

**COOPETITION STRATEGY**  
**A NEW KIND OF INTERFIRM DYNAMICS FOR VALUE CREATION**

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## **A NEW KIND OF INTERFIRM DYNAMICS FOR VALUE CREATION**

### **Abstract**

In management literature the hybrid behavior comprising competition and cooperation has been named coopetition. Whereas a number of authors (Brandenburger & Nalebuff, 1996; Lado, Boyd & Hanlon, 1997; Gnyawali & Madhavan, 2001) have recently emphasized the increasing importance of coopetition for today's interfirm dynamics, scientific investigation on the issue of coopetition has not gone much farther beyond naming, claiming or evoking it. Therefore, whilst, on one hand, we acknowledge the weaknesses of conventional approaches, on the other, we underline that coopetition is clearly an underresearched theme.

The purpose of this paper is threefold. First, by proposing a first definition of coopetition, it aims to move away from the mere recognition of the oversimplified conventional conception to a deeper understanding of the nature of coopetition. By suggesting that coopetition is a matter of "incomplete interest (and goal) congruence" concerning firms' interdependence, we stress that coopetition does not simply emerge from coupling competition and cooperation issues, but rather it implies that cooperation and competition merge together to form a new kind of strategic interdependence between firms, giving rise to a coopetitive system of value creation. Second, we advance a typology of coopetition based on the differing explanatory variables of this incomplete interest (and goal) congruence. Third, with the support of a number of coopetition microcases, especially referring to firms operating in the automobile industry, we clarify the contribution and the potential of coopetition strategy to the advancement of both strategic management, organization theory and managerial practice.

## INTRODUCTION

Strategic management field is currently facing a number of new and unexpected challenges which find their roots in the restless dynamics of environmental change and firms strategic action and thinking. As a result, we need to adapt and integrate existing theoretical lenses and conceptual categories or develop entirely new ones. In this second vein, we advance the study of cooperation as a new interpretive category in strategy.

As known, mainstream economics and managerial research has been largely based on the dichotomy between competition and cooperation. This paper addresses the following issue: how to overcome the above oversimplified conception of interfirm interdependence and develop a more comprehensive framework in which both aspects, the competitive and the cooperative, are simultaneously considered?

In management literature the hybrid behavior comprising competition and cooperation has been named coopetition. Whereas a number of authors (Brandenburger & Nalebuff, 1996; Lado, Boyd & Hanlon, 1997; Gnyawali & Madhavan, 2001) have emphasized the increasing importance of coopetition for today's interfirm dynamics, scientific investigation on the issue of coopetition has not gone much farther beyond naming, claiming and evoking it. Therefore, whilst, on one hand, we acknowledge the weaknesses of conventional approaches, on the other, we underline that coopetition is clearly an underresearched theme. In light of its limited (if not null) theoretical foundations, we take a necessary exploratory approach to the topic.

The purpose of this paper is threefold. First, with the aim of moving away from the mere recognition of the oversimplified conventional conception to a deeper and clear-cut understanding of the nature of coopetition, we start from the compared analysis of competition and cooperation in management and propose a first definition of coopetition. By suggesting that coopetition is a matter of "incomplete interest (and goal) congruence" concerning firms' interdependence, we stress that coopetition does not simply emerge from

coupling competition and cooperation issues, but rather it implies that cooperation and competition merge together to form a new kind of strategic interdependence between firms, giving rise to a coopetitive system of value creation.

Second, we advance a typology of coopetition based on the differing explanatory variables of this incomplete interest (and goal) congruence. Third and finally, by taking into account a number of coopetition microcases, especially referring to firms operating in the automobile industry, we clarify both the contribution and the potential of coopetition strategy to the advancement of strategic management, organization theory and managerial practice.

## **THE NATURE OF COOPETITION:**

### **COOPETITION STRATEGY AS A NEW KIND OF INTERFIRM DYNAMICS**

According to conventional management wisdom, the term coopetition was coined by Nadar, the CEO of Novell, and introduced into strategy research by Brandenburger & Stuart (1996) and Brandenburger & Nalebuff (1996). This term was inaugurated in order to elucidate the strategic interplay among ‘coopetitors’<sup>1</sup>. According to (Afuah, 2000), the word coopetitors is used in the place of the phrase ‘suppliers, customers and complementors’ (i.e., manufacturers of goods which are complementary to the goods produced by the firm at hand). This idea suggests that the word and notion of coopetition is a mere substitute of the more familiar ‘stakeholders’.

We take distance from such a position. First, Brandenburger & Nalebuff (1996) have originally used the term coopetitors to embrace - in addition to suppliers, customers and complementors - a fourth pivotal group of strategic players; i.e., the firm’s competitors. They have suggested to take into account five different kinds of players: the firm, its customers, its competitors, its suppliers and its complementors. Second, distancing from a simple replication

of the well-known idea of stakeholders, Brandenburger & Nalebuff have modeled a structure of multiple relationships (or the value net) in which the firm is embedded. Third, given the above characteristics, coopetition is a way of defining a strategic game of interaction which models the whole ‘interplay range’ in detecting firms interdependence. For it refers to a complex structure of firms’ interdependence where cooperation and competition are simultaneously present and intertwined, in this paper we maintain that coopetition – although it is pretty diffused in practice – is a new way to conceptualize interfirm dynamic interdependence. By doing so, on one hand, we acknowledge that the growing business phenomenology is exposing us to a habitually unintended and unrecognized variety of coopetitive empirical experiences. On the other, we contend that the scientific investigation of coopetition is at the very beginning of its lifecycle.

