictor of positive transference. Results of a quantitative study, by Lim and Johnson (2002), demonstrate that the most important factor in the work environment affecting training transfer is the communication between trainee and supervisor. Brinkerhoff and Montesino (1995) investigate training transfer in training programs on behavioral abilities, comparing trainees who received support and those who did not, and their findings show transference to be much higher for the group that received support. Seyler et al. (1998) conducted an empirical study of environmental factors of motivation affecting transfer of training. The environmental factors of motivation considered are: (1) opportunities for utilization of training; (2) peer support; (3) supervisor approval; and (4) supervisor support. The results of this study indicate that the support of supervisors is significantly correlated to transference motivation, although it is not as highly correlated to the opportunity to use peer support, and sanctions from the supervisor have a negative influence on transference.

These results, as well as the direct positive effects described in prior research (Cromwell & Kolb, 2004; Gumuseli & Ergin, 2002), have led to a broad agreement as to the positive effects of supervisor support on the transfer of training. Based on these findings, the following hypotheses are proposed:

H3a: From the company perspective, supervisor support has a positive effect on transfer of training.

H3b: From the employee perspective, supervisor support has a positive effect on transfer of training.

### 3. The Rioja wine sector in Spain

The theoretical framework, along with the proposed initial hypotheses, leads to an analysis of the processes of change and the basic characteristics of the Rioja wine sector in Spain, which, given its recent importance in the literature (see, e.g. García-Alcaraz et al., 2015; Gil et al., 2015), will provide a relevant context for the next group of hypotheses.

In recent years, Rioja wineries have been involved in a process of transformation. Two circumstances attest to the importance of transfer of training processes in this sector:



investment in training, and the processes of change that companies in the sector have undergone in recent years. It has been determined that Rioja companies have conducted a great number of training courses, especially regarding prevention of occupational risk, food handling, and viniculture. Concerning processes of change, the majority of these enterprises have invested in technology, created new types of products (different varieties of wine), entered new markets, and, to a lesser extent, built new wineries (or improved existing ones) and changed their wineries' commercial names (Gil & Lázaro, 2012). It is important to note the significance of the wine sector in the region, given that it involves a very high percentage of the region's wealth (Barco, 2013).

Regarding the unique characteristics of the Rioja wine sector, there are two situations that distinguish the Rioja wine sector from others in Spain. First, the Rioja is a QDO. This designation corresponds to the highest level of wine sector regulation, entailing a number of requirements, such as the principle of an exclusive winery. This means that the winery's facilities must deal exclusively with raw material (grapes) and finished product (wine) from the QDO (Ruiz & Riaño, 2012). Furthermore, wine production is divided into three different wine areas in the QDO region: Rioja Alta, Rioja Baja, and Rioja Alavesa, which correspond to certain characteristics of the wine, as well as to different cultural insights and policy initiatives, which can influence the development of training (Holden, Nabi, Gold, & Robertson, 2006). These three areas are located in three separate regions of Spain: the autonomous community of La Rioja, including areas of Rioja Alta and Rioja Baja; the autonomous community of Navarra, which is included in the Rioja Baja region; and the province of Alava, which is included in the Rioja Alavesa region.

The second distinguishing factor is the economic and social importance of cooperatives in the region, especially those in the agricultural sector. Cooperatives are entities constituted by individuals who become members (or terminate their membership voluntarily). An extensive literature has analyzed the differences between the effectiveness of cooperative and capitalist companies (Salazar & Galve, 2008). In this regard, the operational inefficiency of property rights is identified as a problem, that is to say, the problem of communal property (Cook, 1995). However, the advantages of cooperative enterprises must also be considered, such as savings on transaction costs (Sykuta & Cook, 2011). In the literature there are works in which aspects are compared to the management of large firms and cooperatives. For example, in Boyatzis and Ratti (2009), managers of cooperative industries have more executive competence, *qua* a manager, than their peers in other companies. Other studies have analyzed the specific characteristics of training for cooperatives against non-cooperative enterprises. For example, in the study by Özdemir (2005) about the cooperatives in Turkey, the author emphasized the need to train members of the cooperative to improve the loyalty of members to the cooperative.

