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COOPERATION, COMPETITION AND THE
LONGEVITY OF STAKES IN JOINT VENTURES:
A VALUE CREATION APPROACH

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Abstract

This research used a transaction value perspective (Zajac and Olsen, 1993; Madhok and Tallman, 1998) to examine the impact of competitive and cooperative forces on joint venture (JV) duration. We argue that some factors increasing the management cost of the JV may also increase its value potential. Such factors include whether the partners are direct competitors, and whether their nationality is the same. Findings from a survey study provided support for all of our hypotheses.

COOPERATION, COMPETITION AND THE LONGEVITY OF STAKES IN JOINT VENTURES: A VALUE CREATION APPROACH

Introduction

Value creation is at the core of alliance building and survival (Kogut, 1988; Zajac & Olsen, 1993; Dyer, 1997; Doz & Hamel, 1998; Madhok & Tallman, 1998). Alliance formation requires that partners expect the value they will derive from it to be greater than the value to be derived from any alternative organizational arrangement. Alliance survival, on the other hand, requires, first, the accomplishment of this value, and second, the maintenance of the alliance's comparative advantage over other organizational arrangements. However, the realized value will typically be lower than the potential value (Madhok & Tallman, 1998). The potential value depends on the synergies that the partners expect to derive from sharing their resources. The realized value depends on the management costs of the alliance. Thus, the survival of an alliance requires, on the one hand, a superior rent-earning potential of the resources committed to it, and on the other, the related management and coordination costs to be low enough so as not to exceed the potential value of the alliance.

Researchers analyzing alliance survival have tended to focus on the factors that make it difficult to achieve the potential value of the alliance (Barkema, Bell, & Penning, 1996; Park & Russo, 1996; Barkema, Shenkar, Vermeulen, & Bell, 1997; Park & Ungson, 1997). This literature, mainly centered on joint ventures (JVs), analyzes the influence on JV survival of several factors through their influence on coordination and management costs. Obviously, these costs play a key role in joint venture survival: when the synergistic potential of the JV is kept constant, reduction in management costs increases the realized value of the JV and, consequently, its chances of survival. However, as Kogut (1988) and Zajac & Olsen (1993) have pointed out, many inter-organizational strategies that entail significant management costs may lead to substantial value gains to the partners involved that outweigh the transaction cost efficiency losses. In addition, the way in which the partners handle their relationship can reduce the actual coordination costs and contribute to increasing value through unilateral commitments (Gulati, Khanna, & Nohria, 1994) or, in general, through the building of trust and relational quality (Dyer, 1997; Ariño & de la Torre, 1998).

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This paper aims to complement the literature on joint venture survival by focussing on the synergistic potential of these alliances rather than only on management costs. By doing so, we find that two factors that have traditionally been viewed as decreasing the chances of survival of a JV have, in fact, an ambivalent effect on it. This is the case of direct competition between partners, and their nationalities. In their pioneering study, Park & Russo (1996) extend the classical debate on competition vs. cooperation (Bresser & Harl, 1986) to the field of JV duration. Although firms can maintain competitive and cooperative behavior in their relationships —what Lado, Boyd, & Hanlon (1997) call syncretic rent-seeking behavior—, the coexistence of both within a long-lasting relationship is difficult to explain. Park & Russo (1996) show that direct competition between partners increases the management costs of the alliance, and at the same time, its chances of survival, due to the conflicting goals of the partners. However, we argue in this paper that direct competition can be a sustainable source of synergies that can provide a solid basis for a cooperative relationship. Our results show that competition only tends to beat cooperation as the synergistic potential of the JV decreases —as happens with dyadic JVs— and when the degree of rivalry within the JV increases —as happens with partners from different countries.

The structure of the paper is the following: in the next section, we review the literature on joint venture survival and instability in order to summarize the factors identified therein which have an influence on survival. We then analyze the impact of these factors on JV survival through the lens of value creation. Next, the hypotheses formulated are tested using the results of a survey on the duration of JVs. We used a Cox proportional hazard model as estimation method. Finally, we discuss our main results and present suggestions for further work.