In order to overcome this dichotomic vision of interfirm interdependence, in defining coopetition our proposal is focused on the analysis of interest (and goal) structures. Whereas both competitive and cooperative perspectives focus on entirely diverging and converging interest structures, since it takes into account firm interdependence on the base of partially congruent interest structures, coopetition represents an integrative theoretical bridge which stretches to join the two contrasting mentioned perspectives. In the following paragraphs, departing from a thorough analysis of relevant strategy and strategy-related literature in the field, we briefly illustrate the contribution of both competitive and cooperative perspectives to management and eventually frame out a first sketch of the coopetitive approach.

## **The Competitive Perspective**

The competitive perspective has dominated for a long time several fields of management research: from strategic management (Porter, 1980, Barney, 1986) to organizational

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<sup>1</sup> To date the term ‘coopetition’ has not yet been incorporated neither in dictionaries, general (e.g., Oxford, Webster) or dedicated to economics (e.g., New Palgrave, MIT), nor in management theory or practice.

economics (Williamson, 1975, 1985) to marketing management (Borden, 1964), and it has represented the dominant paradigm during the eighties. This approach assumes that firms' interdependence, both horizontal and vertical, is based on a Smithsonian individual interest search. The metaphor of the firm as an "island in a sea of market relations" (Richardson, 1972) captures fully the distinctive feature of this standpoint.

With reference to horizontal interdependence, the competitive perspective emphasizes the search of above than normal profit realized either when a firm gains an advantageous position in an industry (Porter, 1985) or when it mobilizes and deploys resources and distinctive competences (Wernelfelt, 1984, Prahalad & Hamel, 1990) that enable it to offer superior products in relation to its competitors. In other words, this perspective aims to a firm rent-seeking behavior which takes place through value-creation strategies and brings to above-normal economic returns.

With reference to vertical interdependence, the competitive perspective highlights the search for value appropriation in economic exchanges. By solidly sinking its roots in neoclassical theory, the competitive perspective assumes that the exchange is a discrete event in which the economic value previously generated by the firms is shared among them according to the principle of allocative efficiency. This value sharing can take place either according to an instant fairness principle, as the traditional marketing theory implicitly assumes (Drucker, 1954; Borden, 1964) or making use of opportunistic behavior as admitted by transaction cost economics (Williamson, 1975, 1985). By way of summary, in the case of vertical interdependence, the competitive perspective claims for a rent-seeking behavior which takes place through value-appropriation strategies.

Independently from the type of firm interdependence and the specific management field of research, the competitive perspective shares a unified theoretical framework which can be briefly described as follows:

1. The creation of economic value occurs within the firm whereas interfirm interactions influence the distribution of that value. That is the case of both vertical and horizontal interdependence. With reference to the former, the price of exchange explains the part of economic value retained by the supplier and the part of economic value allocated to the client. With regards to the latter, the above normal returns results from the allocation of customers' preferences among competitors;
2. Since competitive success and value appropriation by one firm means the defeat and the loss of value of the other firms involved in the game, interfirm interdependence is based on a zero-sum game;
3. In a business world in which any interdependence qualifies a zero-sum game, the interest functions of firms involved in the game are in unrecoverable contrast.

### **The Cooperative Perspective**

An alternative perspective, partly spread out as a reaction to the competitive approach, emphasizes the development of collaborative advantage. With the spread of the cooperative perspective, the view of the business world has changed thoroughly giving rise to a network of strategic interdependence among firms pursuing convergent interests and deriving mutual benefits (Contractor & Lorange, 1988). Firstly upsurged in the marketing management field with reference to vertical interdependence (Håkansson & Ostberg, 1976), this perspective has quickly developed - at the turn of the decade between the eighties and nineties - in other more familiar research fields, ranging from strategic management (Contractor & Lorange, 1988; Hamel, Doz & Prahalad, 1989; Dyer & Singh, 1998) to organizational economics (Griesinger, 1990; Hill, 1990), and covering a wide array of strategic interfirm arrangements.

The first insights of cooperative perspective have marked the transition from the transactional to the relational marketing paradigm (Håkansson & Ostberg, 1976; Borg, 1991).

According to the relational paradigm, the market is not (any more) an atomistic structure based on instant exchange, but it becomes a system of interactive and continuous relationships in which the firms progressively strengthen their reciprocal commitments and realize a process of mutual adaptation and joint value creation.