Generally, the literature defines company size as an organizational resource, such as financial resources or workforce (Leal-Rodríguez, Eldridge, Roldán, Real-Millán, & Ortega-Gutiérrez, 2015). It has been noted that large companies have a greater ability to invest resources in organizational development (Lee & Xia, 2006). The empirical study by Black, Noel, and Wang (1999) examines the relationship between different training measures and company size for a sample of US companies and found that large firms invest more in training. In the case of Spain, small firms face greater obstacles in access to training and the main reasons are related to their technological activity and to the geographical market in which they operate (Castany, 2010). Additionally, small businesses often have



less access to training schemes, which do not reflect the specific needs of employers (Rigby, 2004).

For the reasons expressed in the previous section, and in line with authors such as Saks and Belcourt (2006), the organizational context is considered to influence the transfer of training. In the context of the wine sector, the winery's location and ownership are among the unique characteristics of the sector, along with other variables, constituting a basis for analysis of training and learning, such as company size, for example (Khadra & Rawabdeh, 2006). Thus, the following hypotheses are proposed:

H4a: According to the company, transfer of training correlates with the specific geographic location of the winery.

H4b: According to the employee, transfer of training correlates with the specific geographic location of the winery.

H5a: From the company perspective, transfer of training correlates with the winery ownership.

H5b: From the employee perspective, transfer of training correlates with the winery ownership.

H6a: From the company point of view, transfer of training correlates with the size of the winery.

H6b: From the employee point of view, transfer of training correlates with the size of the winery.

## 4. Methodology

### 4.1. Sample

The sample population of this study comprises companies in the Rioja wine industry, specifically those belonging to the QDO Rioja, with six or more employees. According to the Instituto Nacional de Estadística (*Spanish National Institute of Statistics*) (INE, 2008), there are 179 companies in the QDO Rioja with 6 or more employees, of which 74 (41.34%) have between 6 and 9 employees; 89 (49.72%) have from 10 to 49 employees; and 16 (8.94%) have 50 or more employees (see [Appendix](#) for the Questionnaire).

The sample is statistically representative of the overall population of companies, and two kinds of information were collected: the first being the responses of managers, and the second comprising the responses of employees, both from the same companies. The specific characteristics of the companies and the employees in the sample are detailed below.

The sample consists of a total of 58 wineries belonging to the QDO Rioja, representing 32.40% of the total, and is similar in size to that of other studies conducted in Rioja (Sáinz, 2001; Salazar, 2009). The sampling error is  $\pm 9.1$  with a confidence level of 95%.

The sample of employees consists of 230 individuals from 58 different companies. According to the data provided by the Chamber of Commerce of La Rioja (2008), 1900 employees work within the Designation of Origin, with a confidence level of 95.5%, and a sampling error of  $\pm 6.18$ .

**Table 1** presents the characteristics of the sample of companies and employees. The total number of companies is 58, and in terms of size, 36.2% (21 wineries) have 6–9 employees (designated small), 51.7% of companies (30 wineries) have from 10 to 49 employees (considered medium-sized), and 12.1% have more than 49 employees (considered large). Geographically, 46.6% of the wineries are located in Rioja Alta (27 wineries), 39.9% in Rioja Baja (23 wineries), and 13.8% in Rioja Alavesa (8 wineries). Concerning

