Abstract

This study explores organizational change in different industrial environments in terms of how coordination mechanisms evolve with a focus on the role that incentive systems can play as a determinant of the subsequent organizational change process. The empirical setting consists of two large Spanish firms belonging to different industries. One of the firms belong to a highly technological-intensive sector in the economy (chemical and biotechnology) whereas the other one belongs to a more traditional and highly labor-intensive industry (textile). Our results show that the incorporation of networking elements in new forms of organization involves a more important role for incentive schemes linked to cultural, social, and psychological aspects that extend beyond the contractual approach. Likewise, our study reveals that during the processes of organizational change companies should introduce incentive schemes that allow for the co-existence of exploration and exploitation actions. In this sense, we suggest that in more traditional settings, companies should place greater importance on incentive systems aimed at upholding exploitation actions (what can be achieved through the performance-based system), whereas in more innovative environments greater significance should be attributed to incentive systems designed to favor exploration actions (what can be achieved through the hierarchy-based system).

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Introduction

Over the last three decades, the business world has undergone major changes in the face of technological transformation and growing globalization. Rising rates of instability and turmoil in environmental conditions have led most companies to adapt their strategies and organizational structures to respond to such changes. Specifically, new patterns of organizational behavior have emerged in recent years to successfully face up to the new competitive arena. A case in point is the appearance of new organizational forms in the organizational literature, such as the federal structure (Handy, 1992), the modular organizational form (Sanchez and Mahoney, 1996), the virtual organization (Ahuja and Carley, 1999), the cellular form (Miles et al., 1997) and one of the most popular forms adopted by great companies, the internal network, or N-form (Hedlund, 1994).

A significant body of this literature has been particularly focused on exploring the nature of the evolution of organizational forms and describing the essential internal characteristics of new organizational forms (such as, for example, the internal network form or N-form) and comparing them with more traditional forms. However, as suggested by some authors (Pettigrew and Fenton, 2000; Pettigrew et al., 2001), this field of research is still in its infancy and, therefore, remains underspecified and nebulous. In light of this, we believe that it is necessary to further knowledge of and provide new insights into the evolution of organizational forms with a focus on the distinctive features of new ones.

The main objective of this study is to provide preliminary empirical evidence of the specific way by which organizational forms can evolve from traditional forms to new ones in terms of two supplementary aspects coupled with human resources. On the one hand, our interest is in studying the evolution of coordination mechanisms from more traditional forms to more modern forms, up until the point where patterns that define these new organizational forms are detectable. On the other hand, we are also interested in exploring the potential influence of incentive systems on the organizational change process. We will base our study on the work of James March (1991) which describes how incentive systems have a bearing on organizational transformation processes. The examination of potential links existing between coordination mechanisms and incentive systems and changing organizational forms is, to the best of our knowledge, an important gap in prior literature that this research sets out to bridge.

The research setting chosen for exploring all these issues involves two large Spanish companies over an 11-year period, 1991-2001. During this period, both compa-
nies were domestically-owned firms and were amongst the country’s largest industrial companies. They have been clear examples of success in recent years after undergoing a process of continuous organizational transformation. Furthermore, both companies share a similar institutional context, although they do not share the same technological or industrial environment: one of the firms (the Zeltia group) belongs to a highly technological-intensive sector (chemical and biotechnology) in the new economy, whereas the other one (the Cortefiel group) belongs to a traditional, highly labor-intensive industry (textile). This may also shed light on evolutionary patterns in terms of the turbulence of the environment as well as the impact of incentive systems on these evolutionary patterns in light of the two major actions carried out by firms; namely, exploration and exploitation actions.

As noted by many researchers, most empirical studies hitherto carried out on these issues, with a few limited and noteworthy exceptions, have serious shortcomings because they are static and non-contextual in character (Garud and Van de Ven, 2001; Pettigrew et al., 2001; Pettigrew, 1992). This justifies the recent, growing emphasis whereby empirical research in this field needs to be much more realistic in order to provide useful advice and/or ideas to organization managers and practitioners in general, as well as to be academically rigorous. Accordingly, we use process research methodology and concentrate on the phenomenon in a new real context: the context of Spanish firms in a recent time period. The main value added of the work, therefore, with regard to prior literature, is the scant knowledge of and the novelty of the research issues, and the unique, unexplored setting. Finally, we believe that the findings of our research can provide managers and practitioners with an alternative way to effectively managing long-term organizational change in their firms.

The remainder of the study is organized as follows. In the second section, we present the theoretical background of new organizational forms. In the third section, we discuss the role of incentive schemes in this organizational change. In the fourth section, the methodology used in this work is addressed. We then go on to analyze the empirical evidence by means of two firms. Finally, our most relevant findings and conclusions are presented.

The evolution of organizational forms based on coordination mechanisms

Drawing on the recent conceptual framework of Saloner et al. (2001), we consider the following three coordination issues that are associated with several aspects of human resources in firms: (a) the level of specialization and integration of a firm’s human resources; (b) decision-making processes: centralization and decentralization; and (c) the character of information flows. These coordination issues can also be used to define the main distinctive characteristics of different organizational forms. Accordingly, based on these, we seek to underscore the most pertinent distinctive
characteristics of the most traditional forms such as the multidivisional form (M-form) and the holding structure (H-form), and the new forms such as the internal network (N-form).

