ISSN 0829-0121
Dépôt légal - Bibliothèque nationale du Québec, 1999

BUSINESS STRATEGY, WORK PROCESSES AND HUMAN RESOURCE TRAINING: ARE THEY CONGRUENT?

par

Ramon Valle, Fernando Martín
Pedro M. Romero et Shimon L. Dolan

AVRIL 1999 **DOCUMENT 99-04**

Ramon Valle est professeur titulaire à l'University of Pablo de Olavide en Espagne, Fernando Martin et Pedro M. Romero sont professeurs à l'University of Cadiz en Espagne et Shimon L. Dolan est professeur titulaire à l'École de relations industrielles de l'Université de Montréal

Le texte produit dans ce document de recherche n'engage que la responsabilité des auteurs. La diffusion de ce document est rendue possible grâce à une subvention du Fonds de recherche de l'École de relations industrielles.

Adresse électronique: shimon.dolan@umontreal.ca
Télécopieur : (514) 343-5764

Summary

This study examines the extent to which HR training (content and context) is contingent on business strategy (i.e. classified according to Miles & Snow typology) as well as the characteristics of the work process. 65 Spanish organizations (i.e. 65 senior executives and 65 senior HR officers) participated in the study. Using primarily factorial and cluster analyses, support was found to the assertion that companies adopting a particular type of training strategy /policy have a high degree of internal consistency amongst the training objectives sought. In terms of work processes and training, results indicate that under work processes where the content of work provides for enrichment and for long-term results, companies tend to adopt training strategies where emphasis is on enhancement of individual specialized skills aimed at improving direct productivity. By contrast, firms who use work processes that are characterized by repetitive and routine tasks, de-emphasize this type of training content. Results also indicate that limited level of contingencies exist between training policies and business strategy especially when time dimension is also accounted for. While the theory suggests that organizations that has their HR training fit (contingent) on their business strategy are more effective, the empirical results portrayed in this study shows a more complex picture

Résumé

Cette étude empirique examine les liens entre les stratégies d'affaires (i.e. la typologie de Miles et Snow) et les politiques R.H. en formation de 65 entreprises espagnoles. Elle analyse aussi les relations des processus et des méthodes de travail avec leurs stratégies d'affaires.

Les résultats, proviennent des analyses factorielles (type cluster) et montrent que les entreprises qui se fixent une stratégie d'affaires particulière utilise aussi une stratégie de formation cohérente avec celle ci. Cependant, avec le temps, cette cohérence change et ne reste pas stable. Même si la théorie nous propose une concordance entre les politiques des ressources humaines (en formation entre autres) et la stratégie des
affaires des entreprises, les résultats empiriques de cette étude montrent une portrait beaucoup plus complexe.

INTRODUCTION

Training is considered one of the most significant processes in the Human Resources Management function in organizations. It plays a critical role in maintaining and developing the capabilities of both individual employees and the organization as a whole; and in contributing to the vital process of organizational change as well.

In studying the process of training, there are basically two perspectives that can be adopted - internal or external (Dolan and Schuler, 1994). The first approach is centered on understanding how the various elements involved in the development of the training process (such as how much training, what type, for whom, when, and how) are determined and organized, in order to ensure that all the requirements for its efficient application are met. The second perspective deals with determining the orientation given to the training function within the company, in conjunction with its philosophy, and especially, with its strategic focus.

This study addresses this second issue. It has two objectives: firstly, to examine if the orientation of the parameters which characterize training strategies/policies allows us to talk about a unique or different models; and secondly, to examine if such models of training are related in a systematic manner to (1) the generic business strategies formulated by the organization, (2) the characteristics of the work process, (3) both. Alternatively, training strategies or models may develop sporadically and independently of these factors.

The literature identifies various theoretical frameworks that have been used in the analysis of training. For example: mechanistic, configurational, contingent, resources-based theory, human capital, etc. (Arthur, 1992, 1994; Bartel, 1994; Becker, 1976; Delaney and Huselid, 1996;Knoke and Kalleber, 1994; Macduffie, 1995; Mincer, 1974; Wright, McMahan and Williams; 1994; Wright, Smart and MacMahan, 1995; Yound, Snell, Dean and Lepak, 1996). This leads to a selection of what we propose to be the most appropriate. Subsequently, we propose a series of hypotheses concerning the relationships between training, the business strategies of organizations, and the work processes. These derived hypotheses are then tested against the results of an empirical study conducted in Spanish companies.

For the empirical part of the study, our sample is comprised of 65 Spanish companies in the industrial sector. Two separate questionnaires were sent to each company ; one addressed to the senior management and the other to the Human Resources senior officer. The objective of the first questionnaire was to identify the type of business strategy dominated by the company in reference to the Miles and Snow's typology (1984). The second questionnaire dealt with the orientation of the training process in the company and the features which characterized it.