**Table 1.** Characteristics of the sample of companies and employees.

	Companies		Employees	
	<i>N</i>	%	<i>N</i>	%
<i>Company size</i>				
6–9 employees	21	36.2	47	20.4
10–49 employees	30	51.7	140	60.9
+ 49 employees	7	12.1	43	18.7
<i>Company wine zone</i>				
Rioja Alta	27	46.6	156	67.8
Rioja Baja	23	39.6	47	20.4
Rioja Alavesa	8	13.8	27	11.8
<i>Company ownership</i>				
Capitalist companies	48	82.7	211	91.7
Cooperative companies	10	12.3	19	8.3
<i>N</i>	58	230		

company ownership, as in other research specific to the wine sector (Salazar, 2009), a distinction is made between capitalist wineries (non-cooperative) and cooperative wineries, and the sample breaks down into 82.7% capitalist enterprises (48 wineries) and 12.3% cooperative (10 wineries).

Table 1 also indicates the distribution of the sample of employees. Regarding winery size, 20.43% of individuals (47 employees) work in small wineries, and 60.87% (140 employees) work at medium-sized companies. The largest percentage of employees in the Rioja wine sector work for medium-sized companies, while 18.70% are employed by larger companies. Regionally, 67.8% of employees work in Rioja Alta (156 individuals), 20.4% in Rioja Baja (47 individuals), and 11.8% in Rioja Alavesa (27 individuals). Most of the employees in the sample (91.7%, or 211) work for capitalist companies, while 8.3% (19 individuals) are employed by cooperative enterprises.

#### 4.2. Procedures

A self-administered survey was utilized, which is a traditional method when the population object of study is divided into groups, or grouped contexts (Alvira, 2003), as in this case. Two questionnaires, designed as part of a broader investigation, were developed, wherein various aspects related to transfer of training were collected. The subject of the first questionnaire was the company; thus, the most qualified manager, in terms of learning and training, completed the survey. The second questionnaire was designed for individual employees and was completed by the winery employees.

Data collection was conducted randomly with two stratification criteria: company size (according to the number of employees) and geographical location in terms of its wine production region within the QDO Rioja (Rioja Alta, Rioja Baja and Rioja Alavesa). In order to collect data, the initial contact with the randomly selected wineries was established personally or by telephone, to introduce them to the characteristics and objectives of this research. During this initial meeting, the aim was to ensure, as much as possible, that the companies would complete the questionnaires. This contact succeeded in motivating the majority of the selected companies to cooperate and agree to the investigation. Only four companies failed to complete the survey (1 small, 2 medium, and 1 large). Given the overall high response rate, further study of these companies was not considered

necessary, which would have permitted an investigation into any possible bias. These four companies were randomly replaced by other enterprises with the same characteristics. The final sample was collected throughout the year 2009.

4.3. Measurement

As indicated in the theoretical framework, transfer of training was considered a dependent variable (training effectiveness). And for independent variables, three factors of transfer-ence were analyzed (Baldwin & Ford, 1988), related to training, trainees, and organizational factors. Data were collected by means of the questionnaires designed for managers, and employees. In both cases, the Likert scale, from 1 to 5, was utilized (1 for completely dis-agree and 5 for completely agree with the item).

The dependent variable, transfer of training, was measured by means of an item that asked managers and employees if their performance at work, or in the activity addressed in the training, had improved upon completion of the training. And turning to the inde-pendent variable: (1) regarding factors related to training, managers were asked whether continuing training plans existed in their organizations, and employees were asked whether they had a plan for their training; (2) as for factors related to trainees, sat-isfaction was considered a form of motivation, so managers and employees were asked if they felt satisfied with the training; and (3) regarding factors related to organizational aspects, the focus was on the organizational climate, especially supervisor support for transfer of training. Managers and employees were asked whether their supervisors helped them apply their training on the job.

5. Empirical results

The hypotheses were tested by regression analysis, with the number of observations of companies (58 of a total of 179) and employees (230 of a total of 1900) being considered sufficient by the seminal and recent literature (Cohen & Cohen, 1983; Chen, Yan, & Li, 2015; Willaby, Costa, Burns, McCann, & Roberts, 2015).