The complexity of technological systems (Powell, Koput & Smith-Doerr, 1996) and the increasing turbulence in the competitive scenario (D'Aveni, 1994; Bettis & Hitt, 1995) have strengthened furtherly the importance of interfirm relationships as *loci* of value creation and a way to stimulate firm performances (Dyer & Singh, 1998; Lorenzoni & Lipparini, 1999). By helping firms to enhance their strategic flexibility and learning capability (Volberda, 1996), interfirm relationships are considered a strategic asset and a source of competitive leadership in the current fast-moving competitive environments (Teece, Pisano & Schuen, 1997).

The economic interest to keep on with the current relationship and to enter new relationships in the future makes reputational concerns to emerge (Axelrod, 1984; Hill, 1990) and keep the partners aligned to the norms of trustworthy behavior (Brusco, 1996; Griesinger, 1990). As a consequence, in comparison to the competitive approach the cooperative perspective significantly reduces the room for Williamson's opportunistic behavior.

The theoretical framework underlying the cooperative perspective is summarized as follows:

1. The sources of economic value creation and the roots of firms' superior performances are located within the structure of firms' interdependence;
2. Firms' interdependence is based on a positive-sum game. Whether value creation is a joint process which takes place among two or more partners or whether partners take part at the cooperative game with the goal of deriving mutual benefits, it follows that the more successful a partner is the larger are the benefits for the other partner and vice versa.

Moreover, the importance of joint value creation implies a mutual dependence game structure that is a strong antidote against the risk of opportunistic behavior and, by consequence, a powerful incentive to a collaborative orientation;

3. In a business world which emphasizes a strong mutual dependence among firms and the economic value of cooperation, it follows a picture of business interdependence based on strongly convergent firms interest-functions.

### **The Coopetitive Perspective**

The coopetitive perspective stems from the acknowledgment that, within interfirm interdependence, both processes of value creation and value sharing take place, giving rise to a partially convergent interest (and goal) structure where both competitive and cooperative issues are simultaneously present and strictly interconnected. They give rise to a new kind of strategic interdependence among firms that we term coopetitive system of value creation.

In a sense, this third perspective can be viewed as an attempt to rebalance the cooperative bias affecting the second perspective at hand. In fact, whereas the ultimate rationale of collaborative interdependence advanced by the cooperative approach is the economic and competitive benefits that a firm derives by taking part in a cooperative game, this perspective has been mainly focused on the sources and mechanisms of value creation at two levels of analysis, the dyad level and, sometimes, the network level. Thus, it has overlooked to derive analytically how the value jointly created by firms is translated into actual benefits at the individual firm level.

The coopetitive perspective stresses that the supreme interests of a partner are not necessarily aligned with the supreme interest of the other partner(s). This partial or incomplete interest congruence requires to explicitly take into consideration the fairness problem within the cooperative game structure (Grandori & Neri, 1999) which has been

instead, implicitly or explicitly, taken for granted in the cooperative perspective. In other words, the coepetitive perspective pays attention to the positive-but-variable game structure. This structural variability enlightens the presence of uncertainty due to the competitive pressures of firms' interdependence, provided that it is not known ex ante to what extent each partner would benefit from cooperation compared to the other(s).

Some of the motives that explain competitive pressures, emerging within a cooperative structure, can be summarized as follows. Some scholars have claimed that, in highly innovative cooperative contexts, the capability to detect opportunistic behavior is low (Hennart, 1988) and, as a consequence, the reputational incentives are weak (Hill, 1990). Other studies have stressed that, with the development of trust in a cooperative context, the control processes carried out by the partners are sensibly weakened and this may result in an incentive, to one or more partners, to behave opportunistically (Grandori, 1999). In other words, a number of theoretical and empirical studies have been carried out in the last few years criticizing the cooperative perspective and claiming that opportunism and trust are all but incompatible behavioral assumptions. Far from being antithetical, opportunism and trust are behavioral variables generally coexisting in the same context with various degrees.

Matching Williamson's (1985) type of opportunism with Barney & Hansen (1994) three types of proposed trust, first we have modeled four resulting distrust/trust forms and second we have positioned these forms in a continuum (a continued line), which goes from opportunism/distrust to strong form of trust (Figure 1) and which may prove useful in interpreting interfirm coepetitive exchanges.

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Insert Figure 1 About Here  
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A cooperative system of interfirm relationship may be characterized by different trust degrees which include: weak trust, semistrong and strong trustworthy behaviors, and even distrust. Interfirm strategic trust contexts are inherently dynamic as they continuously evolve and change from one form to the other (e.g., especially between the two middle forms; weak and semistrong trust types) and accommodate the presence of different types of trust at the same time (e.g., semistrong and strong trust). Trust evolves both vertically (in degree) and horizontally (in time) and may be a source of temporary or sustained competitive advantage. Nevertheless, sustained above than normal returns in interfirm cooperation are usually earned when trust tends to be more stable in time and stronger in form.