BACKGROUND AND HYPOTHESES

A brief historical review of the literature suggests that many changes have taken place in the corporate orientation and strategy followed by corresponding changes in the training provided by the firms to their employees. For example, in the era of craft-based enterprises, apprentices gradually acquired the knowledge and skills necessary for the full development of the production process, little by little, usually by working alongside their master, the skilled craftsman. When the age of manufacturing arrived, the workers, although gathered together in larger units (i.e. factories), still were "masters" of the production process since they possessed the expertise and skills to handle the machinery that they now no longer owned. It is with the application of Adam Smith's "division of labor" that the fragmentation and separation of activities began to lead to a continuing disqualification of the worker and increasing task specialization. This process of fragmentation of expertise became one of the basic features underlying the classic theory of organization known as Taylorism and later as Fordism. The universalist approach, exemplified in its origins by Taylorism, calls for and seeks the "one best and only way "of orienting the training of personnel. It is characterized by its short-term nature, the transmission of skills that can be immediately applied to measured work tasks, highly fragmented and shallow knowledge content.

There are currently a wide range of approaches under which we can analyze the practices of human resources management (HRM), and in particular the training function. Jackson and Schuler (1995), in their state of the art summary of the various models and theories used by researchers studying human resource management, stresses the interdisciplinary nature of such research. They conclude, for example, that numerous perspectives are of sociological nature (institutional theory), others are of economic nature (human capital, transactional costs), management (Agency theory or resource-based theory) or psychological (role behavior perspective). Within a universalist approach, there are those who continue to claim that there exist some HR practices that are better than others. Russell et al. (1985) and Terpstra and Rozell (1993) point a significant relationships between, on the one hand, selection and training, and on the other, productivity or performance. Bartel (1994) and Knoke and Kalleberg (1994) find that organizations which apply training programs obtain increases in productivity and in organizational results. Delaney and Huselid (1996) find support for the hypothesis that those HR practices that improve the general skills of employees, their motivation and the structure of work are positively related to the performance of the organization.

Within the configurational approach, other authors consider that HR practices should be considered as systems, and those systems that adopt certain orientations produce synergies and lead to better results (Arthur, 1992, 1994; MacDuffie, 1995; Huselid, 1995; Pfeffer, 1994;). In these cases, references to training are made in terms of: formal training, extensive skills training, skill development, cross training, training "hours", and the training of either new employees or existing/experienced employees. However, the configurational approach lacks systematic support in demonstrating which orientations are established as the best. It is also evident that the classifications applied to the process of training are too generic and insufficiently explicative. Nonetheless, in an attempt to move from the generic to the specific, it is possible to identify two opposing training models for which companies may adhere; these are reflected in the following set of hypotheses :

Hypothesis 1 (generic) : A firm will select a training model which mirrors a host of specific variables represented by high level of internal consistency amongst them.

And, more specifically,

H 1.1 The mechanic model of training is characterized by emphasis on specialization, individual training, planning and search for direct performance improvements

H 1.2 The organic model of training is characterized by emphasis on multi-skills, group-work and satisfaction of long term needs

Another approach dealing with the influence of training on the performance of the organization is the theory of Human Capital. From this viewpoint, training represents investment in human capital that can be justified according to the returns that are generated in terms of increased productivity. However, the perspective adopted not only refers to training applied within the company but also to that acquired outside, and its effects on remuneration, career development, accumulated experience, management capability, etc., (Becker, 1964, 1976; Mincer, 1974; Murphy and Welch, 1990, 1993; Odiorne, 1984; Psacharapoulos, 1985; Rosen, 1982).

The theory based on resources, the strategic framework of the 1990's (Collins and Montgomery, 1995, Jackson and Schuler, 1995), provides another interesting theoretical scheme, with human resources being considered as a significant factor of sustained competitive advantage for the company. This is based on an understanding that the organization possesses capabilities and skills, in the form of the qualities of its individual employees that are superior to those of its competitors, which in turn being the factor accountable for its advantageous positioning in the market (Barney, 1986, 1991, 1995; Reich, 1991; Wright, McMahan and McWilliams, 1994; Ulrich and Lake, 1990). In this context, the value contributed by HRM and by training in particular, can be considered fundamental, since it strengthens the development of the company's human resources into a valuable and unique resource that can be neither copied nor substituted (Becker and Gerhart, 1996; Lado and Wilson, 1994; Hamel and Prahalad, 1994; Wright and McMahan, 1992; Wright, McMahan and McWilliams, 1994).

Of all the approaches indicated, perhaps the one that has deserved the most attention and has been most researched is the contingent approach. This involves establishing a dependency relationship between the orientations that should be adopted in HRM practices, and some other factor of their context, mainly with the business strategy of the company (Dolan and Schuler, 1994).

In such contingent analysis and in the relationship between strategy and HRM practices, one of the primary difficulties found is the diversity of typologies of strategies used in the literature. This, therefore, limits the ability to make comparisons between the results reported in different papers. From this perspective, studies have been conducted linking the organizational or production strategy of companies with variables of their HRM practices. For example, the remuneration variable (Balkin and Gomez-Mejia, 1990; Gomez-Mejia and Balkin, 1992); the career system (Sonnenfeld and Peirel, 1988) or a combination of such variables (Baird and Meshoulam, 1988; Miles and Snow, 1984; Schuler, 1987; Schuler and Jackson, 1987a and b; Wright, Smart and McMahan, 1995; Youndt, Snell, Dean and Lepak, 1996). Jackson et al (1989), Peck (1994) and Milkovich et al (1991) proposed that the long term orientation is necessary prior to innovation strategies.