Management costs and duration of joint ventures

As mentioned above, most of the past research on JV survival has taken for granted the fact that potential value creation in the JV analyzed is constant. As a consequence, the key factors influencing JV duration are the coordination and management costs of the alliance. The main factors analyzed in the literature include the following:

- The number of partners. It has been highlighted that coordination costs increase and management of the JV becomes more complex with the number of partners. Furthermore, there is a risk of the partners' forming coalitions that have a dysfunctional effect on the JV (Park & Russo, 1996). All this negatively influences the survival of the JV as it leads to an increase in the management costs of the alliance.
- Direct competition. When the partners are competitors, there are more incentives to try to gain access to the partner's competencies. Park & Russo (1996) maintain that it is easier to interiorize a partner's know-how when the partner is a direct competitor. This will lead to a short-life JV, as competition beats cooperation. Another factor that increases management costs, thus decreasing the duration of the agreement, are the conflicting goals of the partners in the wider relationship in which the JV is embedded.
- The nationality of the partners and cultural distance. As this distance increases, the problems related with communication, coordination and the initial lack of trust between partners are aggravated (Barkema et al., 1996; Barkema & Vermeulen, 1997; Barkema et al., 1997; Park & Ungson, 1997). These problems lead to high management costs, thus curtailing the survival of the JV.

- Distribution of equity. According to the literature, this variable shows an ambivalent effect on the duration of JVs. On the one hand, the existence of a dominant partner facilitates decision making and hence the coordination of work, while an equitable sharing out of equity makes management more conflict-prone. This line of argument, which considers that the existence of a dominant partner positively affects the survival of the JV by reducing management cost, has been empirically supported (Park & Ungson, 1997). On the other hand, the greater the inequality in the distribution of equity, the greater the incentive for the partners with minority shareholdings to not cooperate, while an equitable distribution introduces more incentives to behave cooperatively. This case, therefore, upholds the negative influence of the existence of a dominant partner on cooperation and, hence, on the survival of the JV. This second line of argument also has empirical support (Blodgett, 1992).
- Previous collaborative relations between the partners. It has been pointed out that the existence of previous cooperation between partners will positively affect future collaborations between them, given that these later collaborations will start from a high level of relational quality (Park & Russo, 1996; Park & Ungson, 1997). This factor will therefore positively affect survival, since as was mentioned above, relational quality reduces coordination costs and contributes to increasing the value of the alliance.
- Experience in managing alliances. Barkema *et al.* (1997) found that previous experience in managing domestic JVs positively influenced the duration of international JVs, as the firm has been able to learn to a certain extent how to carry out alliances. This prior learning lowers management cost, and will hence positively influence the survival of the JV.

Summing up, the research carried out on the survival and instability of JVs has focussed fundamentally on those attributes of the partners that influence the management cost of the JV. If such factors increase these costs, they will negatively influence the survival of the JV, while if they manage to lower them, the foreseeable effect will be a lengthening of the survival of the agreement. Reinterpreting these results from the perspective of transaction value analysis, it can be observed that the researchers' approach is that all alliances have the same potential for creating value and, therefore, the factor that differentiates between long-lasting alliances and those that are not is management cost. The problem with this approach is that not all of the partners' attributes have the same synergistic potential. Therefore, the kind of partner chosen to increase profits in a JV is unlikely to be the same type as the one chosen to reduce transaction costs, as Kogut (1988) has pointed out.

The duration of joint ventures and value creation

Within the framework of this study, we shall say that a strategic alliance creates value for the partners as long as the activities that they coordinate experience synergies or gains in efficiency that would not arise if they were carried out by a single firm (Madhok & Tallman, 1998). Therefore, at least one of the following two conditions has to be fulfilled. The first condition is that the activities are carried out at a lower cost than any of the partners would obtain acting alone. If one of the partners were capable of producing alone at an equal or lower cost than within the cooperation project, this project would not make sense. In this case, the low-cost partner could act as the supplier to the rest through a market relationship, without the need to incur the costs that the cooperation entails. The second condition is that

the sales of the end products manufactured by or related to the JV are greater than those any one firm could achieve acting alone.

Hence, from our viewpoint, the creation of value is somewhat relative, the reference being the value that each partner can create acting alone (or interacting through a market relationship). This is important because the opportunities for jointly creating value among several firms always imply an intensification of the relationship between partners and an increase in the complexity of the relationship. The flip side of this complexity is that the likelihood of conflicts of interests arising increases, along with coordination costs.

