



HAL
open science

Logistical ” mutualization ” in contractual networks: can the experience of the food retailing industry be reproduced?

Odile Chanut, Gilles Paché

► To cite this version:

Odile Chanut, Gilles Paché. Logistical ” mutualization ” in contractual networks: can the experience of the food retailing industry be reproduced?. Proceedings of the 17th International Annual EurOMA Conference (European Operations Management Association), 2011, Porto, Portugal. hal-01766899

HAL Id: hal-01766899

<https://hal.science/hal-01766899>

Submitted on 14 Apr 2018

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Logistical “mutualization” in contractual networks: can the experience of the food retailing industry be reproduced?

Odile Chanut and Gilles Paché

*Université de la Méditerranée (Aix-Marseille II), France
Centre de Recherche sur le Transport et la Logistique (CRET-LOG)
Email: {odile.chanut}{gilles.pache}@univmed.fr*

Abstract

The sustainable use of rare logistical resources is now an acute issue in many countries. In view of increasingly high environment constraints, it has become imperative to avoid wastes resulting from redundancy of logistical equipment. In this new context, logistical mutualization (or pooling), now necessary, looms large in the thinking of decision makers and academics. This paper looks into the mutualization approaches initiated in the food retailing industry and tries to determine whether they could be applicable to contractual networks.

Keywords: Contractual networks, Logistics management, Mutualization (pooling)

Introduction

An article published in the January 2010 issue of *Supply Chain Magazine* described an experiment in logistical mutualization (or pooling) particularly symptomatic of collective strategies currently used in France. 15 firms in the Finistère area of Brittany decided to cooperate to reduce their transport costs as large retailers were demanding increasingly fractionated deliveries from them as part of a JIT supply policy. Following a tender launched in October 2009, the Supply Chain Masters consulting company was selected to carry out a mutualization feasibility study for the end of 2010. The Supply Chain Masters Associate Manager is pleased with this initiative: “Guided by sustainable development principles, the purpose of this collective action is to find new potentials for growth and productivity by establishing SME supply chains networks”. The project involves assessing various mutualization scenarios liable to improve the competitiveness of firms and to reduce the numbers of kilometres covered and CO₂ emissions. It appears that the time has come for concerted rather than individual actions, and the example given above is but an ongoing experiment among many others.

In fact, the pooling of logistical resources and competences by sometimes direct and head-on competitors is not really new. Although logistical mutualization has been frequently mentioned in the last few years, it must be admitted that since the 1980s, large retailers have quickly understood the interest in pooling transport or storage capacities by resorting to shared logistics service providers (LSP). This sharing is a source of competitive advantage since it allows large retailers to benefit from economies of scale and scope, and to optimize the use of rare logistical resources. Mutualization approaches are simply a sign of acceleration of old practices and a generalization of

their scope as part of sustainable development. More precisely, mutualization approaches should be seen as placing the action of firms within the context of an overall environmental initiative known in France as the *Grenelle de l'Environnement*. On this basis, the purpose is to determine whether mutualization approaches introduced by large retailers as early as the 1980s represent a standard model that can apply to other sectors of activity.

This paper chose the case of contractual networks (franchise and concession networks) to determine whether mutualization approaches have a universal character. In contractual networks, logistics have for many years been viewed as a source of competitive advantage. As part of the centralization process of purchasing activities, logistics is organized by franchisors or licensors to optimise deliveries to the stores in the network, and thus reduce transport and storage costs (Blair & Lafontaine, 2005). From this point of view, it is possible to speak of *vertical mutualization*, between network members. But the logistics of contractual networks now has to take into account new business and environmental factors which could lead players to adopt the path of *horizontal mutualization*, between distinct contractual networks. Different contractual networks are often found in the same streets in town centres, as a result of similar implantation strategies. So, delivery processes could be reorganized so as to supply competing contractual networks locally, rather than stores within the same contractual network over the whole country. We examine whether the successful experiments in mutualization of logistical resources between competitors in the food retailing industry can be copied by other contractual networks.