Regarding the first issue, there is a clear difference between the traditional forms (M-form and H-form) and the N-form mode of organizing and integrating human resources in the firm. The M-form consists of quasi-autonomous or highly independent divisions (organized along functional lines), which are characterized by a very high level of specialization. In fact, it has been frequently treated in the literature as a set of organizational structures with a specialized U-form (Williamson, 1975). According to Williamson, the main advantage of this structure is the economy of managerial attention provided by decomposition and specialization. The H-form shows similar features in this aspect, since this structure is a decentralized M-form (Williamson and Bhargava, 1972). By contrast, the N-form consists of a large number of interdependent temporary subunits characterized by a lower level of specialization. These subunits are composed of employees who continuously rotate around these units. In this structure, there are no clearly defined roles amongst the firm’s different members (Hedlund, 1994).

The second issue, decision-making processes, also functions differently between the two traditional forms of organization. One of the most important features of the M-form is the delegation of authority from the general office toward each individual division. In particular, there is a high level of centralization in the M-form regarding strategic decision-making and a high level of decentralization concerning operating decisions. Division managers control, monitor, and set specific and concrete objectives for routine activities, whereas the general office managers control, monitor, and set specific and concrete objectives for strategic activities that include planning, control, assessment, and allocation of resources to each individual division. Consequently, there is considerable competition between the different divisions to obtain resources from the general office. Likewise, the staff in this organizational form provides professional advice to the general office in order to monitor the organizational behavior of each individual division (Williamson, 1975). By contrast, although the H-form is also decentralized operationally like the M-form, strategic control by the center is often only partial or unsystematic. This organizational structure lacks the requisite internal control apparatus of the M-form and cash flows are not exposed to internal competition but returned to source divisions (Williamson and Bhargava, 1972; Williamson, 1975). Similarly, the general office in the N-form is relatively unimportant, since its fundamental role lies in promoting relationships between the different organizational subunits that make up the network. In other words, the role of general office leaders is limited to providing general guidance and managing conflict. Thus, the basic organizational level in this structure is not the top management but rather the intermediate managers and employees (Hedlund, 1994; Grant, 2001; Teece, 2001).

Finally, in reference to the third issue of information flows, it is usually argued that information is an essential factor upon which coordination hinges. Milgrom and
Roberts (1992) suggest that a key problem in the securing of effective coordination and adaptation is that precise information for delimiting the best possible use of organizational resources and proper innovations is not within everyone’s reach. While there is direct access to critical information flows about activities in some organizations, in many others the information systems provide specific information channels for very few employees. Moreover, the proper assigning of decision rights must be clearly in accordance with the design of information flows (Saloner et al., 2001). Since the M-form is characterized by hierarchical control, information will run vertically, from top to bottom, rather than horizontally, as that is where all relevant knowledge is located. The N-form, however, is characterized by an atmosphere of closer collaboration, confidence and integration between the different groups of organizational members, so information runs horizontally rather than vertically (Barlett and Ghoshal, 1993; Hedlund, 1994; Van Wijk and Van den Bosch, 2000). Midway between these two structures is the H-form. In this type of organizational form, hierarchical control is not as strong as in the M-form, but horizontal cooperation is weaker than in the N-form. A summary of the coordination problems of the different organizational forms is presented in Table 1. In addition, a notion has recently been propounded (Pettigrew and Fenton, 2000) regarding the co-existence between the attributes of traditional forms and the new forms. Based on the idea of co-existence, new organizational forms have recently been discovered. These forms are referred to as the ‘multidivisional network’ form which combines elements of the multidivisional structure with the network form (Whittington and Mayer, 1997, 2000), and the ‘holding network’ which combines elements of the holding structure with networking elements (Galan et al., 2005).

Table 1. Main links between coordination mechanisms and organizational forms

<table>
<thead>
<tr>
<th>Coordination Mechanisms</th>
<th>Organizational Forms</th>
<th>M-form (traditional)</th>
<th>H-form (traditional)</th>
<th>N-form (new)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialization of human resources</td>
<td></td>
<td>High level of specialization</td>
<td>Low rotation of employees across the units</td>
<td>Low specialization and there are no clearly defined roles amongst the firm’s members</td>
</tr>
<tr>
<td>Decision-making process</td>
<td></td>
<td>Centralized strategically and decentralized operationally</td>
<td>High operational decentralization and low strategic centralization</td>
<td>Decentralization. Business unit autonomy</td>
</tr>
<tr>
<td>Information flows</td>
<td></td>
<td>Hierarchical control: top-down strategic control over the corporate whole. Vertical knowledge flows</td>
<td>Strategic control of the center is often partial or unsystematic. Some degree of horizontal collaboration</td>
<td>Horizontal cooperation. Horizontal processes of knowledge emerge through interfunctional work teams. This task forces the sharing of experience between decentralized units</td>
</tr>
</tbody>
</table>

Source: the authors.
Incentive systems as a driving-force for organizational change

Following the conceptual studies of Milgrom and Roberts (1992), Saloner et al. (2001) and Roberts (2004), and the empirical research of Kerr and Slocum (2005), we will discuss the possible influence of the incentive systems used by firms on organizational change, particularly within earlier and newer organizational forms. In this study, we assume that the convenience of the different coordination mechanisms previously considered and, thus, the evolution of different organizational forms can be closely linked to the incentive system implemented by firms over time. This assumption is in line with the view of most researchers since they suggest that to be effective it is most desirable that incentive systems should accord with the structure of each specific firm. Moreover, as noted below, the choice of an appropriate incentive system can also be determined by the specific industrial environment in which each firm carries out its activity.