In this sense, in line with Madhok & Tallman (1998), we may distinguish between the potential value and the realized value of a cooperative project. While the potential value depends on the synergies that it is technically possible to achieve, the realized value will depend on the magnitude of management and coordination costs. Thus, not only the potential value of the cooperation increases with complexity, but also the possible sources of coordination and management costs. In this sense, one of the main conflicts of interests among partners is rooted in the possibilities for learning that alliances provide. This learning may lead to the dissolution of the alliance, either because the partners are reluctant to transfer their assets due to the risk of their being interiorized by the rest, or because once they have learned from their partners, the partners may become superfluous (Hamel, 1991). However, management cost does not depend solely on the complexity of the relationship, but also on the partners' efforts to reduce this cost by designing an appropriate structure and form of governance for their relationship. Doz (1996) points out that partners can develop their relationship towards what he calls learning cycles, in which partners develop their relationship through increasing, irreversible commitments that allow them to fully exploit the synergistic potential of the alliance. Thus, it may be assumed that the higher the potential value of a cooperative project, the greater the incentives for the partners to find an appropriate way of structuring the alliance that will allow them to achieve the desired synergies. Thus, the greater the potential value of the cooperation, the greater the likelihood of survival, as this value will give the partners an incentive to find the best way of structuring their cooperation.

Within this context, the creation of joint ventures may be considered a consequence of the processes that seek to create joint value in alliances, at the same time as seeking an appropriate form of governance for them. On the one hand, joint ventures lead to greater relational complexity, since they imply the combination of (firm-specific) idiosyncratic assets owned by different firms. This combination is justified when there is a synergy in the combination of these assets and trading them through market contracting entails high transaction costs (Hennart 1988). On the other hand, they lead to a more efficient form of governance than non-equity contracts (Pisano, 1989; Gulati, 1995; Garcia-Canal, 1996). Thus, assuming the partners' interest in the activities continues, JVs will last as long as the efficiency gains they generate last. This way, when factors which increase the likelihood of achieving sustained synergies (the potential value of the alliance) concur, the likelihood of a partner quitting the alliance will decrease with time.

While all the factors analyzed in the literature influence the management cost of the alliance (and hence its realized value), not all of them also directly influence its potential value. In fact, equity distribution, the existence of previous relations and experience in managing alliances are factors that allow the coordination costs of a cooperative project to be reduced. When the potential value of the venture is held constant, the presence of these factors increases the venture's realized value, as they facilitate teamwork. However, they do not lead to an increase in the potential value of the collaboration. In contrast, the number of

partners, their nationality and direct competition do influence the potential value. Contractor & Lorange (1988) discuss a number of benefits that partners can achieve through JVs. On looking at these, we can see that some of the factors previously discussed in the literature on joint venture survival also influence the synergistic potential of these alliances (see Table 1).

Table 1. Influence of selected factors on the accomplishment of JV benefits

Motives for forming alliances	Factors		
	Direct competition	Number of partners	Different nationalities
Reduction of cost and achievement of economies of scale	√	√	
Access to new markets			√
Blocking competition	√	√	
Access to and development of new technologies	√	√	
Governmental requisite			√
Development of new abilities (learning)	√	√	√
Reduction of risks	√	√	√

In particular, many of the benefits pointed out by Contractor & Lorange are easier to achieve if the partners compete in the same markets. If the partners are direct competitors, they have more opportunities to find activities that can be shared within a JV, thus benefitting from scale economies and spreading their risk between them. In particular, they have more opportunities to share R&D projects and to become a long-lasting learning source for one another. There are also some benefits of cooperation that are only feasible in alliances between competitors, as happens with co-opting or blocking competition.

But as competition also has a potentially adverse effect on cooperative behavior and increases management cost, we may affirm that it will have an ambivalent effect in this type of alliance. Thus, competition will prevail over cooperation when there are factors that either diminish the expected synergies or intensify the conflicts of interests inherent in direct competition.

All of the efficiency gains associated with competition increase with the number of partners, as the pooling of resources from several firms increases the expected synergies. For this reason, partners in dyadic JVs between competitors will have more incentives to quit/abandon the JV than if it were a multiparty alliance, as the potential for exploiting sustainable synergies between partners are lower in dyadic JVs. Thus:

H1: The probability that a partner will quit a JV will be positively related to the competition between partners if there are only two of them.