Retail logistics: from dissemination to mutualization

It is now accepted that logistics is a key factor in manufacturers' and large food and non-food retailers' strategies. Adopting a purely operational point of view, based on the optimization of activities relating to the delivery of finished goods from factories to store shelves and/or the return of unsold or past their shelf-life products (*reverse logistics*), at the beginning of the 1990s logistics included a more integrative outlook, based on a type of management capable of making a group of firms (suppliers, manufacturers, large retailers, LSP) work in close and lasting cooperation to create value for customers (Paché, 2004). New semantics came with the change in perspective since we now talk of "chain solidarity" and supply chain management. Competition has moved from between firms themselves (Procter & Gamble *vs.* Unilever), to between supply chains themselves, as analyzed by Christopher (2010).

Supply chains reconfiguration

Three logistical models have followed one another to match changes in the food retailing industry over the last forty years (see Table 1). During the emergence of the supermarket and hypermarket formats in the 1960s and 1970s, the dominant logistical model was one of direct deliveries from factories to stores (*logistical model 1*). Logistical costs were then met by manufacturers and marginally by wholesalers. With the multiplication of the number of hypermarkets and supermarkets, their race for size and for larger in-store inventories, large retailers were led to create distribution centres (DC) in the 1980s. This is the birth of *logistical model 2*, of deliveries from factories to large retailers' DC, responsible for supplying stores. DC could, if need be, be managed by LSP who would end up by taking charge of increasingly numerous and complex tasks (order management, co-packing, co-manufacturing, etc.).

Table 1 – Retail logistics issues, structures and stakeholders in France

	1970s	1980s	1990-2005	Since 2005
<i>Evolution of retailing structures</i>	Take-off of modern retail formats (supermarket, hypermarket)	Race for size and growth of number of references and stores	Maturity of store stock Raffarin Act (scarcity of new sales areas)	Come-back of convenience stores Development of e-commerce and home deliveries
<i>Logistical models</i> <i>Evolution of logistical structures</i>	Model 1 Direct delivery from factories to stores	Model 2 Delivery from factories to large retailers' DC	Model 2 (con't) Dissemination and specialization of large retailers' DC Rise of SCM with creation of collaborative tools (VMI, CPFR, etc.)	Model 3 Delivery from factories to multi-producers' warehouses, then to large retailers' DC Model 4 Three logistical organizations Toward creation of degrouping centres in the periphery of cities?
<i>Logistical strategic stakes</i>	In terms of going from supply economics to demand economics: ▪ JIT practices ▪ decoupling point	In terms of competitive advantage: ▪ reduction of costs (transfer of costs from manufacturers to large retailers) ▪ growing levels of service (reduction of stock-outs, more frequent deliveries)	In terms of power games: ▪ interest of controlling supply chain ▪ knowledge of markets, negotiated sharing of information on demand	In terms of sustainable development: ▪ reduction of number of km covered and CO ₂ impact ▪ fluid traffic in city centres ▪ higher delivery frequency ▪ search for alternatives to road transport (railway, waterways)
<i>Major logistical stakeholders</i>	Manufacturers Large retailers	Manufacturers Large retailers First generation LSP	Manufacturers Large retailers Second generation LSP (more complex package deal of services)	Manufacturers Large retailers Second generation LSP (more complex package deal of services) Local Authorities
<i>Mutualization</i>		... of store stocks (reduction of stocks in store)	... of transports, with one LSP as mutualization vector	... of warehouses between manufacturers ... of DC between large retailers?

On an organizational and operational plan, logistical model 2 led to a pooling of the stocks of a given large retailer in one or several DC and a corresponding reduction of storage areas in stores. Storage areas were progressively transformed into sales areas, particularly when the Raffarin Act (July 1996) required the creation of any store with a sales area above 300 m² to obtain administrative authorization, making the area dedicated to sales a scarce commodity. The 1990s led to the multiplication of large retailers' DC, whose increasing size did not always allow the optimum operation of their capacities, as logistical infrastructures were created by each large retailer, without

consulting competitors. A new logistical model finally and timidly emerged in the mid 2000s, with the implementation upstream of the large retailers' DC, of multi-producer warehouses shared by several manufacturers. *Logistical model 3* marked a development toward mutualization, but only involved a single large retailer (Hiesse, 2009). The idea was not to pool logistical resources and competences between several large retailers, but to optimize deliveries from manufacturers, particularly SME, by pooling them and sending them to a large retailer's DC.

Toward the emergence of a fourth logistical model?

