

CONTROL PROBLEMS IN DISTRIBUTION CHANNELS: EMPIRICAL EVIDENCE OF MANAGEMENT CONTROL SYSTEMS CONTRIBUTIONS

LOS PROBLEMAS DE CONTROL EN LOS CANALES DE DISTRIBUCIÓN: EVIDENCIA EMPÍRICA DE LA CONTRIBUCIÓN DE LOS SISTEMAS DE CONTROL DE GESTIÓN

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ABSTRACT

As part of the supply chain, manufacturing firms are increasingly placing greater emphasis on the management of their outsourced distribution channels (DCs). However, the role that inter-organizational Management Control Systems (MCS) can play in managing DC problems is still not clearly understood. Through an exploratory case study, we show how intra-organizational control problems persist in an inter-organizational context, rooted in informational asymmetries and conflicts of interest and aggravated by interdependencies. Likewise, the case study illustrates the way in which MCS assists the manufacturing firm to communicate to its representatives what the organization wants from them, motivating them and transferring capabilities. Thus, MCS can help to complement and re-orientate inter-firm agreements and constitutes a key tool for managing DCs in a flexible way.

KEYWORDS: Management control systems, Distribution channels.

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RESUMEN

Como parte de la cadena de suministros, las empresas productoras están poniendo mayor énfasis en la gestión de sus canales de distribución externalizados (DCs). Sin embargo, aún no existe una clara comprensión sobre el papel que los Sistemas de Control de Gestión inter-organizativos (MCS) pueden desarrollar en la gestión de los problemas de los DCs. A través de un estudio de caso, se muestra cómo los problemas de control intra-organizativos persisten en un contexto inter-organizativo, causados por las asimetrías informativas y el conflicto de intereses, y agravándose por las interdependencias. Asimismo, se expone cómo los MCS ayudan a la empresa productora a comunicar a sus distribuidores lo que la organización desea de ellos, motivándolos y capacitándolos. De esta forma, los MCS pueden ayudar a completar y redirigir acuerdos entre firmas y constituir una herramienta clave en la gestión flexible de los DCs.

PALABRAS CLAVE: Sistemas de control de gestión, canales de distribución.

1 INTRODUCTION

Over the last decade, supply chain management has emerged as a key to success in the global economy. As a part of the supply chain, an outsourced distribution channel (DC) is configured as a non-equity contractual alliance, in which an upstream manufacturer externalises part of its value chain to a set of downstream independent intermediaries - representatives - (Stern, El-Ansary and Coughlan, 1996). In this sense, a DC comprises a set of exchanges and ongoing relationships, which facilitate and simplify distribution activities, thereby achieving greater efficiency, improvements in client satisfaction and cost savings (Cepeda, 2003). Savings derived from avoiding complicated administrative and control mechanisms are usually highlighted among the advantages of DCs (Anderson and Oliver, 1987).

In most DCs, manufacturers offer a contract that tries to control the representatives' rewards, based on measurable results, normally on sales (Frazier, 1999). However, although DC members are interdependent and cooperative, they may pursue different, even contradictory, goals (Lassar and Kerr, 1996); and contracts are often described as incomplete (Baiman and Rajan, 2002) giving rise to informational asymmetries (Bergen, Dutta and Walker, 1992). In this sense, a DC can be defined as an agency relationship (Bergen, Dutta and Walker, 1992), where their members tend to make decisions under limited rationality situations, because it is difficult to collect and understand all the existent market information (Stern, El-Ansary and Coughlan, 1996). In fact, inter-organizational management control systems (MCS) - defined as all the devices or systems that one party uses to motivate other parties to achieve desirable or predetermined outcomes (Dekker 2004) - could help to control third parties, mitigating the incomplete nature of contracts and creating more cooperative relationships among the members in inter-organizational relationships, as proposed by Baiman and Rajan (2002). However, despite calls to integrate insights from management accounting and marketing management (Roslender and Hart, 2003), the role which MCS can play in DC management is by no means fully understood (Frazier, 1999; Nunlee, 2005).

This paper contributes to spanning this gap by exploring the control problems that can persist in a DC and the potential contributions of MCS in their management. To grasp the complexity of DCs, we adopted an exploratory case study approach (Yin, 1989). We chose the successful and long-standing relationship between a manufacturing firm, the leading firm in the relationship that is referred to as CMD (an assumed name), and its DC. During the period of study (1998-2004), as part of its externalisation strategy, CMD opted to introduce various MCS tools, which now make up its actual inter-organizational MCS. We study a series of events in the course of the relationship from the manufacturer's perspective because, in this case, it is CMD that delegates its activities and develops the inter-organizational MCS in order to increase the likelihood of gaining its objectives.

Our paper makes several contributions to existing literature. First, in contrast to existing research in marketing (Anderson and Oliver, 1987) and in management control (Merchant, 1985) which defend the idea that when firms outsource some functions to third parties, they avoid these control problems, we identify - applying Merchant and Van der Stede's (2003) framework coupled

with an agency theory approach - persistent control problems in an inter-organizational context that are rooted in informational asymmetries and conflicts of interest and are aggravated by interdependencies. Second, as opposed to the rigidity of contracts, we study how inter-organizational MCS constitute a key tool for managing DCs, completing and re-driving inter-firm agreements in a flexible way. Contemplating different aspects of the literature on marketing and management, we show that the integration and coordination of DCs can be achieved through MCS. Third, Frazier (1999) points out that MCS is a real topic and a research stream in DC management. Our work reveals insights that facilitate MCS development, where it contemplates the way in which each MCS type might contribute to the solution of different problems.