Competition is also more acute when the partners are from different countries and the foreign partner is a direct competitor in the host country of the other partner, since the JV may be a way of accessing local knowledge by the partner that expands its boundaries. In these circumstances, cooperation is more likely to end in the short term, once the foreign partner has internalized the desired competencies. This is what Hennart, Kim, & Zeng (1998) call the “Trojan Horse” hypothesis, which was previously formulated by Pucick (1988), Hamel (1991) and Reich & Mankin (1998) with reference to the behavior of Japanese firms in their international JVs with U.S. partners. The main difference between domestic and international JVs between direct competitors is that when the competitors are domestic, a consolidated status quo already exists in the industry and it is easier to have tacit agreements concerning this. When the alliance is international and another rival firm wants to enter the country, it is easier for a conflict of interest to arise, since the JV is embedded in a wider process in which the foreign firm is gaining market share to the detriment of the domestic firm. We therefore predict that:

H2: The probability that a partner will quit the JV will be positively related to the competition between partners if the partners come from different countries.

Likewise, the nationality of the partners is another factor that may have a negative effect on the probability of quitting the JV. The existence in a JV of partners of different nationalities may mean that the possible synergies and geographical complementarities existing between them may be exploited. In particular, firms can take advantage of four of the benefits mentioned by Contractor & Lorange (1988): they can enter new markets more easily and with less risk-taking; they can tap into the local knowledge of each country; and they can overcome governmental barriers. Within this context, it may be affirmed that firms that belong to countries in the same regional block (countries which belong to a free-trade zone, such as the EU, NAFTA or Mercosur), as is the case of Spain in the EU, have a greater potential for survival, since geographical proximity in conjunction with an institutional framework that favors the free movement of productive factors facilitates the emergence of profitable projects in which sustainable synergies are obtained for the firms involved.

We therefore predict that:

H3: The probability that a partner will quit the JV will be negatively related to the presence of international partners if the partners come from the same regional block.

METHODOLOGY

Data Collection and Sample

In order to test our hypotheses, we carried out a survey among Spanish companies that had participated in JVs. The JVs were identified through press clippings published in the daily newspaper *Expansión* —the leading financial newspaper in Spain— between 1986 and 1992. The end of 1992 was chosen as the cut-off point in our search so as to leave a sufficient amount of time between the creation of the JV and the time of the study. At the same time, we only considered press clippings relating to JVs in which at least one member was Spanish. In this way, we identified 438 Spanish companies that had participated in JVs, with a total of 656 participations.

We focussed on the participation of Spanish companies in order to homogenize the sample as well as for reasons of representativeness. Since the gradual opening up of the Spanish economy during the 70s and 80s, Spanish companies have been forced to engage in a substantial number of JVs and strategic alliances in general, in order to gain access to new technologies and/or markets. Hence, focussing on JVs created by Spanish companies guaranteed that we would be able to obtain sufficient empirical evidence of the new types of JVs that have arisen worldwide since the end of the 70s.

In order to obtain information on the characteristics of their participation in JVs, the circumstances in which this occurred and their current status, a survey was mailed to the identified companies. Each questionnaire referred to participation in a specific JV and each was addressed to the C.E.O. of the company. A maximum of three questionnaires was sent per company so as to encourage them to reply. In the selection of JV experiences, priority was given to criteria such as the scale of the collaboration project and its diversity with respect to variables such as the number and nationality of the partners. The questionnaires were first sent out at the beginning of January 1997, a second mailing being sent approximately two months later, accompanied by a telephone follow-up. Reception of the questionnaires lasted until June of the same year, and the following months were spent screening and completing the information obtained, contacting the person who filled out the questionnaire by phone or fax, when necessary.

A total of 609 questionnaires were sent to 431 Spanish companies. Of these, 99 completed questionnaires were returned, of which 85 were considered valid for this study (the rest were discarded for various reasons, fundamentally because they referred to forms of cooperation that were not JVs or because they contained insufficient information). Table 2 presents the industry groups to which the companies making up the sample and those that responded to the questionnaire belonged.