Although the first objective of logistics was to improve performance (cost reduction, improvement of service quality, increased reactivity) and to create a competitive advantage for large retailers, other challenges were added with time. The control of logistical infrastructures thus became a weapon in vertical competition between manufacturers and large retailers. The logistical cost, that still represents 6 to 8% of the selling price of convenience goods, is partly transferred from manufacturers to large retailers, but the financial compensation required from manufacturers largely surpasses the resulting cost savings. In addition, strategic information relating to market knowledge and consumer behaviours is held by large retailers, and this increases their power of negotiation with producers (des Garets, 2007).

New issues have emerged more recently, to face the current mutations that require a sustainable use of logistical resources. Structured answers are indispensable to meet the *societal urgency of sustainable development*. "Sustainable logistics" initiatives now begin to multiply, all the more so because logistical activities cause much environmental damage. Among these initiatives, the mutualization of logistical resources occupies an increasingly larger place in the concerns of political decision makers, local Authorities, company managers and researchers. In short, to mutualize means to organize – in a structured and purposeful way – the pooling of resources between firms who can also be head-on competitors in the market.

The idea of mutualization is not revolutionary as it finds its roots in the use of LSP shared by several supply chains as early as the 1980s. What is new is considering mutualization to be a collective operation with societal objectives that cannot be overlooked and must replace individual company strategies. Experiments in mutualization may be called vertical when they result in pooling resources between firms located at different levels of the distribution channel. They may be called horizontal between firms or groups of firms that are in direct competition in final markets. From this point of view, we probably are at a key moment in the evolution of supply chains, with mutations which will have consequences at several levels. Two can be more usefully examined.

1. *The ability to conduct winning cooperative strategies in the long term.* What could be more paradoxical than to imagine competitive firms who have patiently developed a logistical organization to distinguish themselves from their competitors, and then finally accept to share resources with them within a mutualization approach? As the societal urgency is now quite obvious, such a mutation in the operation of supply chains cannot be avoided. The result is a generalization of "cooperative" strategies; in other words, firms will have to learn how to manage a situation of competition in some dimensions of their value chain, while cooperating in other dimensions. Such a cooperative approach, coupled with direct competition in the market to conquer consumers, was often applied at a level that may be called horizontal, for example to design shared packaging (between Coca-Cola and Pepsi-Cola). An extension to the field of logistics seems natural, but poses formidable issues in the long term. Flow monitoring gives

access to strategic data on sales, promotional operations under way, etc., and mutualization offers a partly transparent access to all partners in a supply chain. To combine cooperation and competition in a context of mutualization means reformulating the governance of supply chains, on a radically new strategic model.

2. *The controlling intervention of local Authorities.* Adopting a perspective open to interactions between private action and public interventionism, it must be admitted that the mutualization of logistical resources fits perfectly with the concept of a “sustainable city” project aimed at avoiding the saturation and pollution of the urban environment for lack of a sufficient coordination of goods flows. For example, the Monaco principality required the implementation of a system of urban deliveries totally planned from a warehouse located 30 km away. No direct supplying of stores can be made; supplying has to transit through degrouping centres from which pooled rounds associating products for different stores are managed by one LSP. Such experiments are multiplying, particularly in Germany around the concept of *City Logistik*, and result in an increasingly significant intervention of local Authorities in the planning of urban logistical operations (Paché, 2010). These initiatives produce *logistical model 4*, associating three logistical organizations: as a first step, manufacturers deliver to a multi-suppliers warehouse (also called primary warehouse) where flows are grouped; as a second step, manufacturers (several of them) deliver to large retailers’ warehouses (also called secondary warehouses) depending on their needs, and as a third step, these warehouses deliver to stores, or to degrouping centres at the periphery of cities (also called consolidation warehouses).

The current strategies of logistical mutualization lead to a reassessment of the key processes of the supply chain and the allocation of resources between firms. The food retailing industry is therefore at the origin of well-established and highly efficient management models that have been the subject of numerous research works. Principles that we may imagine universal in the organization of logistical mutualization (creation of independent consolidation centres by each large retailer, pooling of transport resources between geographically distant stores, etc.) should emerge. But if logistical thinking and SCM have focused at first on large structures, with manufacturers’ and large retailers’ separate or joint initiatives, what about the thinking and practices of contractual networks, as they do not have the same logistical resources and competences? Are the developments noted in the food retailing industry toward more vertical than horizontal mutualization finally leading to a universal model? This is the question examined in the second part of this paper.