As is widely known, one of the most important problems frequently facing a firm lies in encouraging its different employees to pursue objectives or take actions that are consistent with the achievement of the firm’s goals. Most of the firm’s employees have different concerns and may be willing to pursue their own objectives at the expense of the firm’s. These divergent objectives give rise to the so-called incentive problem (e.g. Baron and Kreps, 1999; Gibbons, 1998; Lazear, 1998; and Zajac and Westphal, 2002). The problem of motivating people in organizations stems from the fact that their own self-interest may not automatically lead them to act in the way that the organization would want them to. This divergence of interests arises because, generally-speaking, the individual members of an organization do not bear all the costs or enjoy all the benefits of the actions they take and of the decisions they make within the organization. Motivation or incentive problems can arise when an individual’s organizational decisions and actions affect others in ways that the individual does not fully consider when there are externalities (Roberts, 2004, pp. 118-119).

The source of this typical problem arises from the principal-agent relationship, which is traditionally examined from the perspective of agency theory. This problem can be satisfactorily resolved by using an appropriate incentive system for all the firm’s employees. When the firm’s objective is to achieve a particular type of organizational change, the design of an appropriate incentive system may be the key link to set that organizational change process in motion (Kerr and Slocum, 2005). If a firm uses a proper incentive system, the objectives of all its employees should be in tune with those of the firm, in a such a way that the firm will have greater success in achieving its objective; in this case, the change in its traditional organizational structure. However, if different groups of employees notice that the incentive system is not the most appropriate one for them, then performance is likely to suffer as they go about their different jobs in the firm. They will be very scarcely motivated and, therefore, their objectives may diverge completely from the firm’s own objectives and, hence, the process of changing the organizational structure will falter.
Traditionally, the literature on incentive systems makes a clear distinction between extrinsic and intrinsic incentives (Child, 2005; Kerr and Slocum, 2005). Generally, extrinsic incentives involve tangible aspects and they are usually characterized by a higher monetary component. Some of the main extrinsic incentives are pay, fringe benefits, security of tenure, promotion, special awards, and status symbols. On the contrary, intrinsic incentives involve less tangible aspects since they are frequently linked to features such as, for example, responsibility, recognition, autonomy, or social interaction (Child, 2005).

Kerr and Slocum (2005) identified two different incentive systems that can usually be adopted by a firm: the hierarchy-based system and the performance-based system. In the hierarchy-based system, the performance of employees is usually defined qualitatively as well as quantitatively, although non-quantifiable aspects of performance are sometimes viewed as more relevant. In this system, intrinsic incentives play an important role. This system also provides a basic rationale for cooperative rather than competitive behavior among employees and across different organizational units. Moreover, it is suggested that this system may be more effective in capital-intensive industries that require large investments, for example, in research and development. By contrast, in the performance-based system, the performance of employees is explicitly linked to an incentive system and qualitative aspects of performance are usually ignored when deciding the most appropriate incentive system. In fact, specific incentives are directly related to specific performance criteria, such as return on assets or pretax profits. In this system, extrinsic incentives play a determinant role and bonuses or commissions are a very significant part of compensation. This system provides few mechanisms for cooperative behaviour between or among different organizational divisions. Finally, this system is considered to be more effective in relatively more labor-intensive industries.

Nevertheless, applying the thinking of Saloner et al. (2001), Roberts (2004), or Kerr and Slocum (2005), we postulate that the incentive system in a broad sense will go beyond the traditional conception of agency theory. Aspects such as people, architecture, culture, process, and routines will also have a bearing on the appropriate influences that underscore organizational change beyond merely contractual relationships. If an organization is to use its incentive systems to generate value, the elements containing distributed incentive systems must somehow cohere. Coherence evolves as people in organizations choose specific metrics and implement procedures to use and combine incentive systems from different elements to achieve value according to these metrics. Accordingly, in keeping with the influential work of James March (1991), we consider that so-called exploration actions will require a specific type of incentive system, whereas exploitation actions will require another kind of incentive system in the transition process towards new forms of organization. Specifically, we argue that the hierarchy-based system will be more suitable for firms carrying out exploration actions. This will be in this way why these actions are usually connected with highly innovative environments. On the other hand, the performance-based system will be more appropriate for firms involved in exploitation...
actions that are usually carried out in less innovative environments. A chart summarizing the literature on the distinctive traits of exploration and exploitation actions is presented in Table 2.