The following represent the most important propositions that can be deduced from studies using the contingent approach:

a) **jobs that are repetitive and restrictive in their definition are typical of "cost" and "extract profit" strategies; while loose or open job descriptions are found with dynamic growth and company turnaround/recovery strategies.**

b) **highly specialized training, orientated towards short-term pay-off, is congruent with dynamic growth and cost strategies; while training orientated towards developing multiple skills is typical of strategies of innovation or of quality.**

c) **the use of training as a means of attempting to provide skills and expertise needed in the future, occurs under an innovation strategy.**

d) **the emphasis is on training the individual, under the strategy of "extract profit"; whereas under turnaround/recovery and innovation strategies, the emphasis is on training for better group cooperation and results.**

Osterman (1994), basing his analysis on production plants and "core" jobs related the work processes to several variables, including certain HRM practices, found that flexibility in the work process required extensive training. Snell and Dean (1992) found positive correlation between training (ie. wide, multi-skill training) and the use of advanced manufacturing technology.

Whereas some explain differences in HRM practices through an overriding contextual variable like strategy, there are others who point out the multiplicity of factors involved. This includes pointing both to external factors such as cultural aspects, legislation, the national economy, the structure of the industry sector, etc., as well as to internal factors such as the size of the organization, its history and traditions, organization structure, technology used, etc. Within such multiplicity, the impact of the strategy formulated or followed by the company obviously carries less weight (Jackson, Schuler and Rivero, 1989; Kane and Palmer, 1995).

There are also those who advocate mixed positioning, proposing approaches that combine more than one perspective: configurational and contingent. For example, Macduffie (1995) speaks of different "organizational logic" depending on the system of production used. This author strengthens the idea that for each type of system, there exist differentiated HRM practices that show inter-relationships and internal consistency, resulting in higher levels of productivity. Arthur (1992, 1994) sees the difference between strategies of cost and innovation reflected in the differences between mass

and flexible manufacturing. For each alternative strategy and system, he identifies corresponding systems of industrial relations. Thus, for flexible systems it is considered necessary for employees to have or be trained in multiple skills, enabling them to carry out the widely-different tasks which a wide variety of contingencies may call for; job standardization is difficult under such systems.

The theoretical frameworks referred to above should not necessarily be considered mutually exclusive. Rather, they can be complementary. For example, the configurational and contingent focus together. In most studies referred to above, the training process is taken either as a single variable or forming part of an HRM system. In this study, we have adopted a mixed focus, since our approach to the subject is from both the configurational and contingent perspectives.

In sum, the literature suggests that there are distinct strategic orientations bearing on an organization's policy towards training, and that it should be coherent with the business strategy, and conditioned by the nature of the work process. This leads us to formulate the following additional hypotheses:

Hypothesis 2 (Generic) : The strategic orientation of training is related to the characteristics of the work process

H. 2.1 Companies with routine work processes will tend to adopt a mechanistic model of training.

H. 2.2 Companies with an enriched (i.e. non-routine) work processes, will tend to adopt organic model of training

Hypothesis 3 (generic): the strategic orientation of training is related to the business strategy formulated by the organization

H. 3.1 Companies with defenders business strategy will tend to adopt a mechanical model of training

H. 3.2 Companies with prospector business strategy will tend to adopt an organic model of training

H. 3.3 Companies with an analyzer business strategy will tend to adopt a mixed model of training (mechanistic-organic)

METHODS AND PROCEDURES

The sample

For the purposes of our study, the total population is made up of the 500 leading Spanish industrial companies, with more than 500 employees. These companies were identified from a data base containing 15,000 active Spanish companies. Two postal questionnaires were sent to each company, one addressed to the top management, the other to the executive responsible for HRM. The present research is based on data obtained from the first 65 companies who return the questionnaires. Two follow up attempts via telephone interviews to boost response rate and also to find out the reasons for non compliance of the " non responding" firms, failed to increase significantly the response rate. This is very typical to Spanish environment where collaboration between Industry and university research is problematic. The only firms (i.e. beyond the first 65) who were more cooperative, were those often solicited by other researchers and thus may have constituted an "exhaustive sample". Consequently, a decision was made to drop these firms as doubts were raised about the reliability of the information which may be provided. By contrast, it is important to affirm that the follow-up telephone interviews with representatives of all the firms sollicited, provided sufficient information to conclude that the "non respondents" firms do not constitute a special case or possess particular characteristics which may bias the results reported herein.

Measures

Each questionnaire was structured into various sections. The one addressed to top management was divided into 7 sections. One section identified the business strategy, using the

typology of Miles and Snow and the descriptions and scales proposed by Peck (1994). The other sections were designed to provide information of a general character on the senior management team, the organizational structure, the environment of the organization, the management information systems, and the financial position of the company.

The questionnaire aimed at the HRM practices was divided into 8 sections, containing a total of 50 questions. Those questions corresponding to the evaluation of training and the work process comprised sections IV and VIII, and are detailed in Charts 1 and 2. Companies were asked to rate each factor on a scale of 1 to 5.

Insert about here:

Chart 1: Strategic orientation of training

Chart 2: Description of the work process and jobs

RESULTS

The statistical treatment of the data obtained enables us to illustrate the following in the order of the hypotheses put forward: Firstly, the profile of the various orientations in training and choice of strategy followed by the companies comprising the sample; and secondly, after descriptive analysis of each of the contextual variables, we examined their relationships with training (i.e. the work process/jobs and strategy).