Logistical stakes in contractual networks

Contractual networks, particularly franchise networks, have in a few years become an unavoidable phenomenon in the business environment of many countries (Blair & Lafontaine, 2005; Boulay & Chanut, 2010). Exhibit 1 lists some of their specific legal and organizational aspects. Contractual networks have colonized city centres and few are the pedestrian streets where stores like McDonald’s, Pizza Hut or Carrefour City are absent. In France, in terms of franchising only, at the beginning of 2010, there were more than 1,350 contractual networks and 52,000 stores, in the most varied sectors of activity, that were distributing products or services. Portugal is not far behind with, at the end of 2007, 501 franchisors and 11,271 franchisees for a population of 11 million inhabitants (according to www.ac-franchise.com-01/11/2009, Access date: April 8, 2010).

Exhibit 1 – A few details on contractual networks

There are several types of contracts in contractual networks, varying on some points but following the same principles: the sharing of investments, risks and profits between a network head acting as strategic centre for the relationship (Assens, 2003), and independent retailers who own their businesses. Franchise contracts, frequent for car dealers and fitted kitchen installers, include a double, compulsory exclusivity: a territorial exclusivity for the retailer, procurement exclusivity for the retailer with the head-of-network franchisor. The franchise contract relies on a significant information transfer from franchisor to franchisee. The commission-affiliation contract, which is becoming a standard in the ready-to-wear clothes business, has been added to the franchise contract and stipulates that the stock remains the property of the contractual network head. Its cost and management are not supported by the franchisee which is considered to be affiliated.

Contractual networks, another organizational form for the food retailing industry

As network organizations, contractual networks represent an alternative to the integrated systems of the food retailing industry, controlled by a limited number of multinational groups, with the exception of the Intermarché and Carrefour supermarket chains, which has operated a partial franchise system since the 1970s and are among the top French food retailers. They enable entrepreneurs who have implemented a distinctive store concept to have direct access to final consumers. An original organizational form, a hybrid between market and hierarchy in Williamson's (1985) sense, contractual networks are based on a close and interactive collaboration between several firms, a franchisor (or licensor), who generally is the initiator of the partnership, and franchisees (or licensees) legally and financially independent retailers, who become members of a network to benefit from a successful business system: "Franchisors are expected to provide operating guidelines, policies, procedures, and marketing support. Franchisees are expected to follow these guidelines and provide the franchisor with sales information and results so that the royalty payments (stipulated by contract) are accurate and timely. Franchisees are also expected to share other operating information to help franchisors refine their marketing efforts" (Paswan & Wittmann, 2009:177).

The contract is based on a complementarity of resources and competences between partners. It distributes roles, investments and gains between two entrepreneurs. The contractual network head selects franchisees, defines the network strategy and brand promotion to maximize the respective profits of the franchisor and the franchisees (Sigué & Chintagunta, 2009). He provides franchisees with a well-tested know-how and checks the activities of retailers, so as to ensure the homogeneity of the offer to customers. Retailers own their businesses and bring their financial, human and managerial resources to the benefit of stores. In brief, franchising is clearly an entrepreneurial activity based on franchisees choosing to earn their life in that way and franchisors carrying out a strategic project; from this point of view, theories explaining the birth, growth and survival of franchising are close to entrepreneurship (Tuunanen & Hoy, 2007).

Now acknowledged as legitimate, contractual networks have become an "organizational standard" authorizing a rapid development of stores in a given territory (Dumoulin & Gauzente, 2009). The two-headed management of the activity (strategic decisions for the network head, store decisions for retailers), coupled with the retailers' patrimonial motivation appears to result in an organizational agility and an improved reactivity of contractual networks in case of external shocks, even if they are not always large-size firms with significant resources. Some franchisors are international firms such as McDonald's, Speedy or Carrefour, that are often mixed networks, relying on both own-account stores and franchised stores. But the network heads (franchisors) are more often smaller firms, of the SME type, with teams of a

few dozens employees and limited resources. In both cases, the franchisors' turnover is made from entrance fees into the contractual network paid by retailers, from a fee on the store turnover and possibly of a commercial margin on the products sold by the central purchasing unit.

The logistics of contractual networks: from vertical to horizontal mutualization?