The rest of the paper is organized as follows. The next section outlines the theoretical framework, and focuses on control problems while contemplating an agency view of DCs and MCS types, in order to develop our research questions. Then, we go on to describe the methodology, the antecedents of the relationship between the manufacturing firm and the DC, and the development of MCS over time. We offer an analysis in the discussion section, and end with some conclusions and implications.

2 THEORETICAL BACKGROUND

Merchant and Van der Stede (2003) define three control problems in an intra-organizational context that can occur simultaneously: 1. Lack of direction: when employees do not know what the organization expects from them; 2. Motivational problems: when employees and organizational objectives do not naturally coincide, and employees are self-interested; and 3. Personal limitations: when employees are simply unable to do an adequate job because of certain personal limitations (person-specific problems or lack of knowledge, training, experience, or information). These authors indicate that managers can avoid the control problems with a particular activity by turning over the potential profits, and the associated risks, to a third party through such mechanisms as subcontracts, or licensing agreements (Merchant, 1985 p. 8). Elimination is typically utilized by managers who are not able to control certain activities, perhaps because they do not have the required resources or because they do not have a good understanding of the required processes (Merchant, 1985 p. 8).

On this point, the literature discussing DCs has defended manufacturers that choose to sell their products through independent firms whenever establishing their own distribution would entail excessive costs or risks (Stern, El-Ansary and Coughlan, 1996). Outsourced DCs reduce physical resource needs (warehouses, centres, etc.), minimize specialised personnel hiring, and permit the sharing of inventory costs. Independent representatives not only favour cost and investment reductions, they also enhance market knowledge and relationships with final clients, offering greater market flexibility and stability. Moreover, fully-owned distribution channels require investment by the manufacturer in administrative systems to control their own activities. These systems may generate such high costs that the manufacturer chooses to avoid them by outsourcing the distribution function (Anderson and Oliver, 1987).

However, once the DC is outsourced, risk and vulnerability may increase for the manufacturer (Frazier and Antia, 1995). As Mishra, Heide and Cort (1998) argued, DCs can be understood as a set of multi-level agency relationships, because manufacturing firms face problems in their relationships with their DCs that parallel those faced by the representatives in their client relationships. Klein and Murphy (1988) highlights that the manufacturer relies on independent representatives to supply some services to end clients. However, the client often cannot evaluate the accurate product quality, and the manufacturer cannot easily monitor the representative. Therefore, there are two levels of asymmetric information that engender two agency relationships. Our research work focuses on the manufacturer –principal– and representatives –agents– relationship.

Stern, El-Ansary and Coughlan (1996) established three conflict sources in DCs: (1) goal incongruence. (2) Competence discrepancy, due to interdependencies; when the manufacturer perceives that the representatives are irreplaceable due to their close relationship with the clients, their accumulated knowledge or because their experience is too valuable to lose. As Stern, El-Ansary and Coughlan (1996) argued, the sales volume is a good measure of interdependency levels. (3) Different perceptions of the reality can provoke informational asymmetries; the manufacturing firm might hold private information on its products' strategic value, or information about its future evolution and demand (Maskin and Tirole, 1992), which affects the representatives' future revenues. On the other hand, due to their direct contact with and closeness to the clients, the representatives can observe details relating to product demands that the manufacturer cannot. Furthermore, the manufacturer may be unable to detect (even though it may suspect) that a certain representative is engaging in opportunistic behaviour or is not delivering the proper services to the end clients. It may be further aggravated by the influence that bad representative service can have on the manufacturer's reputation.

In the light of these arguments, and in contrast to the literature on DCs (Anderson and Oliver, 1987) and intra-organizational management control (Merchant, 1985), which seem to indicate that the manufacturers' need to control can decrease in DCs, we might question whether control problems (lack of direction, motivational problems and personal limitations) disappear when distribution functions are outsourced. Interdependencies, conflicting objectives and bi-directional informational asymmetry could damage DC efficiency (Bergen, Dutta and Walker, 1992; Lassar and Kerr, 1996), provoking the control problems' translation towards inter-organizational control problems. Thus, we set out as a first research question (see Figure 1):

Do intra-organizational control problems persist in outsourced DC as a result of agency problems?

If the control problems are not eliminated it is necessary to manage them (Merchant, 1985), encouraging representatives to use their abilities, knowledge and information in the manufacturer's best interests. In theory, manufacturers have a range of contractual options to manage their DCs. According to Sass and Gisser (1989), exclusive intermediation contracts, associated with commission-based retributions, allow the manufacturer to reduce agency costs.

However, contracts are often described as incomplete (Baiman and Rajan, 2002), where all future contingencies cannot be envisaged, or are costly or impossible to contract, so contracts never fully reflect working DC relationships. As stated by Baiman and Rajan (2002), the inefficiency of incomplete contracts might be mitigated when the relationship between members becomes inherently more cooperative.