The strategic orientations in training

Results displayed in Table 1 suggest that training in the companies sampled appears initially to adopt an approximate equilibrium regarding the orientation adopted between specialized vs. multi-skill training and that aimed at improving individual vs. group work performance. However, by grouping companies which are positioned at the two extremes of the scales (those with 1 or 2,

compared with those with 4 or 5), it is observed that 42% of companies opt for multi-skill and 57,8% for group work in their training policy, as against 25% opting for specialization and 20% for individual work. This suggests a tendency for the majority of companies to adopt training policies oriented towards multi-skill and group work.

The values for the other components of training policy also indicate that companies tend to plan their training to satisfy future needs (72%) but at the same time, seek direct increases in productivity (78%). This positioning is reinforced by the percentages of companies adopting these orientations. Lastly, the data regarding the trade unions attitude to training should be noted. The value of the average score (1.6) reflects trade unions behavior of collaboration with the development of the training process; 52% of companies indicate that they receive the support of the trade unions, while 15% reporting finding hindrances or obstacles (Table 1).

Having established the profile of the companies regarding training, the next stage was to find possible correlation among the components defining their strategic orientation, in such a way as to be able to detect whether there exists an internal fit in the models. Results indicate the absence of significant correlation between business strategy and training strategy. Nonetheless, the specialization vs. multi-skills has been found to correlate with individual vs. group work (0.588, p=0,01) , and planning towards the future is correlated with companies who seek to improve their productivity (0.308, p=0.05, see also Appendix 1).

Insert Table 1 about here

(Orientation of Training: Average, Std Deviation and Percentages)

In order to identify the possible training strategies/policies followed by the companies, first a factorial analysis and then a cluster analysis were carried out. The factorial analysis revealed that there were two factors explaining 73,9% of the behavior of training in the sampled companies. The first factor, Ft1, is formed by the two variables relating to specialization vs multi-skills and individual vs group work, in the orientation of training policy. The second factor, Ft2, refers to the degree of planning, orientation towards future needs, and emphasis on direct productivity improvements.

Considering the components of each factor, it would seem that Ft1 comprises information relating to the content of the training, while Ft2 combines concepts relating to the context and the results expected from the training (Table 2).

Insert Table 2 about here

(Sorted Rotated Factor Loadings (Pattern))

In order to identify the presence of a cluster of firms who adhere to distinct training policies, a cluster analysis was carried out. Using standardized variables and the previously detected training factors *(Ft1 and Ft2)* two clusters emerged (N=20 firms and N=44, see Table 3). Cluster 1 regroups firms which can be characterized as emphasizing training content on one hand (Ft1) and promotes specialization and individual work (Mean=2.27, Sd.=0.7518) and also planning for future needs and seeking direct improvement in productivity (Mean=1.52, Sd =0.5250*)*. Cluster 2, on the other hand, shows a different and distinct pattern. It is more oriented towards multi-skill and team work (Mean=3.82, Sd.=0.6815), emphasizes contextual training orientation (Ft2) and is less concerned with planning for the future nor for seeking immediate improvement in productivity (Mean=2.14, Sd.=0.7669).

Insert Table 3 about here

(Average Values of the Variables of Training)

Thus, the results suggest that in terms of internal consistency of the training, one can speak of two underlying factors, each of which is related to the organic or mechanistic models respectively. The first factor, labeled training content, emphasizes the continuum of specialization vs. multi-skilled labor force, and individual vs. work group. The second factor, labeled training context, emphasizes planning vs. non planning continuum, and oriented or not towards direct improvement of productivity. The ensuing series of analyses, will use both factors in reference to the training models.

Thus, results support the first hypothesis, to the extent that there seem to be distinct training strategies amongst Spanish firms even-though the internal consistency was better depicted in terms of 2 distinct factors, rather than the initially proposed 4 variables.

Work processes and training orientation

A descriptive analysis of the various work process variables is presented in Table 4. All in all, the companies sampled display a high level of concern for both the quality and quantity of work. It is also notable that jobs are mainly oriented towards short-term results (65%) and towards work requiring cooperation and the application of a variety of skills by the employee, reported by more than half of the companies.

Insert Table 4 about here

(Process of Work)

Given the level of multi-colinearity found amongst some of the work process variables, a factorial analysis was performed. Of the eight original variables used, three factors emerged. The first factor, Fw1, was formed by the variables of degree of risk in decisions, the variety of different skills required by the employee and the repetitive nature of the work. The second, Fw2, was defined by the importance of quantitative and quality work results and the short-term/long-term orientation in expected results. Finally, the third, Fw3, represents the functional flexibility and the degree of interdependence between employees. Given the content of these factors, they were labeled as following: Factor 1, Work Content; Factor 2, Expected Work Outcomes ; and, Factor 3, Work Organization (Table 5).

Insert Table 5 about here

(Sorted Rotated Factor Loadings (Pattern))

In order to examine the underlying structure between the work process factors and the training strategy/policy factors a standardized cluster analysis was again performed (Table 6). In comparing the two clusters an interesting observation could be made. The values for the training orientation in cluster 2 companies (N=42) are relatively higher than those in Cluster 1 (N=21). That suggests that under work processes where the content of work provides for enrichment and for long-term results, training tends to be more specialized, individually-focused and has an objective to

improve direct productivity. By contrast, when work is less enriched (i.e. repetitive, no risk, lacks variety), training tends to be focused on multi-skills developments, group work and seeks to improve direct productivity to lesser extent.