Franchisors put among the “wedding presents” a distinctive selling concept (assortment and services, marketing mix and store theatricalization), and also the know-how cementing the franchise contract and making the franchisees' activities more efficient. In addition to the strictly codified know-how taught to franchisees, for example in terms of methods for selling upmarket perfumes, standardized procedures of hamburger production or of car servicing, the successful system proposed by franchisors relies on a set of “organizational know-hows”, including their ability to manage their supply chains successfully to the benefit of their franchisees (Perrigot *et al.*, 2009).

In contractual networks, like in the food retailing industry, logistics has been viewed as a source of competitive advantage for a long time. Supporting the process of centralisation of purchasing activities, logistics is organized by franchisors or licensors to optimize deliveries to the network stores, thus reducing transport and storage costs. From this point of view, it is possible to speak of *vertical mutualization* between network members. In addition, franchisors (or licensors) sometimes ensure LSP functions when they create, either on own-account or by resorting to third-party services, logistical structures dedicated to their networks. Some networks have created distribution centres dedicated to their stores and sometimes own their fleet of trucks (see Exhibit 2).

Logistics (and purchasing) challenges in a contractual network are many. In terms of business efficiency and competitive advantage, logistics play a part in the success of the business model. The challenges are the same as in the food retailing industry: purchases grouped for all stores lead to increased purchasing power and negotiating power, the logistical organization being a source of cost savings with an improved service provision. The control of supply chains and their operating costs, a key expertise for franchisors, is a source of power for them in French & Raven's (1959) sense. It is their way of sending a clear message to their partners about the interest of fully adhering to their projects and not to be tempted to go it alone occasionally. Let us remember that franchisees, as independent retailers, keep some freedom with manufacturers and/or wholesalers, as the procurement exclusivity required by franchisors is quite often partial.

Efficient logistics means increasing franchisees' loyalty and their procurement rate with the central purchasing unit, provided franchisors have the capacity to maintain a high level of logistical excellence. Such an excellence clearly acts as a “catalyst” for the contractual network thus avoiding the propagation of centrifugal effects. It also proves franchisors' commitment to their relationship with franchisees and facilitates a relationship marketing perspective (Watson & Johnson, 2010). In addition, order centralisation enables franchisors to have access to the sales data of each store and to establish comparisons between partners using the benchmarking method. Franchisors can be called LSP. In an article in *Supply Chain Magazine*, of May 2009, La Vie Claire's CEO gave a striking definition of his franchisor trade: “We [La Vie Claire] are a marketing and logistics company”.

It appears that the same issues and challenges of cost reduction and exercise of influence identified in the food retailing industry are found in contractual networks. What about the third challenge, the environment challenge, which could lead stakeholders to follow the path of *horizontal mutualization* between distinct contractual

networks? Although cost reduction remains a very present objective, the rise in the price of energy leads to an environmental pressure under the influence of a public that has become aware of the harmful effects of logistical activities. The reduction of the number of kilometres covered and the optimisation of truck filling have become priorities for reducing CO₂ emissions. Societal pressure is particularly strong on business in city centres with congested pedestrian streets and the harmful effects of intrusive delivery lorries. Contractual networks are in the vanguard in cooperating with city authorities on these sensitive issues.

Exhibit 2 – La Vie Claire, a vertical logistical mutualization between franchise stores

With 192 points of sale in France (166 of which in franchise), La Vie Claire is the second largest sales network specialized in organic foodstuffs, after their competitor Biocoop. The franchisor is an SME employing 187 staff at the end of 2009. The firm is again experiencing strong growth, with a sales turnover of 45 m€ in 2008, an increase of 38% in comparison with 2007, and a steady number of store openings (15 in 2009), thanks to the vitality of the organic market, that is not really affected by the crisis, but also because of a change to a distinctive brand name concept in 2003. La Vie Claire's objective is to have 300 stores in the next few years.

Created in 1946, La Vie Claire has had its ups and downs. First, with a marketing strategy not always favourable to franchisees (parallel sales in hypermarkets). Then with a succession of owners: Bernard Tapie, former president of the Olympique de Marseille football team, was owner from 1980 to 1995, a period during which the franchisor became well-known and had 250 franchised stores, then the Distriborg group, from 1996 to 2001, marketing in France the Bjorg, Vivis, Gayelord Hauser and Krisprolls brands, among others. Facing significant difficulties, the contractual network had but 80 stores when it was bought by the current franchisor in 2002. The new owner brought about a change of concept with a vertical logistical organization conferring a key competitive advantage to the brand name. The new concept included a significant increase of store sales areas (from 50 to 300 m² on average) and of the number of references: from 1,200 in 2002, the number of organic product references reached 4,000 in 2009. 1,300 of these are speedily raising private labels (under the La Vie Claire brand).