Table 2. Distribution of sample and responses by industry groups
(In percentage)

Sector	Sample	Responses
Agribusiness	14.6	12.7
Metals and minerals	1.0	
Energy and water	6.2	11.3
Construction	3.6	1.4
Textiles, leather, clothing and shoes	4.5	2.8
Paper and wood	3.8	1.4
Chemicals	4.8	8.5
Computers and semiconductors	1.9	
Other electric and electronic products	6.2	8.5
Automobiles	1.2	1.4
Aerospace	0.7	2.8
Other machinery	3.1	4.2
Other manufacturing	6.0	8.5
Transportation	1.7	4.2
Communication and advertising	1.4	
Distribution	6.0	1.4
Finance	18.9	26.8
Services	12.2	2.8
Computer software	2.2	1.4
Number of firms	431	71

Dependent Variable and Method of Analysis

We used the longevity of the stake in a jointly owned firm as the dependent variable, understanding by this the number of months that passed between the moment of its creation and the moment at which the partner quits the cooperative project. We considered the following events as the end of the cooperation: dissolution of the JV, sale of the stake to a partner or third party and, finally, the conversion of the JV into a wholly-owned subsidiary. In order to test the aforementioned hypotheses, we used event history techniques. We chose these techniques because they allow those cases for which the considered event has not occurred to be censored: in our study, those in which the cooperation had not been abandoned on December 31, 1996. We used a proportional hazard regression (Cox, 1972). This technique, which uses a non-specified distribution of hazard rates, is appropriate when we are uncertain as to which distribution model best fits the data. The estimations were obtained using LIMDEP 7.0.

Independent Variables

The following independent variables were used in our estimations, all of which were directly related to the posed hypotheses:

Competitors: a dummy variable that equals 1 when any of the partners is a direct competitor of the company under study and 0 otherwise.

Two partners: a dummy variable that equals 1 when the number of partners is two and 0 otherwise. In defining this variable, we considered the participation of two companies in which one owns 100% of the other's capital or both are 100% owned by a third company as a single partner. Also, the C.E.O. of the JV was not counted in the number of partners in cases where he or she had a share in the equity.

*Two partners*competitors*: a dummy variable that equals 1 when the JV is formed by only two partners that are competitors, and 0 otherwise.

*International*competitors*: a dummy variable that equals 1 when there is at least one foreign partner in the JV and this partner competes in the Spanish market with the Spanish firm, and 0 otherwise.

EU partners and Non-EU partner: these are two dummy variables related to the regional block that the partners belong to. *EU partners* equals 1 for international JVs in which all the other partners come from European Union countries, and 0 otherwise. The *Non-EU Partner* variable equals 1 for international JVs in which at least one partner comes from a country that does not belong to the European Union, and 0 otherwise. Thus, the domestic JVs—those in which all the partners are Spanish—act as a reference for the behavior of these variables.

Control variables

The following control variables were used in our estimations. Most of them have been previously analyzed in the literature on JV survival, and some of them we used to estimate the interrelationship between two partners:

Dominant partner: a dummy variable that equals 1 when one of the partners owns more than 50% of the shares of the JV or a much greater share than the rest (in the opinion of the company under study), and 0 otherwise.

Previous alliances: a variable that measures how important the existence of a good relationship with any of the partners, established in other earlier alliances, was in creating the JV in question. Specifically, this variable is the product of a dummy variable that equals 1 when the company under study has maintained previous cooperative relationships with any of its partners and another variable that measures—using a scale from 1 to 7—whether the previous relationship was decisive in the creation of the JV under study.

Experience: this variable measures the experience of the company under study in managing JVs. This was approximated by means of the number of JVs that the company under study had participated in since 1986.

*Two partners*previous alliances:* a dummy variable that equals 1 when the JV is made up of only two partners who had been allied prior to the creation of the JV, and 0 otherwise.

*Two partners*dominant:* a dummy variable that equals 1 when the JV is made up of only two partners and one of the two owns more than 50% of the equity of the JV or a much greater share than the other, and 0 otherwise.

CEO Shareholder: a dummy variable that equals 1 when the C.E.O. of the JV is a shareholder, and 0 otherwise.