Insert Table 6 about here
(Average Values and Standard deviation of the factors of the Work Process and Training)

Business strategy and training orientation

The classification of the business strategy followed by the companies sampled was done in reference to three time frames: past, present and future, giving a dynamic dimension to the data. The values of the average weightings indicate a certain movement along the continuum described by the typology of Miles and Snow. Thus the average value reported for the companies is progressively lower, ranging from 3.98 to 3.14 and to 2.72, corresponding respectively to the past, present and future strategies. In other words, there is a certain trend, or evolution, moving the companies from analyzer strategies towards prospector strategies. Another significant aspect of this evolution is that, in respect to the type of strategy followed in the past, 23.8% of companies described their strategy as defensive. However, this proportion falls to 14.5% for the present and to 11.3% for the future. It is equally noteworthy that for the future, some 53% of companies report the intention to pursue prospector strategies (Table 7).

Insert Table 7 about here
(Strategies Variables: Average, St. Deviation and Percentage)

In order to test the relationships between business strategy and the training factors, an analysis of variance was performed. Results are displayed in Table 8. Results show that only the training context factor (Ft2) is related to present and future business strategy.

Insert Table 8 about here

(ANOVA of Business strategy and Training)

One possible conclusion that might be drawn based on the results of Table 8, is that training strategies do not relate to past business strategies, but rather seem to be more congruent with present and future business strategies. However, attention must be paid to the fact that only the components of training context emerged significant (i.e. planning for future needs; seeking direct improvement in productivity).

In order to understand better the dynamics of the training policies, a comparison of its reported values for each period and for each type of business strategy is presented in Table 9. Results point out the relative positioning of the training factors. Training content (Ft1) does not seem to be very dynamic as its relative position is always close to the average of the scale across times, and business strategy. By contrast, training context (Ft2) seem almost in all cases to reside within the lower values of the scale indicating a clear orientation. Additionally, how the prospective and analyzer firms utilizes with more vigor a planning of the training in order to meet future needs and improve their productivity can be observed. Thus, the results pertaining to the relationships between business strategy and training seem to only partially support our third hypothesis. Only one training factor of the two studied (i.e. training context) shows some fit to business strategy, and this fit seems to be problematic given the limited variance and the values reported in Table 9.

Insert Table 9 about here

(Average values for training factors by business strategy type(Miles & Snow) and time frame)

DISCUSSION AND CONCLUSIONS

This research reveals interesting tendencies characterizing training strategies/policies amongst Spanish companies. Nonetheless, a deeper examination of these trends with respect to the proposed relationships between training , work processes and business strategy, provides only partial

confirmation to the formal hypotheses listed above.

First, it is worthy to note that two orthogonal factors emerge to describe the underlying structure of the training itself. These were labeled training content and training context respectively. While originally thought that 4 variables represent an homogenous structure (i.e. internal consistency) in describing a training profile for each firm, the empirical results produced a more refined structure. It showed that internal consistency is better described in terms of 2 orthogonal factors, each of which contains 2 subsets of variables. Although these results are somehow different from the one proposed initially, by and large it confirms our hypotheses 1.1 and 1.2. In other words, the continuum of mechanistic or organic training models was reinforced by the empirical results reported here, where it was clearly indicated that companies who seek multi-skills labor forces also tend to stress group job performance; by the same token, firms who seek specialized skills coincide with the desire to increase individual performance (i.e. the essence of the training content factor *Ft1*). Furthermore, the second factor (Ft2) considers the continuum pertaining to the degree of improvisation (i.e. planning adopted), along with the objective sought in the training (i.e. either to meet future needs or to gain direct productivity improvements). These findings were not found empirically in previous research , and thus represent a significant contribution to the configurational approach to training strategy.

In terms of work processes and training, results indicate that under work processes where the content of work provides for enrichment, and for long-term results, companies tend to adopt training strategies where emphasis is on enhancement of individual specialized skills aimed at improving direct productivity. By contrast, firms who use work processes that are characterized by repetitive and routine tasks, de-emphasize this type of training content. These empirical findings are contrary to the tendencies suggested by the literature which was rendered operational in our hypotheses H2.1 and H2.2. These empirical results may be summarized as the following: first, that there are specific relationships between work processes and training models; second, that the nature of these relationships are contradictory to the hypothesized one. It is not easy to attribute a simple explanation to these findings. One may suggest that as strategic training contains an important dimension of future needs, it is entirely possible that once the firm had accomplished its short term objectives, it seek training of a complementary nature whereby emphasis is placed on work processes. For instance, once specialization has been achieved, a complementary multi skill is sought; or, once the short term results have been satisfied, a long term objectives are given priority.