The target of the logistical organization is to ensure daily deliveries, before 8 30 a.m., on D+1 after the store orders. La Vie Claire consequently acquired in 2002 a 4,000 m² warehouse in Chaponost (near Lyons). This warehouse is now too small and its order preparation equipment at the end of its service life, so new equipment is being constructed within a 13,000 m² area. The 13 m€ funding is ensured by a buyout to NAXICAP for 4 m€. In addition, La Vie Claire has invested in its own four-vehicle fleet for deliveries to Paris and its outskirts. Four drivers work at night from 10 p.m. to 8 a.m., as the franchisor is against deliveries in day time. As La Vie Claire's CEO says, "days should be dedicated to customers and to efficiency: the efficiency factor is 1 to 3 between day and night concerning the number of stores supplied, due to traffic problems". The drivers have the key to the stores and deliver in the absence of the franchisees, and ensure that the cold chain is complied with for perishable products. In the other geographical areas, transport is either pooled with another firm (a fruit and vegetable supplier in Lyons uses the trucks during the day and La Vie Claire uses them at night), or contracted road hauliers. The purpose of such logistical investments is clear: franchisee loyalty has them to place a 100% of their orders with the La Vie Claire central purchasing unit, whereas the franchise contract leaves them a 20% purchasing freedom outside the central purchasing unit. In this case, we may affirm that the franchisor acts as a LSP for its contractual network.

Source: Professional trade and interview with La Vie Claire's CEO, September 11, 2009.

In such a context, could it be possible to imagine, taking the size of contractual networks into account that experiments in horizontal mutualization may be

conducted between competitive networks with various motivations that would have to be identified? Several experiments are being conducted in France, particularly DC and delivery systems shared by MacDonald's, Courtepaille and Classe-Croûte, three fast-food stores that have no shared capital and are not exactly in the same positioning, and these experiments have reinforced the idea that the evolutions observed in the food retailing industry could extend to contractual networks. But a number of checks cannot be ignored. For example, convinced that logistical mutualization was a good thing, a franchisor managing several fresh produce stores whom we met in March 2010 at the *Salon de la Franchise* in Paris, stated to one of the authors of this paper that he had recently contacted his direct competitors with the view of considering the implementation of pooled DC. He was firmly turned down as the fierce competition between franchisees in the same city makes any cooperation in logistical matters very unlikely. Is this perhaps the limit of franchise as an organizational form?

Conclusion

The mutualization of logistical operations is now a major theme for improving the operation of supply chains, particularly in the food retailing industry. This is a real break from the dominant thought in OM and more widely in SCM. For many years, the most common idea, conveyed by Christopher's (2010) works among others, was to rely on a model of competition between supply chains. At the time, competitiveness mainly resulted from the partners' ability to structure quality relationships along a pipeline, from suppliers' suppliers to customers' customers. This linear vision implied a relational partitioning between supply chains along a vertical perspective, defining performance in terms of cost, service quality and reactivity from exchanges between a manufacturer and a large retailer, or a manufacturer, an LSP and a large retailer. The supply chain vs. supply chain competition model comes directly from the chain paradigm, a direct inheritance of strategic analyses in terms of vertical integration.

Research initiated by Zhang *et al.* (2003) on the "supply chain network economy" introduces a radically new vision. It emphasizes the dynamic interaction between players simultaneously belonging to several supply chains; all the supply chains make up a network integrating a number of nodes that have to be simultaneously efficient for several supply chains (for example, DC or modular platform). Performance results from reaching a critical size in the management of operations in each node, with the achievement of economies of scale and scope. In a context of supply chain network economy, logistical mutualization appears to be a highly significant operational lever for increasing the efficiency of the most critical nodes. This is true for contractual networks, and it is more generally true for the whole food retailing industry. As a consequence, three subjects for thought open for OM, for future research to explore:

- For technical processes, the question is to know how to best organize interface compatibility between different supply chains. Although logistical mutualization leads to the implementation of pooled means for supply chain members in a situation of competition, they also have to be able to share those means without having to support enormous adjustment costs. Interfaces must be sufficiently standardized (or generic) or else logistical mutualization will be impossible to achieve. It is not certain that the standardization process may be quickly implemented or even accepted by supply chain members.