In the model, transfer of training is a dependent variable, while the independent variables are: training design, satisfaction with training, and supervisor support. Table 2 summarizes the regression data gathered from companies through the managers’ responses to the question-naires, and Table 3 presents the regression results from the employees’ answers.

Table 2. Results of linear regression analysis according to companies.

Independent variables	Dependent variable	
	Step 1 $\beta$	Step 2 $\beta$
Training design	0.046	
Training satisfaction	0.324**	0.339**
Supervisor support	0.565***	0.580**
Constant	0.342	
$R^2$	0.642	0.640
$R^2$ corrected	0.622	0.627

Note: Dependent variable: Transfer of training  
\*\*Significant at .05.  
\*\*\*Significant at .01.

**Table 3.** Results of linear regression analysis according to employees.

Independent variables	Dependent variable $\beta$
Training design	0.191**
Training satisfaction	0.628**
Supervisor support	0.205**
Constant	−0.005
$R^2$	0.642
$R^2$ corrected	0.637

Note: Dependent variable: Transfer of training.

\*\*Significant at .05.

\*\*\*Significant at .01.

In step 1, the  $\beta$  coefficients of the independent variables satisfaction with training ( $\beta = 0.324$ ,  $p < .01$ ) and supervisor support ( $\beta = 0.565$ ,  $p < .01$ ) were determined to be significant. The training design variable result was not significant ( $\beta = 0.046$ ); therefore, it was removed from the model. Then, step 2 was taken, wherein the significance of the independent variable satisfaction with training was observed ( $\beta = 0.339$ ;  $p < .01$ ), as well as supervisor support ( $\beta = .580$ ,  $p < .01$ ).

In light of the results, the managers' answers do not confirm hypothesis H1a (design of training positively affects the transfer of training). However, hypothesis H2a (satisfaction with training positively affects the transfer of training) is confirmed. And, hypothesis H3b (supervisor support positively affects the transfer of training) is also confirmed.

In step 1, the  $\beta$  coefficients of the independent variables, training performance ( $\beta = 0.191$ ;  $p < .01$ ), satisfaction with training ( $\beta = 0.628$ ;  $p < .01$ ), and supervisor's support ( $\beta = 0.205$ ;  $p < .01$ ), were determined to be significant.

Given these findings, hypothesis H1b (design of training positively affects the transfer of training) is confirmed based on the employees' answers. Hypothesis H2b (satisfaction with training positively affects the transfer of training) can also be confirmed. And, hypothesis H3b (supervisor support positively affects the transfer of training) is also confirmed.

To complete the regression analysis, a disaggregated valuation of the transfer of training dimensions is performed, according to ownership, form, and the size of the winery, from the companies' (see Table 4) and the employees' (see Table 5) perspectives, with the caution that the interpretation must be performed particularly carefully in cases of low observations.

**Table 4.** Results of linear regression analysis in different organizational contexts according to companies.

	Ownership		Rioja wine zone			Size (number of employees)		
	Capitalist	Cooperative	Alta	Baja	Alavesa	Small	Medium	Large
Design	0.003	0.330	−0.079	0.128	0.300	0.082	−0.103	0.500
Satisfaction	0.323**	0.648	0.221	0.262	−0.175	0.223**	0.660**	0.500
Support	0.572***	0.522**	0.357	0.642**	1.075	0.574	0.363	0.500
Constant	0.471	−1.154	1.978	−0.274	−0.187	0.178	0.506	0.000
$R^2$ corrected	0.641	0.327	0.160	0.729	0.327	0.474	0.727	−0.441
Durbin-Watson	2.251	2.394	1.809	2.381	1.701	1.881	2.050	1.857
Test of Chow	2.8047942***		3.40089907***			2.9785299***		

Note: Dependent variable: Transfer of training.

\*\*Significant at .05.

\*\*\*Significant at 0.01.