Some support was found to the assertion that companies adopting a particular type of training strategy/policy adopt a specific line of generic business strategy. But, the nature and direction of these relations were not linked linearly to those hypothesized in H3.1, H3.2 and H3.3. The part that is coherent with the hypotheses, shows the existence of significant differences for business strategy as a function of the training context factor (i.e. ANOVA results, Table 8). Yet, but no differences were found for the training content factor. Additionally, where significant differences were found, they do not entirely correspond to the direction specified in our hypotheses. While training content factor does not discriminate business strategy at all, training context appears to suggest that defender firms are significantly different from both prospectors and analyzers. These findings were surprising, as it goes against the essence of the contingency approach. While the latter proposes that defenders will adopt a clear mechanistic model of training, the results show a more complex picture. Defenders, seem to adopt an undefined context training strategy, and both prospectors and analyzers adopts a more mechanistic training model. While explanation to these empirical results within a cross sectional context is difficult, perhaps an analysis using time perspective may shade more light . The time perspective analysis, shows a tendency for defender companies to move more and more in the future towards prospector strategy (Table 7), and thus may change the training orientation in the future. One way or another, all companies with either a prospector, analyzer or defender strategy, follow respectively, similar types of training context policies when a dynamic perspective is being used (the three time frames), and when the relative values on the scale is taken into account (table 9). The principal conclusion thus is that applying a pure contingency approach for explaining the relationships between business strategy and training policy as suggested by Miles and Snow (1984) and others is almost impossible. And furthermore, the contingency approach becomes much clearer and richer, once a dynamic perspective has been added

In sum, the findings provide additional understanding as to what Spanish companies are doing in their HR training, and to what extent training can really be viewed as strategic. Strategic, in the sense of training being contingent on business strategy and the characteristics of the work processes. While it may not be concluded from the results of this study that pre-existing formulas determine training policies (i.e. the essence of the contingency approach) in a linear fashion, there are, however, certain patterns that emerge which represent both a mix of these contingent considerations and configurational time dimensions as well as the unique characteristics and culture of these Spanish firms.

Finally, it should be pointed out that the restricted sample size as well as the manner in which it has been selected, represent a limitation for this study and impose constraints on the ability for comparison with other results reported in the literature. On the other hand, the attempt to clarify linkages between human resources training and business strategy reflects an important area for future HR research. We hope that this work will provide the impetuous for more research of similar nature to include also other HR practices such as career planning, staffing or compensation.

REFERENCES

Arthur, J.B. 1994. Effects of human resource systems on manufacturing performance and turnover. *Academy of Management Journal*, 37: 670-687.

Arthur, J.B. 1992. The linking between business strategy and industrial relations systems in American steel mini mills. *Industrial and Labor Relations Review*, 45: 488-506.

Baird, L. and Meshoulam, I. 1988. Managing two fits of strategic human resource management. *Academy of Management Review*, 13: 116-128.

Balkin, D. and Gomez-Mejia, L. 1990. Matching compensation and organizational strategies. *Strategic Management Journal.* 11: 153-169

Barney, J.B. 1986. Organizational culture: can it be a source of sustained competitive advantage?. *Academy of Management Review*, 11: 656-665.

Barney, J.B. 1991. Firm Sources and sustained competitive advantage. *Journal of Management*, 17: 99-120

Barney, J.B. 1995. Looking inside for competitive advantage. *Academy of Management Executive*, 9: 49-61.

Bartel, A.P. 1994. Productivity gains from the implementation of employee training programs. *Industrial Relations*, 33: 411-425.

Becker, G.S. 1964. *Human Capital.* New York: National Bureau of Economic Research.

Becker, G.S. 1976. *The economic approach to human behavior.* Chicago. University of Chicago Press.

Becker, B. and Gerhart, B. 1996. The impact of human resource management on organizational performance: progress and prospects. *Academy of Management Journal*, 39: 779-801.

Collis D.J. and Montgomery, C.A.1995. Competing on resources: strategy in the 1990s. *Harvard Business Review*, July-August: 118-128.

Delaney, J. T. And Huselid, M.A. 1996. The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal*, 39: 949-969.

Dolan, S. L. and Schuler, R.S. 1994. *Human Resource Management:The Canadian Dynamic.* ITP Nelson Canada.

Gomez-Mejia, L. and Balkin, D. 1992. *Compensations, organizational strategy and firm performance.* Cincinnati: South-Western.

Hamel, G. and Prahalad, C. 1994. *Competing for the future.* Boston, :A: Harvard Business School Press.

Huselid, M.A. 1995. The impact of human resource management practices on turnover, productivity and corporate financial performance. *Academy of Management Journal.* 38:635-672.

Jackson, S., Schuler, R. And Rivero, C. 1989. Organizational characteristics as predictors of personnel practices. *Personnel Psychology*, 42: 727-786.

Jackson, S., Schuler R.S., 1995. Understanding Human Resource Management in the Context of Organizations and Their environments. *Annual Review of Psychology.* 46: 237-64

Kane, B. and Palmer, I. 1995. Strategic human resource management or managing the employment relationship. *The International Journal of Human Resource Management*, 16: 6-21.

Knoke, D. and Kalleberg, A. 1994. Job training in U.S. organizations. *American Sociological Review*, 59: 537-546

Lado, A.A. and Wilson, M.C. 1994. Human resource systems and sustained competitive advantage: a competency-based perspective. *Academy of Management Review*, 19: 699-727.

Macduffie, J.P. 1995. Human resource bundles and manufacturing performance: organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review*, 48:197-221.

Miles, R. And Snow, C. 1984. Designing strategic human resource systems. *Organizational Dynamics,* 13: 36-52

Milkovich G., Gerhart B., Hannon J., 1991. The Effects of Research on Development Intensity on Managerial Compensation in Large Organizations. *Journal of High Technology Management Research. 2:133-50*

Mincer, J. 1974. *Schooling, Experience and Earnings.* New York. National Bureau of Economic Research.