Baiman and Rajan (2002) propose that MCS might help to control inter-organizational relationships, reducing the degree of contract incompleteness. In this sense, only recently have researchers begun to consider that MCS design spans traditional organizational boundaries. According to Langfield-Smith and Smith (2003), a useful starting point in studying MCS in inter-organizational contexts is to consider them as MCS within a single firm. Maintaining the former analytical framework, Merchant and Van der Stede (2003) propose the establishment of different MCS types to solve control problems:

- Results controls require: 1. Definition of the dimensions in which results are desired, such as efficiency, quality or service; 2. Measurement of the performance in these dimensions; and 3. Provision of rewards (or punishment) to encourage (or discourage) the behaviours that leads to (or hinders) those results.
- Action controls try to ensure that desired actions are carried out, or to avoid undesired ones. Their main advantage is that they are the most direct form of control, as they direct attention to actions, as well as being an efficient way of assisting coordination. However, an excellent knowledge of actions normally calls for very routine tasks or actions that are easily supervised, thus curbing creativity, innovation and adaptation.
- Personnel-cultural controls emphasise trust, self-monitoring and social or group pressures. The principal methods of implementing these are: selection and placement of employees; training; and job design and provision of necessary resources; codes of conduct; intra-organizational transfers; social arrangements; and tone at the top.

TABLE 1.- MERCHANT AND VAN DER STEDE'S FRAMEWORK

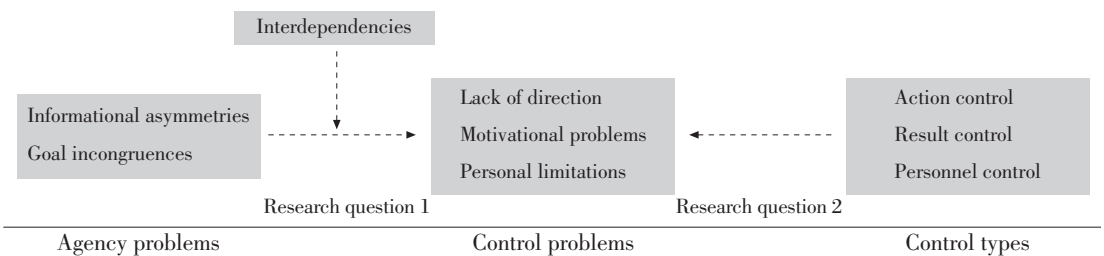
Controls		Control problems		
		Lack of direction	Motivational problems	Personal limitations
Results accountability		X	X	
Actions	Behavioural constraints		X	
	Preaction reviews	X	X	X
	Action accountability	X	X	X
	Redundancy			X
Personnel-cultural	Selection and placement	X	X	X
	Training	X		X
	Provision of necessary resources			X
	Group-based rewards	X	X	
	Culture	X	X	

According to Merchant and Van der Stede (2003, p. 218), not every type of control is appropriate for all kinds of control problems (see Table 1). For example, results controls are particularly apt for the management of motivational problems, and can also be used to inform people about what is expected of them. However, they are not effective in managing personnel limitations. Through action controls, MCS seek to ensure appropriate management, at the same time as they facilitate an objective evaluation offering objective measures, training, and associating positive or negative stimuli with certain behaviours, allowing for reactions at later stages. In order to strike a balance between execution, effort and its rewards, it is necessary to communicate expectations clearly through the establishment of objectives, appropriate behaviour and proper evaluation. Furthermore, personnel controls favour training, seeking to create opportunities so that people may show their true abilities. Together with appropriate compensation systems and the transmission of the organization's cultural values, personnel controls also permit alignment of objectives, reducing the likelihood of moral hazard. On the other hand, the importance of the cultural transmission, as a control mechanism, arises from the substitution of individual objectives for organizational objectives.

Following Baiman and Rajan's (2002) proposal, and transposing Merchant and Van der Stede's (2003) arguments into an inter-organizational context, after analysing whether control problems persist in DCs, we ask ourselves whether inter-organizational MCS contribute to solving such problems and whether the contribution of each MCS type might depend on the relevance of each control problem. This leads us to establish our second research question (see Figure 1):

To what extent do each of the MCS types contribute to the management of persistent control problems in outsourced DCs?

FIGURE 1.- PROPOSED THEORETICAL MODEL



3 CASE STUDY METHODOLOGY

In order to find the answers to our research questions, we have adopted an exploratory case study approach (Yin, 1989), examining the relationship between a manufacturing firm, called CMD (an assumed name), and its DC (formed by a set of 176 small representatives). Three factors have influenced our rationale for selecting CMD as our research site. Firstly, the DC is longstanding and

stable. CMD has used this DC for more than twenty years, and, in 2004, over 97 percent of the representatives had been part of the DC for over five years. Secondly, the DC is successful (as demanded by Kaplan, 1983), as it currently generates more than 75% of sales and caters to 90% of clients. It is highlighted that CMD's ROI from its DC is 3.4 times higher than from direct sales. Thirdly, during the period of study, 1998-2004, CMD unilaterally opted to introduce various control tools, which currently make up its inter-organizational MCS to control its multiple representatives.

In line with Yin's (1989) suggestions, we followed three principles in order to improve the reliability and the validity of our findings: using multiple sources of evidence, creating a case study database, and maintaining a chain of evidence. The information necessary to establish and analyse the chain of events was obtained from published data concerning CMD, internal documents, direct observations, visits to work centres and 24 in-depth interviews with key managers (of an average length of 180 minutes). Dating back to 1985, extensive, detailed archival data revealed the chronology of MCS development, as well as their objectives and content, substantiating information obtained from interviews. The main archival sources included the different types of contracts, the representatives' evaluation system results, minutes of all the regular joint meetings, and projects and procedures documents. Supplementary archival data contained a wide volume of management reports, financial and sales reports, improvement project reports, and internal and external newsletters. Interviews enabled us to gather the perceptions and expectations of individual managers, and served to triangulate our findings. Taking the literature on MCS and DCs as a base, we developed guidelines for semi-structured interviews to gain more information on topics whose clarification would be particularly interesting for the study; and to complete and contrast information previously gathered by tapping the wealth of experience of those people who had a direct or an indirect relation to the introduction of MCS. All interviews were tape-recorded and transcribed, and the completed write-ups were sent to the interviewees to ensure their accuracy. We also carried out direct observations at the head office and work centres. Furthermore, we attended four of the annual meetings that CMD holds for its representatives (from 2001 to 2004). Our presence meant that we could listen to employees' observations about the roles and objectives of MCS.

