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COOPERATIVE LEARNING AND LEARNING OF KNOWLEDGE THROUGH A JOINT VENTURE: A STUDY FROM THE ENTREPRENEURIAL FIRM PERSPECTIVE.

APRENDIZAJE DE LA COOPERACIÓN Y APRENDIZAJE DE CONOCIMIENTO A TRAVÉS DE UNA JOINT VENTURE: UN ESTUDIO DESDE LA PERSPECTIVA DE LA FIRMA EMPRENDEDORA.

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RESUMEN.

La literatura señala a la *joint venture* como un instrumento para el emprendimiento y el aprendizaje entre organizaciones. Este tipo particular de cooperación entre empresas permite a sus socios desarrollar dos procesos de aprendizaje: uno referente a los conocimientos por el socio en la *joint venture*; y, el otro, al aprendizaje del proceso de la cooperación. La mayoría de los estudios que analizan la relación entre ambos tipos de aprendizaje sugiere que el aprendizaje de los conocimientos proporcionados por el socio está influenciado positivamente por el aprendizaje corporativo. En este estudio se analiza una muestra de 81 empresas que han participado en una *joint venture*. A partir de la utilización de escalas propias, el estudio evidencia que la relación entre los dos tipos de aprendizaje no es unidireccional, sino bidireccional.

Palabras clave: Entrepreneurship; Aprendizaje interorganizativo; Aprendizaje de la cooperación, Joint venture

ABSTRACT.

Academic literature points to the joint venture as an instrument for entrepreneurship and interorganizational learning. This particular type of partnership allows partners to develop two learning processes: one concerns the knowledge provided by the partner in the joint venture, and the other revolves around the process of cooperation. Most studies that analyze the relationship between the two types of learning suggest that learning knowledge provided by the partner is positively influenced by cooperative learning. This study analyzes this assumption by looking at a sample of 81 firms that have participated in joint ventures. Using original measurement scales, the final results show that the relationship between the two types of learning is not unidirectional but bidirectional.

Keywords: Entrepreneurship; Interorganizational Learning; Cooperative Learning, Joint Venture

JEL: M13, M16, O33

1. INTRODUCTION.

Corporate Entrepreneurship (CE) can occur in a variety of forms, such as: strategic renewal, Corporate Venturing (CV), and/or innovation (Zahra, 1995; Sharma and Chrisman, 1999). *Strategic renewal* involves making significant changes in the strategy and/or structure of the organization, both on an individual business level and in the corporation as a whole. Corporate Venturing implies developing new corporate activity, which may or may not involve the creation of new organizational units, other than those that already exist. The new unit can be internal, when it remains within the existing organization, but it can also be external when it is developed through semi-autonomous or autonomous organizational units that lie outside the existing organization, for example, via a JV (Sharma and Chrisman, 1999). *Innovation* refers to “creating and introducing new products, production processes, and organizational systems” (Zahara, 1996: 1715).

Despite the fact that innovation in itself implies the presence of Entrepreneurship, the other two forms of CE can exist without innovation (Sharma and Chrisman, 1999).

One of the characteristics of the entrepreneurial firm is the continuous search for new opportunities (Covin and Slevin, 1991), even in cases where the firm does not have the necessary resources to do so (Stevenson and Jarillo, 1990). By means of an alliance, the entrepreneurial firm can quickly obtain the knowledge it needs to exploit an opportunity and undertake any of the CE activities (Teng, 2007). In this case, the firm's capacity to identify valuable knowledge and learn from the partner may constitute the entrepreneurial basis on which to build a new competitive advantage (Simonin, 1997).

Among the various forms of alliances, the joint venture (JV) has been noted in the literature as an option that is particularly suitable for inter-organizational learning (Kogut, 1988; Mowery et al., 1996). A JV is an organization with its own legal identity that results from a partnership between two or more independent organizations that share control, decision-making, benefits and risks of the new organization in proportion to each partner's contribution (Harrigan, 1986). According to the study by Geringer and Hebert (1989), when at least one of the partners is based outside the country where the JV operates, or

when a significant amount of its operations is carried out in another country, it is considered to be an international joint venture (IJV).

A JV provides the context for partners to simultaneously address different learning processes: (a) learning the knowledge provided by the partner involved in the agreement (Kogut, 1988; Hennart, 1988; Inkpen, 1997; Inkpen and Dinur, 1998; Inkpen, 2008), and (b) cooperative learning (Westney, 1988; Simonin, 1997; Dyer and Singh, 1998; Anand and Khanna, 2000; Kale et al., 2002; Kale and Singh, 2007).

With regard to the first of these learning processes, the extent to which an alliance relaxes the boundaries between organizations represents an opportunity to internalize the partner's embedded knowledge (Prahalad and Hamel, 1990; Crossan and Inkpen, 1994, 1995; Teece et al., 1997; Khanna et al., 1998), which may subsequently be applied to activities outside the framework of the JV, with new products, new geographic markets or new business (Khanna et al., 1998).

On the other hand, participation in a JV also facilitates cooperative learning and engenders collaborative know-how. Cooperative experience allows an organization to obtain both tangible benefits (increased market share, sales, etc.) but also intangible ones (the acquisition and / or generation of some kind of knowledge) of future alliances (Simonin, 1997) although these will be established with future partners (Dyer and Singh, 1998; Gulati et al., 2009). However, the potential benefit of this experience requires the new alliance to be structured in the same way in which it was generated (Anand and Khanna, 2000; Argote and Ingram, 2000). In addition, the impact of this capability on value creation in subsequent agreements is greater in the case of an IJV, in comparison with other types of alliances, as a result of the greater degree of complexity involved (Anand and Khanna, 2000).