In most strategic partnerships, each of these dyadic relationships is neither strictly competitive nor strictly cooperative: they are simultaneously competitive and cooperative. Typically they involve mixed motives in which the partners have private and common interests (Gulati, Nohria & Zaheer, 2000). Some empirical contribution in the field of interfirm learning has highlighted that, when mutual dependence is not balanced, the more dependent partner is subject to the risk of holding up from his counterparts. This type of competitive pressure results from coupling an asymmetric learning pace among partners (Hamel, 1991) and a low relative scope of the alliance (Khanna, 1998; Khanna, Gulati & Nohria, 1998). The competitive pressure emerging from this 'learning race'<sup>2</sup> is related to the fact that the fastest learner may decide to end the cooperative relationship once he has achieved his own learning objectives, without considering the interest of the other partners to protract the relationship. The relative scope of an alliance describes the business shares of the partners who fall into the object of the alliance and explains the distribution between

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<sup>2</sup> In most situations, partners ally with each other because by working together they hope to generate some common returns that they can share in a certain way. But the knowledge or information each partner obtains from the partnership can also have purely private benefits that accrue to one partner alone. Under some circumstances, the partners may find themselves engaged in a race to learn or exploit as much as they can the other's assets and then exit the alliance. Such learning races are likely to occur when the private benefits that can

individual or private benefits (stemming from the whole application of knowledge learned in businesses which are different from the alliance object) and the common benefits (emerging from the application of knowledge to pursue the alliance objectives). When both asymmetric learning pace and low relative scope are present, the fastest learner has higher incentives to end the relationship before his counterpart has managed to capture the whole benefits he expects from the alliance.

The forces driving to diverging (though partially) interests are not only related to opportunism incentives à la Williamson. Exogenous environmental dynamics (Doz, 1996), a shift in the strategic priorities of a firm (Koza & Lewin, 1998), or a loss of leadership which makes a partner less attractive than it was earlier, are all drivers that induce the once cooperative interest structure to diverge, with the effect to rebalance the individual incentive towards cooperation.

Complementary firms coming from different industries may not be completely aligned in the choice of the courses of action in the ongoing relationship. This may be related to the fact that, since the value of a resource depends on the way in which a resource is combined to other resources (Penrose, 1959), it follows that a different resource endowment brought by firms coming from different industries may result in an incomplete alignment as concerns the alliance's most convenient course of action.

Efficiency purposes may lead a partner who has made an investment in an alliance to apply the yield of that investment into other cooperative contexts (Håkansson, 1993). This replication activity may result in an interest conflict with the first partner whenever it brings to spillover its private knowledge or, more generally, to enhance the competitive position of his competitors (Dowling, Roening, Carlin & Wisnieski, 1996; Economist, 1999).

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accrue to any of the partner after he has learned from the other partner outweighs the common benefits of the alliance (Gulati, Nohria & Zaheer, 2000: 211).

The theoretical framework underlying the cooperative perspective is summarized as follows:

1. Firms' interdependence is both a source of economic value creation and a place for economic value sharing;
2. Firms' interdependence is based on a variable-positive-sum game which may bring to mutual but not necessarily fair benefits to the partners because of several competitive pressures of different nature that may undermine their cooperative structure;
3. In a variable-sum game structure, firm interdependence is based on a partially convergent interfirm interest function.

## **COOPERATION STRATEGY FOR VALUE CREATION:**

### **A TYPOLOGY OF COOPERATION**

In this section, we advance a typology of cooperation based on the differing explanatory variables of this incomplete interest (and goal) congruence, then we sketch how cooperation strategy may contribute to value creation. As previously maintained, cooperation is a concept which may prove helpful to interpret a new kind of interfirm dynamics where competition and cooperation frameworks merge together.

Starting from these premises, we introduce the notion of cooperation strategy. Cooperation strategy refers to a kind of interfirm strategy which consents the competing firms involved to manage a partially convergent interest and goal structure and to create value by means of cooperative advantage. Far from being a compact monolith, cooperation strategy is a multidimensional and multifaceted concept which assumes a number of different forms and multiple levels of analysis and for which it is all but easy to grasp its structure, processes and evolving patterns. As previously understood, cooperation encompasses both economic and

social issues related to interfirm interdependence. Blurring boundaries in the firms' value chain(s) and relationships among cooperative players developing a cooperative system of value creation. For this reason, most of the study that has initially recognized the importance of cooperation has not gone much farther beyond naming, claiming or evoking it. This characteristic of the earlier investigation on cooperation has stimulated us to take a step forward in conceptualizing cooperation. We move far from considering cooperation simply a new term and, by thoroughly exploring its explanatory and symbolic power and giving it significance, we advance to a concept helpful to strategy investigation. We first advance a typology of cooperation and second identify and stratify three cooperation levels in relation to value creation.

### **A Typology of Firm Cooperation**

As regards the typology of interfirm cooperation, our proposal is based on two basic cooperation forms: i.e., dyadic cooperation and network cooperation. Dyadic cooperation refers to firm dyads or simple two-firm relationships and relates to: a) cooperation (both competitive and cooperative) relationships between the same two firms along one single level of the value chain (i.e., strategic consortia as R&D consortia). This is what we have termed 'simple dyadic cooperation'; b) cooperation (competitive and cooperative) relationships between the same two firms along several levels of the value chain (i.e., a number of firm dyads in the automobile industry who cooperate on car R&D and/or production and compete in car distribution). This is what we have named 'complex dyadic cooperation'. Network cooperation concerns a structure of complex relationships among more than two firms at the same time and links up with: a) cooperation (competitive and cooperative relations) among multiple firms along one single level of the value chain (i.e., buyer-supplier relationships known as 'parallel sourcing'). This is what we have named 'simple network cooperation'; b) cooperation (competitive and cooperative relations) among multiple firms along several levels of the value chain (i.e.,

industrial districts, firm clusters and multilateral agreements). This is what we have termed ‘complex network cooptation’.