Size: a variable that measures, via turnover, the size of a company participating in the JV. It is included in order to tentatively analyze its effect, while at the same time correcting possible biases due to its influence.

Multipleactiv: a dummy variable that equals 1 when the JV carries out more than one functional activity, and 0 otherwise.

Table 3 shows the descriptive statistics and correlations of the variables used in our estimations. Overall, high correlations were not observed.

Table 3. Descriptive Statistics

	Mean	s.d.	1	2	3	4	5	6	
1. Competitors	0.46	0.50	1						
2. Two partners	0.54	0.50	0.04	1					
3. EU partners	0.51	0.50	0.01	0.08	1				
4. Non-EU partners	0.14	0.35	-0.10	0.17	-0.41	1			
5. Two partners* competitors	0.26	0.44	0.64	0.54	0.05	-0.09	1		
6. International* competitors	0.28	0.45	0.68	0.05	0.41	0.05	0.46	1	
7. Previous alliances	0.32	0.47	-0.02	-0.08	0.17	-0.20	0.00	0.08	1
8. CEO Shareholder	0.13	0.37	-0.07	-0.32	-0.16	0.04	-0.21	-0.08	0.10
9. Dominant partner	0.29	0.46	0.08	0.18	0.02	0.18	0.15	0.17	-0.11
10. Experience	0.06	0.24	0.07	-0.07	0.05	-0.10	0.08	-0.05	0.37
11. Size	90369.6	149125.8	-0.10	0.04	-0.01	0.03	0.02	0.07	0.12
12. Multiple activity	0.55	0.50	0.07	0.03	0.01	0.16	-0.01	0.04	-0.15
13. Two partners* Previous alliances	0.15	0.36	0.07	0.39	0.29	-0.08	0.27	0.17	0.62
14. Two partners* dominant	0.20	0.40	0.07	0.46	-0.04	0.22	0.31	0.14	-0.03

Results

The results of our estimations confirm the positive effect on the duration of the alliance of the competitive interdependencies between the partners and their different nationalities. Table 4 shows the results of the estimated model. It shows the value of the coefficients of the independent variables, their standard error, and an indication of their level of significance. Generally speaking, it can be seen that the model offers estimates that are statistically significant with chi-square values that correspond to significance levels lower than 0.05. The hypothesis that all the estimated coefficients are 0 can therefore be rejected. Taken as a whole, our results confirm all of the predictions we formulated:

Table 4. Results of Cox Proportional Hazard Model on the probability of leaving

Variables	Coefficients [†]	
Competitors	-1.91 *** (0.69)	
Two partners	-1,69 * (0.93)	
EU partners	-1.58 *** (0.54)	
Non-EU partners	-0.97 (0.73)	
Two partners*competitors	1.30 * (0.76)	
International*competitors	1.50 * (0.79)	
Previous alliances	-0.01 (0.09)	
CEO shareholder	-0.89 (0.59)	
Dominant partner	-0.97 (0.64)	
Experience	-0.14 (0.14)	
Size	-0.74 (1.35)	
Multiple activity	-0.48 (0.37)	
Two partners*previous alliances	0.02 (0.13)	
Two partners*dominant	0.34 (0.44)	
Chi-Squared	26.79973 [p=0.02]	
Cases	85	
* p<0.1	** p<0.05	*** p<0.01

(†) Beta coefficients (standard deviations in brackets).

Hypothesis 1 supported. When direct competition is combined with the fact that the agreement has only two partners, it has a positive influence on the likelihood of quitting the JV, as was established in Hypothesis 1. The Two partners*Competitors variable, showing the interaction effect of two partners and competitors, is significant at $p < 0.1$.

Hypothesis 2 supported. When direct competition is combined with the fact that the partners come from different countries, it has a positive influence on the likelihood of quitting the JV, as was established in Hypothesis 2. The International*Competitors variable, showing the interaction effect of international partners and competitors, is significant at $p < 0.1$. Taking these results in conjunction, along with the result of the Competitors variable, we can see that direct competition, per se, is not an obstacle to the development of a long-lasting cooperative relationship. It only shows a positive effect on the likelihood of quitting the JV when there are factors that intensify competition or reduce the expected synergies of the alliance.