Once the data collection was finalized, we carefully analysed the interview transcripts to understand areas of agreements between interviewees. Archival data were used to confirm issues that arose in interviews and from direct observations. Then, a table was designed to reorganize the original transcripts around issues of significance in order to assist our understanding of the roles, content and objectives of MCS in the DC. Focusing on 'what led to what, and when' (Miles and Huberman, 1994, p. 110), we traced seven events during which MCS development might be discerned.

CMD and Distribution Channel backgrounds

CMD was established in the late nineteenth century. It is currently the leading firm in the Spanish industrial chemical sector and belongs to a multinational group. This sector is characterized by a relatively stable market, in which five giant companies share most of the world

markets. CMD is organized into regional districts, and its activity is basically commercial, although it also carries out the packaging of its products. Industrial chemical products are sold, in containers, directly to major clients or through the DC to a large number of small and medium clients. While delivery sales are carried out through the DC, CMD bills the client directly. CMD's containers are a main asset, often out-valuing the cost of their contents. The management of these containers is a key issue; they are an important source of income, since daily rent is charged to the client, and they must be collected for reuse.

Practically from its outset, CMD delegated the tasks of warehousing and transport, for two primary reasons: logistic costs and in an attempt to attend a great number of geographically small clients dispersed around the market. Gradually CMD regularized the contractual framework of the relationship, focusing on its legal and labour aspects. From 1985 onwards, only one contract type was used for these independent entities, regardless of their varying sizes, legal constitutions, and other business activities. An analysis of the contract shows that it does not envisage every possible contingency. It is a starting point which outlines the legal relationship and those parts of the business that are delegated (geographical areas) as well as economic conditions.

Pre-existing contract representatives were remunerated in different ways: by fees per container in storage or sold, by remittance of a fixed monthly sum for storage or sales, or by reimbursement of expenses. This fact stimulated the need to link the services provided by representatives to the final product price. CMD took advantage of the newly introduced contracts to establish a single system of remuneration: commissions on sales. From that moment onwards, the representatives accepted the products on consignment, operated exclusively in a given geographical area and received commissions on area sales, even though on occasions CMD delivered the product directly to the client.

CMD's commercial department was established in the late 1980s, to take charge of direct sales and customer attention. CMD assigned a commercial department staff member to each group of representatives, who was then responsible for supervising all of these representatives' activities. Through visits to the geographical areas, the commercial department staff member could test client satisfaction and so establish whether the representative was performing well.

CMD's industrial products do not differ from those of its competitors; its main added value is its working approach with the DC, as the representatives supply the clients with a satisfactory standard of service. This fact has prompted its parent company to draw up a plan, named "CMD style", to implement in the rest of Europe.

In order to maintain the chain of evidence, we present the case study in the following two sections that are of interest to our study: (1) chronological development of the MCS; and (2) CMD's perception of its results.

4 | CHRONOLOGICAL DEVELOPMENT OF MCS

1998. Electronic integration

CMD installed computers and shared software in all its representatives' centres, delegating new functions (through passwords, representatives can create and maintain client files, access information on price discounts, monitor clients' inventory, manage logistics, receive complaints and control outstanding payments) that increased its degree of externalization. "We needed systems that, by allocating responsibility for the assigned functions [to Distribution channel members], would allow us to keep some control over the market" (District Director). The aim was to homogenize tasks, improve control over activities, eliminate duplicated functions (mainly administrative), and reduce its inventory level. "It liberated us from an important administrative work-load; we gained in speed and reliability of data, and client complaints dropped" (Client Attention Centre Manager). Therefore, CMD was able to keep track of its containers, on-line allocation of inventory among the representatives and gain information on final clients. "It gives us greater efficiency, even though the channel model is more costly" (former CMD CEO).

1999. Shared information project

CMD began to issue reports with commercial management information with the aim of: (i) obtaining better knowledge of the evolution of its clients; (ii) planning and solving problems more quickly; (iii) coordinating their work with the commercial department (Project Report). As CMD's managers comment, it provided the representatives with the necessary information to improve their sales activities and included falls in demand, registration of new clients, container contracts, sales analyses contrasted with the previous year, itemised sales breakdowns and the total number of containers per client. "Preparing tools to help them out, we told them that the clients should be managed, and asked them to take responsibility for doing so" (Representatives Manager). This information was commented upon each month by the commercial staff, which enabled them to establish sales objectives.

1999. Representatives' marketing plan

This plan was based on four pillars:

{a} *Representatives profile*. CMD defines the characteristics it seeks in representatives: (i) a firm operating in industrial supplies; (ii) good knowledge of their area; (iii) a good reputation; and (iv) having other related business (Representatives' marketing plan report). "We've consolidated our channel. We defined what the channel type should be and described how they [representatives] should work. This takes us to the following step, to evaluate the channel on the basis of this definition" (former Representatives Manager).