Murphy, K. and Welch, F.1990. Empirical Age-earnings profiles. *Jurnal of Labor Economics.* 8 (2):202-229

Murphy, K. and Welch, F. 1993. Occupational change and the demand for skill 1940-1990. *American Economic Review.* 83: 122-126

Odiorne, G.S.1984. *Strategic Management of Human Resources.* Jossey-Bass Publishers.

Osternan, P. 1994. How common is workplace transformation and who adopts its?. *Industrial and Labor Relations Review*, 47: 173-188

Peck, S.R. 1994. Exploring the link between organizational strategy and the employment relationship: the role of human resources policies. *Journal of Management Studies*, 31: 715-736.

Pfeffer, J. 1994. *Competitive advantage through people.* Boston: Harvard Business School Press.

Psacharapilos, G.1985. Returns to education: a further update and implications. *Journal of Human Resources.* 20: 583-604.

Reich, R.B. 1991. *The work of Nations: preparing ourselves for 21st-century capitalism.* New-York: Knopf

Rosen, S. 1982. Authority, control and the distribution of earnings. *The Bell Journal of Economics.* Autumn. pp.311-323

Russell, J., Terborg, J. and Powers, M. 1985. Organizational productivity and organizational level training and support. *Personnel Psychology*, 38: 849-863

Schuler, R. 1987. Personnel and human resource management choice and organizational strategy. *Human Resource Planning*, 10: 1-17.

Schuler, R. And Jackson, S. 1987a. Organizational strategy and organizational level as determinants of human resource management practices. *Human Resource Planning*, 10: 125-141.

Schuler, R. And Jackson, S. 1978b. Linking competitive strategies with HRM practices. *The Academy of Management Executive*, 1: 207-219.

Snell, S.A. and Dean, J.W. 1992. Integrated manufacturing and human resource management: a human capital perspective. *Academy of Management Journal*, 33: 467-504.

Sonnenfeld, J.A. and Peirer, M.A. 1988. Staffing policy as a strategic response: a typology of career systems. *Academy of Management Review*, 11: 588-600.

Terpstra, D. and Rozell, E. 1993. The relationship of staffing practices to organizational level measures of performance. *Personnel Psychology*, 46: 27-48

Ulrich, D. and Lake, D. 1991. Organizational capability: creating competitive advantage. *Academy of Management Executive.* 5(1):77-92

Wright , P.M. and McMahan, G.C. 1992. Theoretical perspectives for strategic human resource management. *Journal of Management*, 18: 295-320.Wright, P.M., McMahan, G.C. and McWilliams, A. 1994. Human resources and sustained competitive advantage: a resource-based perspective. *The International Journal of Human Resource Management*, 5: 301-326.

Wright, P., Smart, D. And McMahan, G. 1995. Matches between human resources and strategy among NCAA baseball teams. *Academy of Management Journal*, 38: 1052-1074.

Youndt, M., Snell, S., Dean, J. and Lepak, D. 1996. Human resource management, manufacturing strategy, and firm performance. *Academy of Management Journal*, 39: 836-866.

Training	**- Seeking specialization vs. multi-skills** **- Oriented towards individual vs. group work.** **- Planned and oriented towards future needs vs. unplanned and oriented towards short-term.** **- Oriented towards the direct and immediate improvement of productivity vs. improved medium-term results and related to general performance** **- Trades union attitude of collaboration vs. obstruction**

Chart 2: Description of the work process and jobs

Work process:	**- Repetitive and predictable vs. creative and innovator** **- Centered on short-term vs. long-term results** **- Cooperation and interdependence vs. autonomy** **- Demanding quality standards vs. undemanding** **- Required to take decisions involving risk vs. no risk** **- Application of little expertise and skill vs. considerable expertise and skill needed**
Functional flexibility	**- Personnel work with considerable flexibility vs. little flexibility between tasks**

Table 1. Orientation of Training: Average, Std Deviation and Percentages

TRAINING	AVERAGE	ST. DEV	PERCENTAGES 1-2	3	4-5
Specialization vs. multi-skill	2.17	0.807	25	32.8	42.2
Individual vs. group work	2.37	0.806	20.3	21.9	57.8
Planned and oriented towards the future	1.35	0.626	71.9	20.3	7.8
Oriented towards the direct improvement of productivity	1.29	0.608	78.1	14.1	7.8
Trades union attitude of collaboration	1.63	0.742	51.7	32.8	15.5

Table 2: Sorted Rotated Factor Loadings (Pattern)

TRAINING	FACTOR 1 Ft1	FACTOR 2 Ft2
Multi-skill vs. specialization	0.87525	0.11003
Oriented towards individual vs. group work	0.88815	-0.06679
Planning and future needs	-0.17554	0.82544
Direct improvement in productivity	0.2288	0.78785
Explained variance	41.3	32.6

Table 3: Average Values of the Variables of Training

CLUSTER	Size	Ft1	Ft2
Cluster 1	20	2.2750 (0.7518)	1.5250 (0.5250)
Cluster 2	44	3.8295 (0.6815)	2.1477 (0.7669)
P-Value		0	0.003
F		69.0303	9.5871