- For information systems, logistical mutualization relies on a flow monitoring information the sharing of which between supply chain members may pose a problem. Flow monitoring information includes marketing dimensions that supply chain members want to protect jealously. We know that contractual networks like to react quickly to their competitors' promotional campaigns by launching their own promptly. If contractual networks introduce logistical mutualization, they will be aware of marketing actions under way in the shared warehouses and this may endanger any policy of differentiation.
- Finally, in terms of strategic issues, there is a high risk of dilution of logistics as a source of competitive advantage between all supply chain members. The performance resulting from logistical mutualization depends directly on the potential of activity represented by the partner(s), each party drawing from the other the sources of its own competitive advantage. A contractual network will be efficient in logistics because another competitive contractual network brings a significant business volume in one node of the supply chain network, and vice versa. Logistical mutualization leads to naturally isomorphic behaviours that could check the extension of the process if one contractual network considers that it has idiosyncratic know-how that can at no cost be shared with competitive contractual networks.

References

- Assens, C. (2003), "Le réseau d'entreprises: vers une synthèse des connaissances", *Management International*, Vol. 7, No. 4, pp. 49-59.
- Blair, R., & Lafontaine, F. (2005), *The economics of franchising*, Cambridge University Press, New York (NY).
- Boulay, J., & Chanut, O. (2010), *Les réseaux de franchise*, La Découverte, Paris.
- Christopher, M. (2010), *Logistics and supply chain management*, FT Prentice Hall, Harlow, 4th ed.
- des Garets, V. (2007), "Les systèmes d'information et la grande distribution: nécessité ou opportunité?", in Dubois, P.-L., & Dupuy, Y. (eds.), *Connaissance et management*, Economica, Paris, pp. 203-213.
- Dumoulin, R., & Gauzente, C. (2009), "Les facteurs d'institutionnalisation de la franchise et leurs conséquences sur la performance", *Management & Avenir*, No. 22, pp. 155-170.
- French, J., & Raven, B. (1959), "The bases of social power", in Cartwright, D. (ed.), *Studies in social power*, University of Michigan Press, Ann Arbor (MI), pp. 150-167.
- Hiesse, V. (2009), "L'intermédiation du PSL dans les canaux de distribution: quels schémas logistiques émergents?", *Logistique & Management*, Vol. 18, No. 2, pp. 29-40.
- Paché, G. (2004), "Penser la décision en sciences de gestion: pour une vision de nature syncrétique", in Alcaras, J.-R., Gianfaldoni, P., & Paché, G. (eds.), *Décider dans les organisations: dialogues critiques entre économie et gestion*, L'Harmattan, Paris, pp. 79-99.
- Paché, G. (2010), "Logistique urbaine mutualisée: quelle stratégie de différenciation pour le commerce alimentaire en ligne?", *Revue Française de Gestion Industrielle*, Vol. 29, No. 2, forthcoming.
- Paswan, A., & Wittmann, C. (2009), "Knowledge management and franchise systems", *Industrial Marketing Management*, Vol. 38, No. 2, pp. 173-180.
- Perrigot, R., El Akremi, A., Herrbach, O., & Mignonac, K. (2009), *Quels sont les savoir-faire sources de l'avantage concurrentiel en franchise?*, Rapport d'Etude, Fédération Française de la Franchise, Paris.
- Sigué, S.-P., & Chintagunta, P. (2009), "Advertising strategies in a franchise system", *European Journal of Operational Research*, Vol. 198, No. 2, pp. 655-665.
- Tuunanen, M., & Hoy, F. (2007), "Franchising—multifaceted form of entrepreneurship", *International Journal of Entrepreneurship and Small Business*, Vol. 4, No. 1, pp. 52-67.
- Watson, A., & Johnson, R. (2010), "Managing the franchisor-franchisee relationship: a relationship marketing perspective", *Journal of Marketing Channels*, Vol. 17, No. 1, pp. 51-68.
- Williamson, O. (1985), *The economic institutions of capitalism: firms, markets, relational contracting*, The Free Press, New York (NY).
- Zhang, D., Dong, J., & Nagurney, A. (2003), "A supply chain network economy: modeling and qualitative analysis", in Nagurney, A. (ed.), *Innovations in financial and economic networks*, Edward Elgar Publishing, Cheltenham, pp. 197-213.