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Simple dyadic cooptation is evident by considering a basic strategic dyadic alliance, such as R&D consortia. An R&D consortium is a legal entity established by two (or more) organizations that pool resources and share decision making for cooptative research and development activities (i.e., at same level of the value chain). It is possible to operationalize R&D consortia as those entities filing with the US Justice Department under the National Cooperative Research Act of 1984 (Doz, Olk & Ring, 2000) or in Europe filing with the UE prescriptions on the matter. Many R&D consortia are of limited duration as they are linked with specific projects with given time horizons. The so-called shadow of the future can propel the formation or favor the continuation or extension in scope and duration of such kinds of agreements (i.e., escalation of commitment).

Complex dyadic cooptation is utterly apparent if we consider a number of recent alliances in the automobile sector (i.e., BMW-Daimler Chrysler, Ford-PSA, Honda-Isuzu, Fiat-GM, Opel-Renault, PSA-Toyota, Opel-Suzuki and Volkswagen-Porsche) which offer a fair representation of the heretofore described structure of cooptation strategy. These agreements assume different forms and focus on cooperation in R&D and manufacturing of one or more car components or product lines (e.g., automatic gears, diesel or petrol engines, sports or utility cars, vans, or commercial trucks) while distribution generally remains competitive (see Table 1). The alliances above are widely known under the press common label of “allied in costs, rival on markets” or “marry nobody, collaborate with everybody”.

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As reported above, simple network cooptition is represented by cooptition among multiple firms at one level of the value chain. As concerns the Japanese-like buyer-supplier relationships in car manufacturing known under the label of ‘parallel sourcing’ (in opposition to sole sourcing - see Richardson, 1993), we observe that for every type of auto components parallel sourcers (i.e., Toyota) normally select two or three suppliers at least one of which coming from the internal market. This choice allows Japanese car makers to keep their supplier under the continuous pressure of the relentless menace of potential competition from the exclusive suppliers of similar components for the same final product or of the same component for different final products, or eventually of upward vertical integration from the same buyer firm. This peculiar relational structure is aimed to keep a constant and intense the transfer of material and information on process techniques among the participants in the supply chain, discouraging obnoxious opportunistic behaviors from one of the two parties or blocked situations as it occurs in bilateral monopoly<sup>3</sup>. Commitment to long-term cooperation need not imply abandonment of competition between suppliers. In fact, Japanese automakers have traditionally relied on multiple suppliers embedded in a multi-tier system for a higher share of their externally sourced parts than did their US counterparts. The secret to fusing competition and cooperation lies in a willingness to work with a supplier to solve technical and economic problems, instead of simply switching immediately to an alternative source (i.e., the practice of ‘non-switching’).

Complex network cooptition is epitomized by taking into account a number of Italian

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<sup>3</sup> As concerns the cooperative-competitive benefits of parallel sourcing in terms of communication and coordination costs: “We have seen how the practice of parallel sourcing works to provide competitive incentives for supplier performance while at the same time providing the benefit of sole sourcing, principally reduced costs for communication and coordination associated with both quality control and JIT production” (Richardson, 1993:).

industrial districts (e.g., Valenza Po for gold jewelry, Carpi for knitwear & sweaters, Parma for cured ham and parmesan cheese, Prato for textiles & clothing). The concentration of small and medium firms in these aggregate bodies unveils a model of tightly connected dynamic fabric of multiple relationships which intervenes at different levels and with mutable protean intensity. They present high self-organizing power in that they usually cover all the value net of production and distribution. In the same vein, we consider an agreement set up among some of the biggest players in the tyre industry on a particular car component as a characteristic example of complex network coepetition. Michelin, Goodyear, Pirelli and Dunlop - though remaining fierce rivals on world's tyre markets - have jointly designed and realized the 'pax system' already available as an optional part on the Renault Scenic model and forthcoming on some Audi automobiles.

Last but not least, coepetition is equally important to manage the link between R&D and production within the firms. In competitive markets part of success often hinges on the speed with which firms can turn invention into innovation and innovation into products ready-to-market. Achieving a quick effective transition from invention and innovation to production requires extensive coordination among the various stages of the process, which is a function of the organization arrangements used by the firm and the degree of communication among those involved. Japanese automakers offer an useful illustration of the benefits of firm level coepetition strategy (Kenney & Florida, 1993). Instead of relying on the individual contributions of atomized, fractionalized departments, they organize the design and development process for a particular car model around one or more teams of cooperating employees coming from various functional departments of the firm (product planning, styling, engineering, factory operations, marketing, and so on). The teams are assigned to the development project for the duration of its life, moving it through its various stages. The teams are often working unencumbered and competing on the same project. This approach, on

one hand, originates what a western-oriented perspective considers redundancies but, on the other, these redundancies reveal more effective ways to speed up process and to solve R&D and development product problems (Nonaka, 1991, 1994). This continuity enables a much smoother and more rapid transition through the design, development and production process. The result was a time-to market reduction from 60 month and 3 million engineering hours for US automakers to 46 months and 1,7 million engineering hours for Japanese car manufacturers in the 80s (Clark & Fujimoto, 1991).