Table 4: Process of Work

PROCESS OF WORK	MEAN	ST. DEV	% ACCUMULATED		
			1-2	3	4-5
Repetitive vs. creative	2.72	1	37.5	40.6	21.9
Short-term vs. long-term	2.23	0.83	67.2	25,0	7.8
Cooperation vs. autonomy	2.47	0.84	50.0	40.6	9.4
Quality	4.36	0.86	3.1	15.6	81.3
Quantity	4.06	0.77	3.1	17.2	79.7
Decisions with risk	3.11	0.99	23.4	43.8	32.8
Application of a variety of skills	3.52	1.01	17.2	29.7	53.1
Degree of functional flexibility	3	1.13	33.8	33.8	32.3

Table 5 : Sorted Rotated Factor Loadings (Pattern)

WORK PROCESS	FACTOR 1 Fw1	FACTOR 2 Fw2	FACTOR 3 Fw3
Application of a variety of skills	0.90059	0.15556	0.08015
Decisions with risk	0.88298	-0.01033	-0.07989
Repetitive vs. creative	0.63556	-0.48284	-0.22921
Short-term vs. long term	0.03556	0.81759	-0.09681
Quantuty	0.24474	0.6579	-0.34552
Quality	0.38736	-0.59747	-0.21346
Degree of functional flexibility	0.09181	0.01363	0.88626
Cooperation vs. autonomy	-0.1433	-0.1055	0.66522
Explained variance	29.9	22	15.9

Table 6: Average Values and Standard deviation of the factors of the Work Process and Training

	Cluster 1	Cluster 2	F	P-value
Size	21	42		
Ft1	2.85 (1.1526)	3.64 (0.7513	10.75	0.002
Ft2	1.42 (0.4551)	2.23 (0.7262)	14.47	0
Fw1	3.50 (0.8207	2.90 (0.7766)	20.72	0
Fw2	3.82 (0.3744)	3.41 (0.4873)	16.81	0
Fw3	2.97 (0.8871	2.60 (0.7614)	2.62	0.11

Table 7: Strategies Variables: Average, St. Deviation and Percentage

STRATEGIES	AVERAGE	ST. DEV.	PERCENTAGE			
			1-2	3-4-5	6-7	0
PAST	3.98	1.96	23.8	52.4	23.8	0
PRESENT	3.14	1.86	40.3	45.2	14.5	0
FUTURE	2.72	1.83	2	35.5	11.3	0

1-2 Prospector ; 3,4,5 Analyzer; 6-7 Defender

Table 8.: ANOVA of Business strategy and Training

	Training Content (Ft1)					Training Context (Ft2)				
	Sum Squares	Df	Mean Squares	F	Sign. of F	Sum. of Squares	Df	Mean Squares	F	Sign. of F
Past Business strategy	1,882	2	0,941	0,946	0,395	0,428	2	0,214	0,43	0,652
Present Business strategy	2,445	2	1,223	1,229	0,301	4,202	2	1,863	4,227	0,02
Future Business strategy	2,994	2	1,497	1,505	0,231	3,726	2	0,214	3,749	0,03

Table 9: Average values for training factors by business strategy type(Miles & Snow) and time frame

Training	Past Business strategy			Present Business strategy			Future Business strategy		
	P	A	D	P	A	D	P	A	D
Ft1	3.57	3.38	2.93	3.4	3.43	2.88	3.3	3.41	3.33
Ft2	1.87	1.89	2.29	1.84	1.91	2.56	1.98	1.77	2.58

P= Prospector; A=Analyser; D=Defender

ANNEXE I - Correlation Matrix

	F1	F2	F3	F4	T1	T2	T3	T4	T5	T6	T7	T8
F1	1											
F2	0.588**	1										
F3	-0.01	-0.129	1									
F4	0.185	0.107	0.308*	1								
T1	-0.147	-0.016	0.064	0.004	1							
T2	0.031	0.125	-0.097	-0.135	0.482**	1						
T3	-0.280*	-0.461**	-0.031	-0.033	-0.03	-0.024	1					
T4	-0.027	0.03	-0.149	-0.308*	-0.01	-0.097	-0.172	1				
T5	-0.031	-0.069	0.045	-0.297*	-0.264*	-0.270*	-0.021	0.442**	1			
T6	-0.047	-0.056	-0.206	-0.124	0.399**	0.199	-0.177	0.194	0.115	1		
T7	0.069	0.055	-0.143	-0.116	0.493**	0.251*	-0.197	0.149	-0.022	0.719**	1	
T8	0.112	-0.197	-0.18	-0.077	-0.181	-0.1	0.333**	-0.21	-0.126	0.126	-0.141	1

* Correlation is significant at the 0.05 level (2-tailed)

** Correlation is significant at the 0.01 level (2-tailed)

Training:

F1	**Specialization vs. Multi-skills**
F2	**Towars individual vs. Group work**
F3	**Planned and Future needs**
F4	**Direct Improvement in Productivity**

Process of Work:

T1	**Repetitive vs. Creative**	**T5**	**Quantity Importancia de la Cantidad**
T2	**Short Term vs. Long Term**	**T6**	**Decision with risk**
T3	**Cooperation vs. Autonomy**	**T7**	**Application of a variety of skills**
T4	**Quality**	**T8**	**Degree of functional flexibility**