Table 2. Major distinctive characteristics of exploitation and exploration actions

<table>
<thead>
<tr>
<th>Exploitation Actions</th>
<th>Exploration Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Incremental or evolutionary innovation and change</td>
<td>• Radical or revolutionary innovation and change</td>
</tr>
<tr>
<td>• Efficiency and rigidity</td>
<td>• Innovation and flexibility</td>
</tr>
<tr>
<td>• Low costs and traditional customer segments</td>
<td>• Differentiation and new customer segments</td>
</tr>
<tr>
<td>• Well-defined domains</td>
<td>• Changing domains</td>
</tr>
<tr>
<td>• Doing better what we already do</td>
<td>• Novel ways of doing things</td>
</tr>
<tr>
<td>• Decision-making based on rationality</td>
<td>• Decision-making based on creativity</td>
</tr>
<tr>
<td>• Reactiveness</td>
<td>• Proactiveness</td>
</tr>
<tr>
<td>• Variance-reducing activities</td>
<td>• Variance-increasing activities</td>
</tr>
<tr>
<td>• Management strategy</td>
<td>• Entrepreneurial strategy</td>
</tr>
<tr>
<td>• Reinforcing current competitive advantages</td>
<td>• Developing new sources of competitive advantage</td>
</tr>
<tr>
<td>• Local search (existing technological capabilities)</td>
<td>• Distant search for new capabilities</td>
</tr>
<tr>
<td>• Past (path-dependence; technological trajectories)</td>
<td>• Future (emerging market opportunities)</td>
</tr>
<tr>
<td>• Economizing</td>
<td>• Strategizing and organizing</td>
</tr>
<tr>
<td>• High certainty</td>
<td>• High uncertainty</td>
</tr>
<tr>
<td>• Tight coupling</td>
<td>• Loose coupling</td>
</tr>
<tr>
<td>• Short-term measurable improvements</td>
<td>• Long-term improvements difficult to measure</td>
</tr>
<tr>
<td>• Repetition through routines</td>
<td>• Creation of new routines</td>
</tr>
<tr>
<td>• Backward-looking experiential learning</td>
<td>• Forward-looking cognitive models</td>
</tr>
<tr>
<td>• Hierarchical organizational designs</td>
<td>• Horizontal organizational designs</td>
</tr>
<tr>
<td>• Little participatory decision-making</td>
<td>• Highly participatory decision-making</td>
</tr>
<tr>
<td>• Human resources are considered as a cost source</td>
<td>• Human resources practices are essential for achieving a sustainable competitive advantage</td>
</tr>
<tr>
<td>• Model particularly suitable for stable market segments</td>
<td>• Model particularly suitable for highly unstable and changing market segments</td>
</tr>
</tbody>
</table>

Source: the authors.

As innovation is the central aspect of Zeltia’s corporate identity, the Zeltia organizing mode for managing incentive systems should consistently support innovation. Thus, according to James March’s (1991) approach, it is to be expected that the Zeltia company, which is in a technology or capital-intensive sector, should choose a system of incentives linked to the organizational mode that emphasizes exploration actions (i.e. the hierarchy-based system). On the other hand, since the Cortefiel
group belongs to a more labor-intensive sector, in which there are well-established procedures, the company should opt for incentive systems linked to the organizational mode that promotes exploitation actions (i.e. the performance-based system).

Methodology

Research design

The research design of this study is based on two longitudinal case studies. We used a longitudinal methodology for the four following fundamental reasons (Eisenhardt, 1989; Pettigrew, 1990; Yin, 1994; Galan et al., 2005). First, this method allowed us to explain and understand the dynamics present within single settings. In others words, it enables researchers to examine in-depth phenomena of organizations within their real context. Secondly, longitudinal case studies combine different data collection methods which permit researchers to gain a better view of several organizational phenomena over time. Thirdly, this method can aid in the generation of description and theory. Finally, we were in search of temporal interconnections of events. Given that we do not know very much about the issues of interest in this line of research, our intention was to conduct inductive case research and, thus, provide new evidence in order to gain an insight into what is occurring.

Our goal was not only to bring time into the analysis (longitudinal aspect) but we also wanted to offer a comparative perspective. For this reason, we have selected two large Spanish industrial firms, which belong to two different industrial environments: the Zeltia group carries out its core activities within capital-intensive and highly innovative sectors, the chemical and biotechnology industries, while the Cortefiel group is included within a more labor-intensive industry, the textile sector. In addition, these companies have a different basic approach to organization, and they have been engaged in ongoing processes of structural realignments over the period under study (1991-2001) as a direct result of continuous and far-reaching changes in their environmental conditions.

Finally, we are particularly interested in providing new preliminary and exploratory evidence on the issues investigated within an institutional context and a timeframe that has hitherto been scarcely analyzed in organizational literature. In our view, there is still a relative lack of empirical studies with new evidence for the last several years, during which fundamental environmental transformations in every economy have occurred, including in Spain’s economy.

Data collection

Our research used a triangulation methodology and combined documentary sources with interviews. Documentary sources included annual reports, company
histories, teaching cases, press reports, and information available on the Internet. All these sources provide insight into the origins of the firm and an overview of the firm’s main products, corporate strategy, and economic performance over the period under study. In some cases, these sources also allowed us to infer some information about the organization form and the reward policy followed by each firm.

More specific and relevant information concerning the coordination mechanisms and incentive systems was collected through two questionnaires and semi-structured individual interviews specifically designed for this research. Informants in both cases included each general manager, several functional managers, and lower-level managers. Interviews were conducted during site visits to each firm. Informants were briefed beforehand regarding the objective of our research, and the interviews were transcribed.