As it is easy to fathom, all the heretofore mentioned experiences force strategy scholars and practitioners to accept the possibility that the two alternative concepts of competition and collaboration may result insufficient to explain the ever-changing business reality, summoning the new spirit, logic and puzzle of coopetition.

### **Coopetition Strategy and Value Creation**

As previously maintained, coopetition strategy concerns interfirm strategy which allows the firms involved to manage a partially convergent interest and goal structure and to create value by means of cooperative advantage. This partially convergent interest and goal congruence is the base of a “cooperative system of value creation”. Since we have heretofore conceptualized and exemplified two kinds of competition (i.e., network and dyadic), in this subsection our intention is to show how coopetition strategy is able to guarantee value creation to firms involved by way of a variable-positive-sum game structure. First, by considering the competing actors involved, we identify three competition levels (i.e., macro, meso, micro). Second, we analyze these levels in relation to firms value creation. Since value creation may be considered a two-dimension concept, we introduce two kinds of value creation (i.e., knowledge value and economic value). Whereas the knowledge value is given by the growth in the interfirm (firm) knowledge stock that the cooperative strategy framework

is able to grant from a given time  $t_0$  to a ensuing time  $t_1$ , the economic value is represented by the added value in terms of interfirm (firm) cost reduction or revenue increase that the strategic cooperative framework may confer. By juxtaposing competition levels and value creation, we eventually provide a matrix representation of competition for value creation (see Table 3). As previously maintained, this representation disentangles the idea of competition for value creation basically from two perspectives: the firm level and the interfirm level.

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In order to achieve a representation which may fit better the partial interest congruence involved in the dynamic process of competition, we have matched the three competition levels to the two main dimensions of firms value creation. First we consider the competing actors. As concerns the competition strategy levels, the macro level refers to interconnecting clusters of firms and firms across industries, the meso level concerns to relationships among firms connected vertically or horizontally - i.e., firms that interact with one another as competitors or as buyers and suppliers, the micro level concerns actors as the functions and divisions within a firm or the workers in a firm. As already mentioned, it is amenable to understand that all the three levels taken into account may accommodate a competing behavior. Clusters of firms and firms across industries compete in that, whereas they usually compete on government R&D spending/funds, access to capital markets and shareholders investments, and activity diversification when entering new markets, they may find themselves cooperating on best practice and technology transfer and new markets exploration and exploitation. Firms within an industry compete in that, while they traditionally compete on product and factor markets, they cooperate in product design, manufacturing or distribution and the definition of new standards. Purchasers and suppliers compete in the form of the aforementioned complex

dyadic cooperation (see previous subsection for details). Functions and divisions and workers within a firm cooperate in that they traditionally compete fiercely for corporate intrafirm fund allocation, while they cooperate in product and workforce development and interchange.

Now, what are the benefits in terms of knowledge and economic value outspreading from these kinds of relationships? At the macro level, while knowledge value is added by intense communication and information flows and interindustry new knowledge creation and transfer, which in turn allow to join more knowledge stock, economic value is achieved through reduced aggressive and suboptimal rent-seeking and profit and fund sharing arrangements. At the meso level, whereas knowledge value is attained through intraindustry new knowledge creation and transfer, deep communication and information flows and product co-design and co-development, economic benefit is accomplished through increased R&D investment and workforce training investment, joint R&D and production, faster agreement on standards and reduced time-to-market for products. Finally, at the micro or firm level, while knowledge stock added value is bestowed by extended communication and information flows and intrafirm new knowledge creation and transfer, higher incentive and commitment to work, and knowledge creation by the workforce, economic benefit is granted by a quicker and more effective transition from R&D to production and an increased productivity by the overall commitment of the workforce.

## **DISCUSSION AND CONCLUSION**

A number of business cases and experiences have shown that value creation is achieved by combining competition and cooperation, a paradoxical behavior that has been termed ‘cooperation’. Arguably, as it urges us to confront two different and antithetical firm behaviors (the competitive and the cooperative), cooperation strategy appears both hybrid and puzzling. By considering in a single unifying framework that we have termed ‘cooperative system of

value creation', this paradox may be solved at least partially. In the context of a cooperative system where the behavior of two or more firm is jointly analyzed, as they are part of a variable-positive-sum game structure, the two antagonistic behaviors are seen as a part of a complex strategy context where both play a key role and interact in the context of the same time and space structure. It becomes hence possible to define the emerging cooperation framework as one partial convergence of actors interests and goals.