**Table 5.** Results of linear regression analysis in different organizational contexts according to employees.

	Ownership		Rioja wine zone			Size (number of employees)		
	Capitalist	Cooperative	Alta	Baja	Alavesa	Small	Medium	Large
Design	0.185**	0.291	0.157	0.362**	0.307	0.139**	0.156	0.069
Satisfaction	0.619***	0.829***	0.615***	0.522***	0.766***	0.560***	0.596***	0.669***
Support	0.209***	0.111	0.242***	0.096	0.165	0.090	0.182***	0.330***
Constant	0.022	−0.528	0.004	0.186	−0.301	0.117	0.092	−0.325
R <sup>2</sup> corrected	0.626	0.808	0.591	0.711	0.765	0.657	0.639	0.585
Durbin-Watson	1.906	2.094	1.782	2.610	1.551	2.412	1.901	1.805
Test of Chow	1.0477288		1.7448578*			1.2694878		

Note: Dependent variable: Transfer of training.

\*\*Significant at .05.

\*\*\*Significant at .01.

In order to conduct this valuation, the Chow test (Chow, 1960) must be utilized. This allows the researcher to confirm whether differences between groups of workers, according to the type of company, reach sufficient levels. As suggested by Iglesias and Ruiz (1998), the objective of this test is to confirm the existence of significant differences between the linear regression parameters (simple or multiple).

As indicated in Table 4, there are significant results across all variables analyzing different organizational contexts. Regarding the winery's ownership, it is observed that the independent variables explain the greater percentage of variance in capitalist wineries (0.641), compared to the variances perceived in cooperative wineries (0.327). Also, satisfaction and support are significant variables for capitalist wineries; while for cooperative wineries, only supervisor support is a significant variable. The variable of location is highly significant. In Rioja Baja, the independent variables explain a major variance (0.729), and it is the only region where the variable supervisor support is significant. In regard to size, we observe that the independent variables proposed for medium-sized wineries are more significant than for other wineries, the corrected  $R^2$  is greater and has significance in the supervisor support variable.

As illustrated in Table 5, unlike the study of managers' responses, the responses provided by employees display significant differences only in those variables reflecting the different contexts of the wineries, with the exception of the variable location which has a low level of significance. Moreover, considering the variables of transfer, broadly speaking, the most significant variable in transfer is training satisfaction. The existence of a training plan is significant for employees and capitalist companies from the Rioja Baja region, and for small enterprises. The supervisor support variable is significant for capitalist companies in Rioja Alta, and for medium and large companies.

## 6. Conclusions and suggestions for future research

In this paper, the determinants of training transfer in the wine industry are studied, from the perspectives of both managers and employees. A number of conceptual hypotheses are formulated, and tested by regression analysis using data from one consolidated industry (Rioja, Spain).

Hypothesis H1a is not confirmed, despite the fact that the literature argues for the importance of design in the process of training (Gómez-Mejía, Balkin, & Robert, 2001)

and, particularly, in the transfer of training (Axtell et al., 1997; Kontoghiorghe, 2002; Rouiller & Goldstein, 1993). It is understandable that managers' responses are more focused on those aspects related to training management, rather than its planning, as is the case with supervisor support of training transfer. H2a is confirmed. Indeed, satisfaction affects the transfer of the training process, as the literature already affirms (Aziz & Ahmad, 2011). H3a, the most significant variable, is also confirmed, attesting to the important role environment plays in the transfer of training. The existing literature notes the significance of climate in training transfer (Rouiller & Goldstein, 1993) and, more specifically, highlights the influence of supervisor support on activities performed before training, and in tasks conducted after training (Cromwell & Kolb, 2004; Kraiger, McLinden, & Casper, 2004).