In order to ascertain the fundamental internal characteristics of the organizational modes associated with the evolution of coordination mechanisms, we examined and collected information on the following: level of centralization-decentralization in the decision-making process, nature of information flows, and level of importance of modularity and teams and work groups in each firm within the timeframe under study. Finally, we analyzed the role of incentive systems by gathering information related to the different types of rewards and motivational tools employed by each company in the same timeframe.

Empirical evidence

The examination of both companies follows the same framework. We begin with a brief history of each company from its incorporation. We then provide new exploratory evidence on the evolution of several internal characteristics closely coupled to the possible emergence of new organizational forms in terms of their coordination mechanisms and, finally, we provide insight as to how incentive systems can affect the change in organizational structure.

The case of the Zeltia group: brief history

This company was incorporated in 1939, the year in which the Spanish Civil War ended and War World II began. In 2001, the Zeltia group was a large family-owned Spanish group whose main business lay in the consumer chemical and biotechnology sectors. The group’s major firms in the consumer chemical sector, Zelnova and Xylazel, each maintained their leading position in the domestic market. Zelnova ran a household and industrial insecticide and air-freshener business and was a leader in insecticides for home use. Xylazel ran a decorative and protective wood products business, and was a leader in products for wood protection. With regard to the biotechnology business, the Zeltia group has recorded its foremost success in the
1991-2001 decade through two companies, Pharma Mar and Pharma Gen. Pharma Mar was set up for the development of marine-based pharmaceuticals for medical applications, especially in the antitumoral field. Pharma Gen carried out activities such as paternity tests, forensic analyses, and the manufacture of diagnostic kits for a variety of diseases, all based on DNA analysis technology. These four companies along with Inmunal (auto-vaccines) and PROMAX (wood recovery treatment and conservation services) made up this group between 1991 and 2001.

A crucial feature of the Zeltia group is its ongoing and dedicated commitment to innovation. This commitment was apparent over the entire timeframe under study, and it was particularly acute for the last three years of the period under analysis (from 1999 to 2001). Specifically, in these last three years, the average R&D expenditure as a percentage of net sales rose from 13.39% in 1999 to 20.10% in 2000 and to 32.10% in the final year.

Organizational change across the evolution of coordination mechanisms in the Zeltia group from 1991 to 2001

The organizational form used by the Zeltia group over the 11-year period under study was the holding structure (H-form). This group had a small general office with a staff of about 15-20 people. All subsidiary firms (Zelnova, Xylazel, Pharma Mar, Pharma Gen, Inmunal, and PROMAX) were highly independent and were structured as functional forms with their own departments for manufacturing, sales, and finance. The central office had a minimum role and there was no strategic control. The different units only depended on the headquarters for a few issues related to the most important decisions. The divisional managers had considerable responsibility; they could submit suggestions regarding new business initiatives and other similar types of strategic decisions.

However, an important difference can be noted between the organizational structure adopted at the beginning and the end of this timeframe, since some characteristics of the holding structure were actually starting to coexist alongside features of the N-form. The main organizational characteristic that led to the emergence of the N-form is the increasing importance given to horizontal information flows.

As noted above, the Zeltia group is included in R&D intensive sectors since it allocates considerable resources to innovation. Apart from devoting a large amount of money to R&D activities, this group also maintained extremely important partnership agreements with several of the most prestigious academic institutions and hospitals all over the world in different research projects; in areas such as marine biology and microbiology, natural marine products, synthesis and elucidation of chemical structures, pharmacology, drug toxicology and metabolism, studies on action mechanisms, and clinical and preclinical experiments/tests. As a result of the important technological changes of recent years, the Zeltia group has had to promote trust and collaboration amongst the different members and departments of the
organization in order to achieve its goals. For this reason, it has formed experienced work teams made up of employees from different organizational departments. There were many examples of work teams involved in different activities, such as marine operations, clinical and preclinical research, and the chemistry of natural products. Whereas in previous years knowledge was fundamentally transferred to and applied at higher levels, at the end of the period under analysis a great deal of knowledge was retained at the unit level and was transferred and integrated amongst organizational units. In other words, in 2001 there was important lateral communication or horizontal cooperation across different organizational units.

Accordingly, the arguments put forward regarding coordination mechanisms are consistent with the results of Galan et al. (2005), which point to the appearance of the ‘holding network’ as a new organizational mode in which elements of the traditional mode (H-form) coexist with the new mode (N-form).

The role of incentive system in the organizational change process in the Zeltia group

In the Zeltia group, the design of an appropriate incentive system was considered to be one of the main factors contributing to the achievement of a successful organization. The incentives system implemented by the Zeltia group throughout the period 1991-2001 promoted many of the features linked to the exploration actions presented in Table 2. The various characteristics of the organizational design were geared towards facilitating the creation and sharing of knowledge as well as the search for new opportunities.

At the end of the year 2000, the Zeltia group introduced an incentive system that set out to recognize and reward the initiative and creative skills of all its employees. This firm was explicitly paying for the skill or knowledge that employees acquired during their employment. The direct rationale for such a pay policy was clear in this company; a more skillful or better trained employee was more valuable to the organization, and paying for skills, knowledge, or credentials gave employees a motivation to acquire valuable skills and knowledge, and a pay policy of this nature could promote worker retention because it encouraged employees to grow in their job. It can be argued that the non-quantifiable aspects of the employees’ role were usually considered more important than quantifiable ones within this incentive system.