First, our "cooperative value creation framework" suggests new clues that can contribute to the strategic management debate. Since cooperation strategy brings the promise to explain strategic network interdependence among firms by means of a 'cooperative system of value creation', we need to update our relational terminology and relational behavior in firm strategy comprising a more cooperative orientation where competition and cooperation are both considered and coevolving (i.e., we need to read previous and current firm experience under the cooperative lenses and to foster firm cooperative strategic behavior).

Second, distancing from approaches to strategy simply competitive or cooperative, under cooperation strategy the two crucial processes of value creation and value sharing occur in the context of a variable-positive-sum game structure. A strategy of cooperation, rather than encouraging value appropriation or rent-seeking behavior, nurtures value creation and favors an entrepreneurial oriented behavior (Rumelt, 1987) by firms or within a single firm. In Hirschman's (1970) terms, cooperation is voice-based as opposed to exit-based market-based relationships. Whereas an exit-based strategy, as the traditional US arms length model of procurement, discourages communication between purchasers and suppliers, thereby locking the information transfer, a voice-based procurement strategy, as the Japanese one - insists on effective and timely transfer of information on process techniques among the participants in the supply chain. Supported by the insurance of a long term stable relationship, a voice-based procurement system of such a kind stimulates suppliers to seek continuous improvements in

productivity. The superior efficiency of the Japanese auto manufacturers at least through the 80s is virtually unquestioned, and their supplier relationships are widely acknowledged to be a key factor contributing to that superiority.

Third, while firm and interfirm cooperation may be a matter of short or long term standpoint, only if viewed over an extended time period cooperation strategy proves really helpful to the creation of knowledge and economic value. Even if in a short time period a cooperation strategy may add to firms involved more value than conventionally does a traditional competitive structure, (a) this differential value may be only a small fraction more than the one that is gained by sheer competition. (b) Since we consider cooperation as variable-positive-sum game structure, this cooperative differential strategic value in relation to a pure competitive framework may accrue to one only of the two (or more) actors involved, thereby raising an equality problem in balancing the rents accumulated. Contrary to conventional wisdom, a long term commitment to a cooperative relationship does not preclude competition. Commitment to long-term cooperation need not imply to disavow competition between suppliers. As observed erstwhile, Japanese automakers rely on multiple suppliers for higher share of their externally sourced parts than do US auto manufacturers. If a suppliers' performance is consistently unsatisfactory, some of its business is shifted to a competitor for a short time as a penalty. During that time the assembler firm works closely with the supplier to try to remedy the problem. But the supplier firm is not permanently dismissed unless it proves unable or unwilling to adapt over a substantial period of time.

Four, analyzing cooperation we have detected three levels of cooperation strategy; i.e., the macro, meso and micro levels. They refer, respectively, to relations among firms across industries or among different clusters, among firms in the same industry, within a firm. The incorporation in our analysis of these three cooperative levels rests on the idea that cooperation, far from being a narrow concept, is encompassing both interfirm and firm

relationships. By way of implication, we see no hindrance to the fact that the cooperative framework here proposed may be extended in the future to a gamut of analytical levels referring other market, nonmarket or extramarket institutions such as relationships between governments, interest groups, unions and firms and among entire countries and blocks of countries.

Five, cooperation strategy contributes to conceptualize a hybrid strategy in that it accommodates in principle both deliberate action and spontaneous or emergent strategic behavior. Cooperation strategy in fact does not detect a sharp distinction between spontaneous behavior and deliberate goal-seeking. This is an approach where firms are both carried along by their changing environment and deliberately pursue cooperation to improve their position, resources, capabilities. The more firms and managers improve their understanding of cooperation and the open potential of cooperating, the more will they choose deliberately a strategy of cooperation.

Six, this framework provides an encompassing basis for integrating theories of cooperation and theories of cooperation to generate an enhanced understanding of sustained business performance. Business performance has largely been conceptualized as a zero-sum game in which a firm must either gain a competitive advantage or be forced out of the industry (i.e., Porter, 1980). When cooperation among firms is recognized as a strategy, it can be analyzed in terms of its ability to influence firms to address competitive problems (Hamel, 1991) and to generate sustained competitive advantage (Barney, 1991). Such a perspective is hampered by the structures of the competitive paradigm: it confers supremacy to the invisible hand of competition over the visible hand of cooperation (Hill, 1990). In contrast, perspectives that are used to advocate cooperation and trust among firms as moral and strategic imperatives (Harrison, 1994; Kanter, 1994), provide only a partial explanation of how business performances are achieved and sustained. Our proposal of cooperative system of value

creation sensitizes researchers and managers to consider strategic phenomena as a firm's quest for both competitive advantage and cooperative advantage by simultaneously competing and cooperating.