{b} *Representatives control scorecard.* The previous shared information project prompted the establishment of a computer application. New information was added that allowed for the monitoring of the representatives' objectives. Although representatives already had access to the same information (through client invoice copies), the computer format was better organized and more detailed. "It's a support tool where each representative's situation is analysed, and it provides a great amount of information... Our channel members have speedy access to information that allows them to develop their work in a more coordinated, effective, rapid and satisfactory way" (Representatives control scorecard report). In most cases, this information even improved commercial department activities by providing an extra management tool.

{c} *Representatives database.* This tool gathered information on the different areas and on the functions of the representatives (e.g., sales, commissions, degree of dedication, number of sales personnel, number of delivery trucks, client attention hours, average period of payments, etc.). It facilitates comparisons and analysis of representatives' results and their evolution.

{d} *Representatives meetings.* With the aim of communicating, training, integrating, and aligning actions, these meetings dealt with such aspects as results and budgets (both CMD's and DC's), commercial and pricing policies, annual targets and representatives' improvement plans, marketing campaigns, technical and logistics matters, as well as administrative issues. "It was necessary to stimulate communication and everyone had to receive the same message because not all the commercial staff can or want to communicate things in the same way" (Commercial Director). Moreover, CMD used these meetings to provide training on new activities (e.g. transport laws, new product introductions, trade fairs, and new computer programs).

1999. Representatives' satisfaction survey

CMD initiated a two-level satisfaction survey to identify weak points and develop new projects that would enhance the relationship. Groups surveyed were: 1. Final clients: to assess the standard of services offered by representatives to clients; and 2. Representatives: to evaluate the level of services supplied by CMD.

2000. Representatives manual

This manual set out the procedures to follow in all activities relating to storage, distribution, administration, and commercialization, as well as templates of documents and forms both for internal use and for the final client.

2001. RES project: Representatives Evaluation System

The RES had two objectives: to reward those who obtain the best results and to pinpoint those who need more assistance in order to pre-empt possible conflicts. "It has provided us with objective

information to understand how our channel was doing” (Sales Manager). Analysing the DC chain value, CMD defined 37 performance measures (including financial and non-financial, internal and external measures), their relative weights and the desired level of development. “Before we (also) had sales data, but we could not foresee the appropriate management approach, the potential of the area. We had data but it was dispersed. Now we've got them together and they're shared by both parties” (Client Attention Centre Manager). It was a continuous improvement system, the principal goal of which was to enhance commercial activities. In this way, CMD can now detect shortfalls, item by item, representative by representative, in order to implement the pertinent personal objectives.

2002-03. RES results

Through the RES, CMD has obtained a ranking of its representatives every year, rewarding best performances, accompanying it with an incentives plan. According to interviews, it is the first step towards a more sophisticated compensation system. The results obtained from 2002 to 2003 reflect a notable improvement in representative and client satisfaction levels. In 2003, CMD changed its incentives system to an award system based on the RES. It established the “commitment award, for those representatives who exceeded the average evaluation” and the “excellence award for those who surpassed the commitment level”.

CMD’s assessment of its distribution channel management

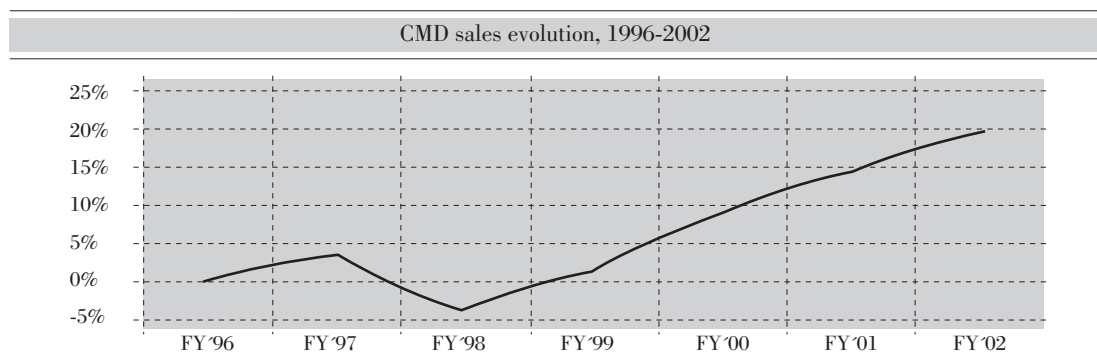
All our interviewees comment that the DC has evolved into a more complex entity, and that inter-organizational MCS have allowed the outsourcing of new administrative and commercial tasks. Nowadays, more outputs arising from manufacturing activities are translated into inputs for representatives’ activities and vice versa, requiring a better fit between a wider range of manufacturer and representative operations. Besides dependence on the storage, delivery and collection of products and containers, in other words the increase in outsourced tasks makes CMD more dependent on the representatives. “The DC is a fundamental piece in our structure, they're the ones that speak to the clients, giving our image and service” (Sales manager). “They’re a powerful tool to get closer to the dispersed clients, giving them proper attention that we could not give, or that would be excessively expensive” (CMD Director). Furthermore, according to CMD’s managers, a bad DC service could provoke higher costs. As the Representatives Manager argued, “the advantage of the commission system is that it's simple. The drawback is that it doesn't motivate the representatives properly. It draws them towards the bigger clients, more commission for less work”.