Hypothesis 3 supported. While the participation of European partners decreases the propensity to abandon the cooperation (the EU Partners variable is significant at $p < 0.01$), when a partner from a country outside the European Union participates, no significant effect is appreciated. This result may be explained on the basis that while the difference in nationality contributes to the creation of synergies, being a member of the same regional block adds more value to the alliance, while at the same time the smaller cultural distance makes it easier to achieve the level of relational quality needed for the normal functioning of the alliance.

With regard to the control variables, only the variable related to the number of partners presents a statistically significant coefficient, showing that two-partner cooperation projects tend to last longer than the rest.

Discussion and conclusions

This paper is an attempt to apply the insights of transaction value analysis (Zajac & Olsen, 1993; Madhok & Tallman, 1998) to JV duration. In particular, we have focussed on the influence on the net value of the alliance—rather than only on the management costs—of the factors that have been traditionally analyzed as having an influence on joint venture duration. In doing so we predict that some of these factors have an ambivalent effect. Direct competition between partners and differences in nationality are not always bad for JV survival as they can increase the JV's synergistic potential. In particular, we expected cooperation to beat competition when there are more than two partners involved and when they are domestic. In addition, international alliances in which partners come from the same regional block have more chances of survival. Our data provided support for all of our hypotheses.

The paper deals with a controversial topic: the relationship between competition and cooperation and, in particular, joint ventures between competitors. Our results lead us to infer that one of the opposing forces tends to beat the other. Once the potential synergies of the cooperative project have been taken into account, these will be compared with the management costs stemming from the conflicting goals. The greater the synergies, the greater the odds of cooperation winning and the JV surviving, as Hypothesis 1 suggests. It may be

argued that these results could be due to collusion. Although collusion cannot be easily identified in practice (firms do not tend to say that they are colluding), it is difficult for a JV to last longer if collusion is the only benefit sought after, especially if the number of partners is large, since it is difficult for them all to remain in the JV and agree with the established status quo (Bresser & Harl, 1986).

On the other hand, the more conflicting the goals of the partners are, the greater the chances of quitting the JV, as Hypothesis 2 suggests. In particular, our results seem to support the Trojan Horse hypothesis (Hennart et al. 1998), since when partners come from different countries, it is difficult for the JV to last longer. This amplifies the effect of conflicting goals.

Nevertheless, cooperative projects with international partners, at least from the same regional block, as pointed out by Hypothesis 3, can be a solid basis for a long-lasting JV. This could be due to the fact that a JV of this kind can be the starting point of an international network that takes advantage of the regional market in which it is inserted.

Taken as a whole, our results show that the longevity of the stake in a joint venture depends on the set of relationships existing between the partners, and for this reason, the results of the Previous Relationships variable could be considered puzzling, as our results show that relational quality does not seem to influence JV duration. However, we are focussing on the duration of a single project (the JV), not on the cooperative relationships between the partners as a whole, and the dissolution of a JV does not necessarily imply the end of the entire set of cooperative relationships between them. Although intense rivalry can be a threat to the duration of the entire set of cooperative projects, a good relational quality does not necessarily artificially extend the duration of a JV if the JV is not backed by a strong cooperative project.

Thus, although management cost plays a key role in JVs, our results show that focussing exclusively on this cost eclipses an important aspect of the problem. In the search for value, competitors can be the best allies, but a normative interpretation of previous research can lead to wrong conclusions. Thus, the solution does not lie in avoiding alliances with competitors or partners from different countries, but in looking for a relationship that increases value while economizing on transaction cost, in a similar way to that suggested by Dyer. Our results show the importance of analyzing the interrelationship of direct competition with other variables in order to identify its real effect on value creation and JV duration. Therefore, our study confirms Kogut's (1988) insight that the desired partners' attributes are unlikely to be the same for transaction cost and strategic behavior perspectives.

One way to further develop this line of research would be to expand the unit of analysis from one single project to the entire relationship between partners. The relationship between the duration of each cooperative project and the duration of the whole alliance would be of particular interest. A second way to further develop this line of research would be to study the relationships proposed here in a longitudinal fashion in order to identify both the different processes through which partners can achieve the full synergistic potential of the alliance and overcome conflicting goals, and the role that other alliances with third firms may play in this process, as cooperation and competition between two companies can be affected by third parties (Gomes-Casseres, 1996:77).

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