Finally, the cooperative system of value creation both challenges and extends the competitive perspective of strategic management for value creation. First of all as concerns the resource-based theory, second as refers to the emerging strategic network perspective. Whereas resource-based scholars emphasize the relevance for competitive advantage of causally ambiguous and firm-specific resources that diminish in value when they are shared with other firms, we suggest that profits also result from the nonfinite, symbolic and idiosyncratic resources, such as altruism, trust and reciprocal exchange, that make critical resources increase in value when they are shared with selected firms in a cooperative network. By opening new room for a cooperative space or arena, we are compelled to view strategic networks (Gulati et al., 2000) as effective governance devices of interfirm relationships that are conducive to superior performance in that they accommodate competition and cooperation for network resources at the same time and among the same firms.

## **Limitations and Future Research**

By discussing the possible conceptualization of cooperation and considering a typology of cooperation through some microcases referring particularly to firms operating in the automobile industry, in this article we have clarified the contribution and the potential of cooperation strategy to the advancement of strategic management, organization theory and managerial practice.

Were we attempt to draw conclusions based only on the experience and perspective of an individual firm, cooperation may look a naïve or useless concept. Conversely, looking at cooperation strategy framework from a range of interfirm perspectives, we have been able to

explain coopetition as a variable-positive-sum game based on a partial interest and goal congruence.

Empirical research on coopetition behavior will subsequently assist to show what typology(ies) and what levels of coopetition (taken by themselves or in interrelationship) are pro-tempore more efficient and contribute create more knowledge and economic value bot in quality and quantity.

We have acknowledged that coopetition is an entirely new field of exploration which brings great promise of advancement for both management scholars and practitioners. We thus envision to be just at the beginning of a ‘coopetitive pathway of investigation’ which is rapidly emerging as an open avenue for a significant part of future strategy and organization research.

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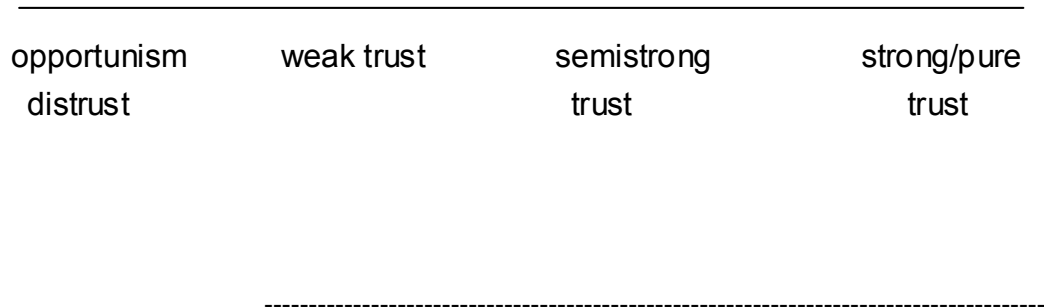
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**Figure 1 - Forms of trust in a continuum**



**Table 1 - A Matrix Representation of a Typology of Coopetition**

		<i>Number of Firms</i>	
		<b>Two</b>	<b>More than Two</b>
<i>Level of Value Chain</i>	<b>Single</b>	Simple Dyadic Coopetition	Simple Network Coopetition
	<b>Several</b>	Complex Dyadic Coopetition	Complex Network Coopetition

**Table 2 - Complex Dyadic Coopetition: Recent Agreements in the World Automobile Industry**

<b>Dyadic Agreement</b>	<b>Joint Products</b>
BMW Daimler-Chrysler	Engines for Mini and Pt Cruiser
Volkswagen Porsche	Sport Utility Highest Market End
PSA Renault	Engines and Automatic Gears
PSA Toyota	Compact Car (start 2005)
Opel Suzuki	Micro Monovolumes (Agila and Wagon R+)
Opel Renault	Commercial Light vehicles
FIAT PSA	Monovolume (FIAT Ulysse, Lancia Z, Peugeot 806) Commercial Light vehicles
FIAT GM	Product Plan Powertrains (Engines+Transmissions)
Honda Isuzu	Diesel Engines Common Rail Type

Source: [Il Sole24Ore](#), September 2, 2001: 8

**Table 3 - A Matrix Representation of Coopetition Levels for Value Creation**

		<b>Coopeting Actors</b>	<b>Knowledge Value</b>	<b>Economic Value</b>
<b>Levels of Coopetition Strategy</b>	<b>Macro</b>	Clusters of Firms  Firms Across Industries	Communication and Information Flows  Inter-Industry New Knowledge Creation and Transfer	Reduced Aggressive and Suboptimal Rent-Seeking  Profit and Fund Sharing Arrangements
	<b>Meso</b>	Firms in a Industry (Horizontal Relations)  Purchasers and Suppliers (Vertical Relations)	Intra-Industry New Knowledge Creation and Transfer  Communication and Information Flows  Co-Design Co-Development	R&D Investment Workforce Training Investment  Quicker Agreement on Standards  Reduced Time-to-Market  Joint R&D Joint Production
	<b>Micro</b>	Functions and Divisions within a Firm  Workers in a Firm	Communication and Information Flows  Intra-Firm New Knowledge Creation and Transfer  Greater Incentive and Commitment to (Hard) Work and Create knowledge	Quicker and More Effective Transition from R&D to Production (e.g., from 60 to 46 months)  Heightened Productivity Thru Commitment

Source: Free Elaboration from Kenworthy (1995)