However, with the introduction of these inter-organizational MCS, CMD personnel felt that they had obtained sufficient control over the DC. The new MCS have improved communication and there is an ongoing adjustment between them, managing these higher interdependencies. MCS have brought about operating improvements, greater efficiency in terms of externalization of functions, lower personnel and structural costs, greater control of stock, containers and the end market, the optimization of delivery routes, and the ability to track assets. CMD values the MCS contribution in

aligning the objectives of both parties, remunerating representatives not only through commission on sales. With the new MCS tools, CMD guides the DC towards the right service and, at the same time, increases the flow of objective information that allows them to monitor the outsourced activities. The Representatives Manager remarked, “It was simply not correct to have so little information with which to monitor representatives”. This MCS development has not yet concluded, as several interviewees pointed out “We want to include them more fully in our value chain” (CMD Director).

Likewise, since 1999 (see Figure 2), CMD shows an ongoing increase in sales. While there was a positive trend in the macro-economic market itself, most of interviewees consider that sales have increased over the average as a consequence of MCS development on the DC management. MCS has focused the representatives’ attention on sales and commercial tasks, improving their activities. According to the interviews, it has allowed the development of a premium prices policy, maintaining market share, and the introduction of new client services supplied by the agents (services which are billed by CMD to the final clients). MCS development has also freed commercial staff of administrative and more routine sales tasks and it has given them time to dedicate to other commercial functions (e.g., development of new product applications, attention to strategic clients) improving the positive sales evolution. But, at the same time, all of these make CMD sales more easily influenced by representatives’ behaviour and activities.

FIGURE 2.- CMD SALES EVOLUTION, 1996-2002



5 ANALYSIS AND DISCUSSION

Before our study period the DC tasks were simple, so the MCS used by the manufacturer were basic ones that are commonplace in DC management (Stern El-Ansary and Coughlan, 1996): the contract, the commission system and direct supervision. In this setting the manufacturer developed the MCS in a homogeneous way across the entire channel. In this section, we first discuss how each control problem is rooted in agency problems. We then go on to analyse how each MCS type manages specific control problems.

Control problems rooted in Agency problems

We found that the control problems defined by Merchant and Van der Stede (2003) for an intra-firm context persisted in the outsourced DCs and, as agency theory predicts, that these control problems were rooted in informational asymmetries and pervasive conflicts, aggravated by interdependencies (see Figure 3).

- **Lack of direction:** The DC was characterized by bi-directional asymmetries of information despite reaching the benefits recognized in the literature (see Anderson and Oliver, 1987; Stern, El-Ansary and Coughlan, 1996). Earlier MCS did not allow CMD access to private information regarding representatives' behaviour, or knowledge. Its relationship with the DC was heterogeneous, with some different problems (legal, labour, and compensation). In 1985, CMD had tried to manage its DC developing an exclusive intermediary contract, in order to establish the main obligations and rights of the members, and the services' retribution through a fixed percentage of commission on the sales. However, the contract was incomplete; the interviewees view was that the contract is only the beginning and that it should be completed with other mechanisms. While many aspects of production, transport, and marketing were centrally planned and controlled, the new key operations of the representatives provoke greater interdependence and were seen to require more control. This was made even more acute because controlling the final market was a critical aspect of CMD's control over assets (containers). In this respect, CMD depended on the information reported by representatives, whether manually or digitally. The commodity nature of CMD's products meant the company sought to add value to its sales method through its DC. CMD had dependencies on representatives' performance (Stern, El-Ansary and Coughlan, 1996), as is shown by the percentages of DC sales volume, which highlights the need for it to invest in administrative systems to manage the outsourced activities and to increase the representatives' commitment, in contrast to the argument advanced by Anderson and Oliver (1987). A lack of direction became apparent because neither the contract nor the commercial department could communicate to the representatives exactly what CMD expected of them. Furthermore, direct supervision by the commercial department was the only link between CMD and representatives, a situation that often led to misinterpretation, oversight, or loss of information. Given the commercial staff's limited capacity for monitoring (Celly and Frazier, 1996), representatives could shirk or behave opportunistically.
- **Motivational problems.** In a similar way to Gietzmann's (1995) example, CMD perceives that when giving its clients' portfolio to its representatives and supporting them through its commercial employees, DC members have a fixed remuneration to face their costs of distribution, enabling bad representatives in good areas to obtain large commissions, and vice versa. The DC can, due to lack of goal congruence, undertake an action in an inefficient way or provide distorted information, and these situations will affect CMD reputation, due to the higher dependencies. CMD detects that the current retribution system does not provide representatives with the necessary incentives to confront new risks and