Certainly, linking rewards to observable, verifiable outcomes (rather than behavior) may provide some desirable incentives. However, target- or performance-based rewards are often considered a partial solution in settings characterized by exploration actions, as occurred in Zeltia’s case. In this vein, the Board of Directors approved a formal incentive scheme for all employees with indefinite contracts and a variable annual wage. This scheme provided an opportunity to acquire shares in the company and, most importantly, it emphasized the importance of long-term commitment to the company.
Senior managers take decisions that, arguably, have a major impact on a firm’s performance, and they have numerous ways in which they can alter their behavior in response to incentives. In this sense, the senior management team also had its own incentive scheme, which was fundamentally based on a variable reward system in the short-term and the combination of a variable and fixed reward system in the long-term. Thus, senior-level managers were compensated with stock options, and the firm extended this system to line workers through stock-ownership schemes.

In the literature on incentive systems, compensation is more than just the money paid in the form of wages, salaries, and bonuses. It might include intrinsic or psychological compensation, such as status, independence, power, and so on. In general, the importance given to the non-monetary reward system was very high in this company. Giving its people freedom and autonomy in deciding how and on what to work provided them with intrinsic motivation. Thus, rewards in this company had large non-monetary elements or intrinsic motivation, especially personal autonomy and professional recognition. Furthermore, a separate scientific career path was created so technical people could advance without having to move into management.

Close cooperation between the Board of Directors and managers and between managers and employees was used in order to achieve the different organizational objectives. Direct communication between groups was strongly advocated in the organizational transformation process with the idea that multiple approaches to a problem could co-exist, compete, and cross-fertilize one another.

Senior managers at Zeltia highlighted the importance of three factors above and beyond the standard agency problem as the trigger for the motivation behind and as a necessary step for organizational change. These three factors were (a) the recruitment effect; (b) the importance of culture; and (c) the relevance of job definition. For those in charge of human resources at the company, the importance of variable recruitment was very important. If the employee was right for the job and was happy at work, there was less need to include incentive systems designed to increase motivation. Likewise, culture was very important at Zeltia, as it implicitly determined one’s attitude to work and one’s readiness to take part in assuming risks and accepting commitments and responsibilities. The culture at Zeltia promoted a commitment to work well done, encouraging creativity and the transfer of knowledge within the company. In addition, the company’s senior managers indicated that a suitable job definition was an important motivating process over and above that of the agency relationship. Finally, the company’s senior managers explained how important it is that the process of organizational change (from H-form to H-N form) should be well understood by employees.

The prior account highlights the existence of an organizing mode that emphasizes the relevance of a hierarchy-based incentive system in support of different activities associated with exploration. Nonetheless, it is interesting to note that this system was not necessarily present in ‘pure’ type, since it showed some variation.
The case of the Cortefiel group: brief history

The origins of this company date back to the end of the 19th century, and today it is one of Spain’s oldest and largest groups of textile design, distribution, and manufacturing firms. Although the company initially focused solely on the distribution of textile products, a few years later it started to manufacture men’s wear. Thus, the firm was a pioneer in developing a vertical integration model which combined design, manufacturing, and distribution. In addition, it was also a pioneer in the development of the mass production of garments that is known to suit the new environmental conditions both in Spain and in other countries that manufacture or commercialize different kinds of men’s and women’s clothing. In 2001, this textile group included the Cortefiel brand, founded in 1950; the Springfield and Women’s Secret brands, men’s fashion and lingerie, respectively, the current leaders in their markets in Spain; the Milano brand, a chain specializing in men’s tailoring, clothing, and accessories; the Pedro del Hierro brand, well-known for the elegance of its designs and fine taste in its colors and fabrics; and the Douglas brand, a joint venture entered into with the German company Douglas Holding in the perfume and cosmetics business.

Furthermore, the Cortefiel group is a multinational group, with its geographic diversification strategy playing a vital role over the period 1991-2001, mainly from the middle of the decade. In 2001, the Cortefiel group was present in 29 countries around the world, especially in Continental Europe, through investment and direct management, and with the Springfield and Women’s Secret as a worldwide franchise.

Organizational change across the evolution of coordination mechanisms in the Cortefiel group from 1991 to 2001

The basic mode of organization used for this company over the period 1991-2001 was the M-form. In 2001, the Cortefiel group had a general office and eight semi-autonomous divisions associated with each of its eight brands (Cortefiel, Don Algodón, Milano, Springfield, Women’s Secret, Pedro del Hierro, Douglas, and Via Plus), which were structured as functional forms. Each division had its own general manager, marketing manager, sales manager, merchandising team and planning team, several shop managers and agents, as well as sales assistants. Each division or commercial brand was responsible for all functions relating to its customers, design and style, marketing, merchandising, and planning of its product line.

However, strategic decisions were made by the general office, while division managers only made operating or routine decisions related to their respective divisions. The general office carried out the following functions: strategic orientation, legal, technological and computer consultancy, administrative services, financing and control, human resources management, operations management, industrial management, and marketing management. The general office was not responsible for allo-
Linking organizational change, coordination mechanisms and incentive systems...

cating the organizational resources across different divisions. This function was the exclusive domain of the senior management team or the Board of Directors. In addition, there was a general manager in each country where this company operated.