The responses of employees in the Rioja wine sector are also examined. Unlike managers' responses, employees' responses confirm hypothesis H1b, that planning of training affects the transfer of training. For workers, the action of planning and performing training does affect transfer. However, for employees, satisfaction with training is especially significant in the process of transfer, as H2b predicted. The confirmation of H2b indicates that motivation is the most important factor for individuals in the transfer of training (Kontoghiorghe, 2004), and, as the literature confirms (Lehtinen, 2008), satisfaction with training is one of the most important factors in motivation. Moreover, evaluation models of training (e.g. Kirkpatrick, 1996, 2000) deem satisfaction to be a key factor in the evaluation of training processes. As in the managers' responses, employees also point to supervisor support as an element affecting transfer, as predicted by hypothesis H3b. These results, which highlight the importance of climate in transfer, also concur with theoretical approaches (Baldwin & Ford, 1988; Elangovan & Karakowsky, 1999) and with other prior empirical studies (e.g. Seyler et al., 1998).

The second group of hypotheses was designed to analyze the existence of significant differences between organizational contexts within the sector, and to determine whether different qualities or values of training depend on contexts, which could be a reflection of different cultural attitudes toward training (Subedi, 2006) or, in general, toward learning (Dymock & McCarthy, 2006). The results reveal that, according to managers, significant differences exist among all variables examining the three organizational contexts proposed (winery region, ownership, and size). However, according to employees, significant differences are barely noted in these contexts. The results appear to support the idea that differences in transfer of training do exist among QDO wineries. However, the differences are not so much attributable to cultural aspects, but rather to different organizational approaches, or to the wineries' management.

This study offers evidence for research and business management, with one of the main contributions being the comparison between the responses of managers and employees in the wine sector. This comparative approach reveals that managers' perspectives on the transfer of training, which are focused more on aspects of strategy, in terms of intangible resources such as climate of transfer, differ from those of the employees, who prioritize motivational aspects, such as satisfaction. Another important conclusion is that cultural differences appear not to affect transfer, despite significant differences among distinct contexts. Management focuses more on organizational aspects, while employees are more focused on motivational issues. Thus, in terms of business management, organizations ought to strive to make training an authentic learning experience, by, first, creating

the environmental conditions for transfer and, second, evaluating those aspects of training related to trainee satisfaction.

The study has certain limitations. First, the research was conducted in just one sector, which, while allowing for a more in-depth analysis of context (Céspedes, Pérez, & Valle, 2005), can also limit its external validity. Second, the variables were measured by just one item, which, although it is quite characteristic, does not encompass all the nuances of the transfer process. Rather, it addresses specific aspects such as climate of transfer, referring to the support that supervisors give to transfer, either before or after training. The primary objective here was to compare the perspectives of managers and employees, rather than analyze various aspects of the transfer of training.

As for the possibilities for future research, the application of this methodology using data from the 'new' wine producers in the world is the first line of research. Another conceptual extension could be a more in-depth study of different organizational environments, in order to determine and analyze the existence of cultures of training, and how they affect the transfer of training. Any such contribution would enhance the study of learning in organizations and, more specifically, the organizations themselves (Ellinger, Ellinger, Yang, & Howton, 2002), given that they generate contexts that facilitate the transfer of training, and thus create learning (Gallego & Gil, 2012; Gil & Carrillo, 2014).

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## Appendix

### Questionnaire

#### Companies

*Training design:* There is in your company a continuing training plan.

*Training responses:* Your company is satisfied with the training received by its employees.

*Work environment:* The supervisors of the companies help to put into practice what the employees have learned in training courses.

*Training transfer:* Once employees conclude training activities, they perform their job better, according to what they have learned.

#### Employee

*Training design:* How often ... [never, seldom, sometimes, or often] ... do you take training courses related to your job?

*Training responses:* Are you ... [not, a little, somewhat, quite, or very] ... satisfied with the training courses taken?

*Work environment:* How often ... [never, sometimes, often, or very often] ... do you talk to your manager (or superior) about doing a better job?

*Training transfer:* The training courses received help you ... [not at all, a little, somewhat, or great deal] ... to do your job better?