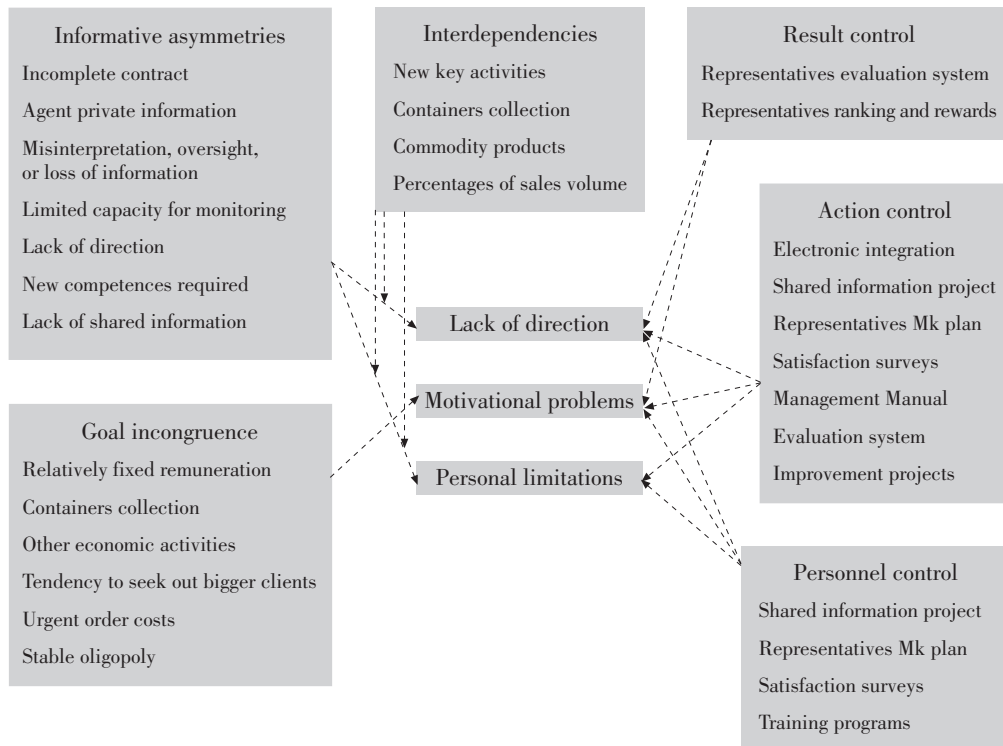
opportunities, that is to say, it detects that representatives can be satisfied with the maintenance of the current client portfolio, dedicating no further efforts to the search of new market opportunities. Furthermore, the commission system also failed to motivate container collection, so CMD could not meet its targets for container rotation. This problem of moral risk can be heightened by the fact that the representatives, although they are exclusive in the commercialization of their products, can also carry out other economic activities. Thus, the potential for opportunistic behaviours arises, when the representative neither makes the necessary effort, nor acts in the clients' interest. CMD detects the tendency of some representatives to pay attention only to those more profitable, high-volume clients. This problem was aggravated when a client made an urgent order that the representative had to fulfil, even though the cost of supplying the service outweighed the commission. The consignment system and the fixed percentage commission failed to transmit sales risk to the representatives, because the contract was exclusive to a given geographical area and CMD's industry was a stable oligopoly. Traditionally, CMD had trusted in contracts, in the direct supervision of its commercial staff and in remuneration by means of a fixed percentage of commission on the sale, but it is unable to evaluate the quality of the service that is exactly being given to its clients.

- Personal limitations: CMD took its first steps towards hiring representatives by recruiting existing logistic firms that already acted as deliverers and depositaries of its products. Considering the dynamic nature of the relationship towards a more complex and interdependent agreement, the contract process (in the mid 1980s) presented an actual problem of adverse selection and moral hazard, because some representatives lacked training, resources, and capacity in order to fulfil the new tasks (administrative and commercial). At the same time, CMD detected that representatives did not have the proper information to manage their geographical areas and client portfolio.

MCS type contributions to the management of DC control problems

Chiefly from 1998, CMD opted to create a DC plan to get what Narus and Anderson (1986) would call proactive management of its relationship. The objectives of the DC were changed to include administrative, commercial and sales activities, besides warehousing and deliveries tasks. This made CMD more dependent on, and vulnerable to representatives' behaviour, meaning it had more to lose, because of increased risk due to inadequate representative service, as Frazier and Antia (1995) foresaw. As Figure 3 shows, and according to Merchant and Van der Stede (2003), CMD needed to introduce MCS that would allow it to guide its representatives in their new functions, to mitigate their lack of direction. To address motivational problems, CMD needed mechanisms that would stimulate target achievement. To mitigate personal limitations, CMD required mechanisms that would supply representatives with resources and information. That is, CMD gradually (1) formalized procedures for action control purposes; (2) developed more complex information systems to control results; and (3) developed personnel-cultural controls.

FIGURE 3.- CASE-STUDY RESULTS



(1) Action controls: The new MCS tools (electronic integration, the shared information project, the representatives’ marketing plan, satisfaction surveys, and the representatives’ manual) fully enabled direct supervision by its commercial department (see Table 2), defining and communicating acceptable limits of desired actions, solving lack of direction problems. In this way, CMD supplied its commercial staff with the necessary tools to act on a more solid information base, which in turn helped them to correct representatives’ behaviour. The company also gave representatives the tools and information needed to improve their activities by solving personal limitations and motivating them, which increased their commitment to joint actions and commercial objectives. Moreover, to avoid curbing innovation (Merchant and Van der Stede, 2003), CMD established joint improvement projects to foment creativity and adaptation. This formalization of action controls was assisted by the fact that externalized services had previously been carried out by CMD personnel, so the firm managed personnel limitation problems by transferring its information and its procedures (Lassar and Kerr, 1996). Therefore, CMD increased its confidence that representatives would act in the desired manner in both former and new functions, thereby reducing the risk of poor client services.

(2) Result controls: Because the commission system did not provide enough information, did not guide, motivate and train representatives, as Table 2 shows, the new representatives’ evaluation

system complemented it. These new MCS provided direction, communicating the proper actions, helping to define the results that CMD wanted in areas it considered critical (new commercialization and administrative functions, management of containers and clients), in order to appraise these areas regularly, to control the stocks and containers, and to establish incentives and benchmarking systems, with the aim of encouraging behaviour that would bring about the desired results. As CMD's managers comment, this evaluation system is a flexible process, allowing the manufacturer to modify its defined measures (eliminating items, including new ones or modifying them), as they perceive that they do not present the desired attributes correctly. Moreover, after detecting the limitations of each representative with the new evaluation system, CMD set out joint targets, specific training programs, and improvement projects for each one, managing personal limitation problems. In this sense, CMD persuaded its representatives to increase their effort in the DC value chain activities, because they responded to both financial and non-financial stimuli. This policy helped CMD to mitigate motivational problems.