However, in recent years, several distinctive features of the N-form can be detected. The features of this new form coexist with the features of the M-form. The main features of the internal network, or N-form, present in this company from the three coordination problems studied were the following: (1) a high level of functional turnover in staff; (2) an increasing autonomy of each division—several years earlier these divisions were basically considered to be departments—over time, coupled with a greater level of decentralization and independence in the decision-making process; (3) an increasing importance given to work teams—the number of persons that made up each work-team could range from 3 to 20—since one of this company’s main goals was to develop highly professional and motivated work teams through internal competition. These work teams had complete freedom for making decisions dealing with the problems that frequently arose. Within this context, horizontal communication between different work teams was very important in order to achieve a streamlined organization.

The above descriptions of the evolution of coordination mechanisms are consistent with the results of Whittington and Mayer (1997, 2000) which show the appearance of the ‘multidivisional network’ mode to be a new organizational form in which elements of the traditional form (M-form) coexist with the new form (N-form).

The role of incentive systems in the organizational change process in the Cortefiel group

The Cortefiel group designed an incentive system that sought to highly motivate the different company members. The incentive system implemented by the Cortefiel group throughout the period 1991-2001 had many features that support the exploitation actions presented in Table 2. As in the case of the Zeltia group, the various characteristics of the Cortefiel group’s organizational design went beyond the strictly contractual standpoint, incorporating other elements designed to facilitate focus and execution.

The Cortefiel group’s incentive system included training and the holding of different meetings or conventions, as well as monetary rewards (mainly, sales commissions) for all its employees. In fact, these sales commissions were a very significant part of compensation for most employees. Given that the company operates in a more traditional environment in which technical procedures and processes are standardized, it was easier to introduce objective measures of results or performance upon which to base incentive systems. This incentive system emphasizes quantitative aspects of the employees’ role much more than qualitative ones.

The essence of exploitation was to achieve maximal performance in delivering within the current strategy. In this vein, Cortefiel focused most of its energy on effec-
tive, timely execution. In contrast to the Zeltia group, and in order to achieve focus and execution, the incentives system was based on quantitative measures of operational performance, such as return on assets, and different indicators linked to firm profits. Senior managers at Cortefiel said that the better the performance measures of an activity, the less costly it was to provide stronger incentives for the activity in isolation and so induce higher effort. Accordingly, this company focused on efficiency and measurement combined with present-day quality requirements stemming from the transformation the textile sector has undergone over the past decade. Faced with growing competition from Chinese firms, this company has gone about incorporating high value added specialized technological processes in order to compete with Italian firms, but ones in which, for the time being, Chinese firms did not have the appropriate technology.

The firm paid higher wages to more experienced workers based on their seniority; either in terms of age and tenure in the job or organization (the company had an age-experience premium). The skill level of workers with greater seniority was usually higher and they were more stable workers (lower absenteeism). Seniority- and tenure-based salary prevailed for various reasons, including reducing turnover, increasing the value of an employee throughout their career, union influence, and social norms.

Beyond the incentive systems of a contractual nature, senior managers in the Cortefiel group also revealed the importance of other aspects linked to organizational design in the generic sense as motivating factors for staff and triggers of organizational change. Amongst these elements in the Cortefiel group, they pointed to the importance of the following aspects: (a) the allocation of decision authority; (b) the creation of small units geared towards self-management; (c) the establishment of pay systems designed to compensate workers who achieve extraordinary results; and (d) culture. The allocation of authority had a powerful impact on incentives. Giving an executive power encouraged them to do a better job and to handle more information, exert better control, and take better decisions. In turn, according to the company’s managers, the creation of smaller units improved the possibilities of measurement and intrinsic motivation. Likewise, they instituted a system for the payment of commissions that provided extraordinary rewards for those workers who were willing to work harder. Finally, internal sources at the company maintained that culture was an important motivating factor and had considerable importance as an instigator of change. More network elements needed to be included in order to face growing international competition and allow for adjustment towards processes of higher value added. In this sense, there was a need to move from a culture based on high specialization to a culture that catered to training and to the performance of new activities that would add higher value to the organization/product. This led to the arrangement of intensive schemes of in-house training.

Therefore, the incentives system implemented by the Cortefiel group for upholding organizational change has been based on quantitative measures of operational performance. The Cortefiel group has focused on a policy of efficiency and cost reduction combined with quality that has enabled it to reduce prices and dominate
the market. This has meant that the incentives it has introduced have involved quantitative measures designed to reinforce control, efficiency, and quality simultaneously.

In this company, as in the Zeltia group, communication with employees was critical in the process of organizational change (from M-form to multidivisional network or M-N form); employees should be co-opted into the process as much as possible and procedural justice should be carefully attended to.

In spite of growing importance of some qualitative aspects linked to the employees’ role and intrinsic incentives, it can be argued that the Cortefiel group has used an organizing mode that has emphasized the significance of a performance-based incentive system in support of predictable task performance.

Discussion and conclusions

This paper has analyzed theoretically and subsequently reported on existing longitudinal empirical evidence regarding the appearance of potential new patterns of organizational forms. In this sense, we have explored the characteristics of traditional forms, specifically the M-form and H-form, and of innovative organizational forms, specifically the N-form or internal network, in terms of the evolution of three coordination mechanisms. Furthermore, we have simultaneously explored the role of incentive mechanisms in the organizational change process.