(3) Furthermore, MCS allowed it to reinforce the personnel-cultural controls. By defining a profile for new representatives and establishing new lines of communication and training, CMD created cultural values that sought to align representatives' objectives. CMD gathered information on its representatives' needs through satisfaction surveys, detecting their needs (Narus and Anderson, 1986), contributing to overcoming personnel limitations, and motivating them. Training courses, regular meetings, and communication channels help in the adequate management of the DC, guiding its behaviours and allowing its socialization through inter-firm transference of CMD objectives and know-how.

Consequently, MCS development can be explained in terms of the solution it offers to control problems. CMD managed its contractual agreements to reduce its dependence on representatives and to mitigate the underlying informational asymmetry, collecting information from representatives regarding their behaviour, their assets, and the final market, in order to forewarn of problems, enabling their timely correction. In a flexible way, CMD tried to ensure representatives' compliance with its objectives through MCS in order to promote cooperation and prevent failures. Our findings extend Merchant and Van der Stede's (2003) statement by showing that as the relationship grew, its controls evolved towards increasing formalization of procedures for action control and personnel control, and developing more complex result control systems. Therefore, MCS types are not substitutes, they complement each other and these combinations synergistically influence the attainment of manufacturer objectives.

TABLE 2.- ANALYSIS OF MCS TYPES DEVELOPMENT IN THE CMD CASE

Events	Result control	Action control	Personnel-cultural control	Control problems		
				LD	MP	PL
1998 Electronic integration		Homogenization of processes. Limitation of actions and stock controls. Tasks accountability. Better informed direct supervision.		x		
				It allows representatives to be guided in a homogeneous way.		
1999 Shared information project		Establishment of action responsibility in the given area. Better informed direct supervision. Establishment of joint sales actions objectives with commercial department.	Communication platform.	x	x	
				It allows guiding representatives in a homogeneous way and the establishment of joint objectives to motivate them to reach it.		
1999 Representatives' marketing plan		Establishment of action responsibility in the given area. Better informed direct supervision. Establishment of joint sales actions objectives with commercial department. Benchmarking database.	Representatives' profile. Commercial department helps and trains representatives. Communication platform. Social commitment. Shared meetings.	x	x	x
				It allows representatives to be guided in a homogeneous way; the establishment of joint objectives to motivate them; and the meetings to train them.		
1999 Satisfaction surveys		Client satisfaction appraisal.	Representatives' satisfaction and needs appraisal	x	x	
				It allows representatives to be guided towards improvements in their services and motivates them by asking about their needs		
2000 Representatives' Manual		Establishment of operational norms and processes.		x	x	x
				It allows representatives to be guided in a homogeneous way, by training them.		
2001 Representatives' evaluation system	Establishment of control objectives on 37 key value-chain performance indicators.	Establishment of control objectives on 37 key value-chain performance indicators.		x	x	
				It guides representatives towards key success variables and motivates them through ranking and rewards.		
2002 First RES results	Representatives ranking and reward system	Improvement projects.	Specific training programs.	x	x	x
				It guides and trains representatives in the key success variables and motivates them by acknowledging their importance		

LD: Lack of direction
MP: Motivational problems
PL: Personal limitations

6 CONCLUSIONS AND IMPLICATIONS

This case study allows us to explore persistent control problems in inter-organizational relationships and the role of MCS in influencing outsourced DC management. Contrary to traditional assumptions, we provide evidence that control problems persist in an interorganizational context. Our findings show how lack of direction, motivational problems and personal limitations are rooted in DC bi-directional informational asymmetry and conflicting objectives, both aggravated by the interdependencies caused by the quantity and complexity of tasks that the manufacturer delegates to the representatives.

According to the line of argument proposed by Baiman and Rajan (2002), we have found that MCS contribute to contract completion, and promote a more cooperative and flexible relationship. Our findings show how MCS types evolved from basic results controls –the classical contract, direct supervision and sales commission – to include a more sophisticated mix including result, action and personnel-cultural controls. This gradual development of MCS helps to manage the relationship with representatives in order to mitigate control problems. MCS mitigate control problems allowing the manufacturer (1) to communicate to the representatives what the manufacturing firm wants from them in a standard and formal way; (2) to motivate them; and (3) to transfer capabilities in order to delegate more tasks, developing a common DC culture. Through MCS stimulated development, the manufacturer completes and develops the contract in key operational aspects to reach its strategy. As opposed to the rigidity of contracts, MCS types allow a gradual increase of new outsourced tasks, modifying the representatives' commitment to different contingencies in a flexible but formal way, and achieving, at the same time, a closer relationship with the DC members.

Besides the theoretical implications, there are also practical aspects of this research. Our findings offer insights into the types of control problems that can be found in DCs, as they show how each MCS type can help to mitigate them and to reach a more cooperative relationship. In spite of these problems, vertically integrating the distribution function is not the only option for the manufacturer to gain control. However, we must mention that the evidence presented in this paper is based on a single in-depth study; therefore it would be interesting to analyse other, possibly contrasting cases. Besides, it would be interesting to complement these results with data from the representatives' perspective analysing their perceptions. Likewise, it would be interesting to analyse its effect on trust, as another key construct in achieving an acceptable confidence level in supply chain relationships.

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