In the prior sections we discussed the fundamental results of the organizational change experienced in two companies: Zeltia and Cortefiel. We saw how both companies use different organizational modes, yet both have adopted a similar approach to the incorporation of internal network features. Specifically, Zeltia began with an H-form structure in 1991 and during the period under study it gradually included fresh combinations of coordination mechanisms designed to incorporate internal network features. The form finally achieved was one that revealed the co-existence of features from traditional forms with features of the new forms giving rise to the holding network form. In turn, Cortefiel has followed a different organizing mode that focused more on exploiting, yet in the evolutionary process it has also incorporated elements of new organizational forms. In 1991, it adhered to the M-form and throughout the decade of the 1990’s it gradually incorporated internal network elements. The end result was the coexistence of new and traditional forms in what is known as the multidivisional network form.

A special innovation in this process with regard to the literature is that there are prior cases that have shed light on the central role played by incentive systems as a determining factor in organizational change. This leads to the induction of the following original model (see Figure 1).
Taking a further step forward regarding the importance of incentive systems, and based on the James March model, the results show that incentive systems will be a function of the organizing mode in which we find ourselves. We have seen that in the case of Zeltia, the organizing mode involved emphasizing exploration, whereas for Cortefiel the organizing mode involved emphasizing exploitation.

The incentive systems implemented by the Zeltia group as a trigger for organizational change from the H-form to the H-N form were designed to facilitate the generation and sharing of knowledge, as well as the search for new opportunities. In turn, the incentive system implemented by the Cortefiel group for producing organizational change was essentially based on quantitative measures of operational performance. The Cortefiel group has focused on a policy of efficiency and cost reduction combined with quality that has enabled it to reduce prices and dominate the market. During the transition from the M-form to the M-N form, incentive systems have been designed to encourage focus and execution at the same time as they have introduced a series of measures of a psychological and social nature that go beyond measures of a contractual nature.

An interesting conclusion of our findings may be that incentive systems will not be universally valid as the driving-force of organizational change. In other words, they will be significantly determined by the organizing mode used by the company. Likewise, this process of change will require the introduction of other incentive sys-
tems more closely linked to cultural, social, and human aspects that exceed the mere contractual sphere. Thus, the incentive systems used by Zeltia were aimed at furthering creativity, cooperation, the search for opportunities and the generation and transfer of knowledge. All this is consistent with the organizing mode geared towards exploring. In turn, beyond the incentives perspective provided by the agency theory, the following system aspects were important in this company: (a) recruitment effect; (b) the importance of culture; and (c) the importance of job description. For its part, the incentive systems at Cortefiel were designed to sharpen the focus on execution and cooperation. In addition, there will also be an important series of systems that exceed the contractual barrier in order to incorporate the social and psychological aspects of individuals. This means that the following aspects were important for this company: (a) the allocation of decision authority; (b) the creation of smaller units; and (c) culture.

Our findings make it clear that neither exploration nor exploitation actions are present in a pure form, but rather in different proportions. Certain aspects are specific to both mechanisms, such as those aimed at exploration and exploitation in the strict sense, whereas other aspects coexist, such as the need for cooperation and the promotion of intrinsic rewards.

The findings obtained in the present paper lead us to formulate two general propositions (Propositions 1 and 2) and two specific ones (Propositions 2a and 2b) that would be interesting to test in future quantitative studies.

**Proposition 1:** The incorporation of network elements in the new organizational forms requires an increase in the relevance of incentive systems linked to cultural, social, and psychological aspects beyond the contractual approach.

**Proposition 2:** During a process of organizational change, companies should implement incentive systems that allow for the coexistence of exploration and exploitation actions.

**Proposition 2a:** Companies in less innovative industries should make a more extensive use of incentive systems linked to exploration actions, as may be the case with the hierarchy-based system (without forgoing incentive systems that also favor exploitation actions).

**Proposition 2b:** Companies in more innovative industries should make a more extensive use of incentive systems linked to exploitation actions, as may be the case with the performance-based system (without forgoing incentive systems that also favor exploration actions).

All the interviews in both case studies pointed to the important role of a good incentive policy to effectively respond to threats stemming from present environmental conditions, and consequently adopt some features of more innovative organizational structures. Creating an effective reward system seemed to depend less on finding “the one best way” than on ensuring that the reward system and jobs were designed in tandem, to be consistent and complementary.
This paper has several important implications for managers. An important issue when considering compensation as a driver of organizational change is how much one wants to rely on direct, shorter-term economic incentives, versus longer-term economic rewards or non-monetary forms of motivation. The second common aspect in both cases were the powerful social and psychological forces beyond the contractual standpoint that motivated people and provoked their reactions to any reward system proposed as driver of organizational change. It will have a profound impact on cognitive perceptions of procedural justice.

Future longitudinal research should focus on explaining the extent to which the adoption of the internal network can be contemplated as either the usual or sporadic mode of organization. Moreover, we firmly believe that a dynamic analysis of the introduction of elements linked to incentive systems and coordination mechanisms in the characterization of new organizational forms is a thought-provoking issue which researchers are beginning to investigate and should continue to explore in the future.

References


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