It should be noted that research on cooperative learning focuses on the study of the influence of a firm's previous experience on the performance of the partnerships in which this firm participates thereafter. In addition, only a few of these studies, such as those of Westney (1988), Simonin (1997) and Nielsen (2007) examine the effect of this learning, and more specifically its outcome (the collaborative know-how) in learning the knowledge contributed by the partner. However, it is necessary to make an in-depth analysis of the relationship between these two types of learning –cooperative learning and learning knowledge provided by the JV partner, within the same JV.

The aim of this paper is thus to analyze the possible influence of cooperative learning and learning of knowledge contributed by the partner in the agreement, especially for the case of JVs in which both types of learning are developed. The paper contains the following sections. The first provides an analysis of the role of cooperative learning in learning knowledge gained from the entrepreneurial partner in the JV, whilst the second section looks at the inverse relationship between the two types of learning. Following an explanation of the methodology in the third section, we go on to present and analyze

the results of the study with a sample of 81 JVs carried out by entrepreneurial firms. The final section contains the conclusions drawn from the study and highlights the limitations and lines for future research.

2. BACKGROUND AND HYPOTHESIS.

Knowledge can be the most important strategic asset in a firm, as it can form the basis of competitive advantage (Grant, 1996) when it encompasses characteristics such as heterogeneity, imperfect imitation, imperfect substitutability or imperfect mobility (Peteraf, 1993). Thus, it is also essential in generating and maintaining a competitive advantage in terms of the organization's ability to obtain or develop or new knowledge (Teece et ál., 1997).

Organizational learning implies a continuous process of information acquisition and interpretation that leads to the creation of new knowledge. The acquisition and interpretation of information is also the focal point in the process of identifying and exploiting new entrepreneurial opportunities (Kirzner, 1973), which can lead to strategic renewal, new business creation and/or innovation (Stevenson and Jarillo, 1990). This search for information can be carried out through a strategic alliance (Teng, 2007).

Organizational knowledge is the result of organizational learning and is reflected in the codes and routines that guide actions within the firm, so the creation of new knowledge also involves creation and assimilation from the outside world of new codes and routines to replace or supplement existing ones. Through an alliance, an organization can access knowledge about its partner (Kogut, 1988) and/or learn to cooperate, and in particular learn how to learn about the other partner (Simonin, 1997).

The relationship between the two types of learning when they are both developed within the framework of the same alliance is explored in the following sections.

2.1. THE INFLUENCE OF COOPERATIVE LEARNING ON LEARNING OF KNOWLEDGE GAINED FROM THE PARTNER IN THE AGREEMENT.

The high failure rate that characterizes cooperation (Geringer and Hebert, 1989) and JVs (Park and Russo, 1996) suggests that the creation of value through this strategic choice is not easy (Anand and Khanna, 2000), and thus collaborative know-how has been considered as a unique, limited, valuable resource that is practically impossible to transfer or imitate (Simonin, 1997). Such know-how could form the basis of a competitive advantage and subsequently affect the performance of future alliances in which partners may participate. The impact of this special knowledge on value creation is greater in the case of the JV, than in other alliances, because of its greater complexity (Anand and Khanna, 2000).

Collaborative know-how requires the firm to learn how to cooperate. Cooperative learning can be generated throughout the different stages of evolution of the JV (Simonin, 1997): (a) the search and selection of partners, (b) the selection of the type of agreement, negotiating the terms and formalization of a satisfactory agreement, (c) the supervision and direction of ongoing cooperation, and (d) the completion of the agreement.

With regard to learning knowledge gained from the partner, Westney (1988) notes that it is possible for firms with cooperative experience to develop cooperative learning curves. These learning curves are generated when the previous experience in managing an organization facilitates partnership identification, internalization and internal dissemination of knowledge for subsequent partners.

Previous research such as that of Westney (1988), Simonin (1997), Anand and Khanna (2000) and Kale et al. (2002) mention the positive relationship between previous experience in cooperation through a JV and learning in subsequent JVs. However, studies by Prahalad and Hamel (1990) and Pennings and Harianto (1992) suggest that during the process of cooperation, the capacity or ability of a partner for cooperation can be a key factor for identifying, accessing and internalizing new strategic assets from the partner firm.

These arguments suggest that cooperative learning generated through the evolution of a JV will condition the partner's learning within the framework of the joint venture in which both types of learning will develop. We therefore propose the following hypothesis:

Hypothesis 1: Cooperative learning positively affects the learning of knowledge contributed by the partner in the joint venture.

2.2. THE INFLUENCE OF LEARNING KNOWLEDGE GAINED FROM THE PARTNER ON THE AGREEMENT FOR COOPERATIVE LEARNING.

A JV is an effective option for learning and knowledge transfer between partners, which also allows for the development of new competences and skills (Lei et al., 1997). In addition, the JV is especially effective when the main learning objective is the internalization of tacit knowledge. Tacit knowledge is a complex concept since it is almost impossible to collect related empirical data; as occurs with a firm's technology, experience in the distribution of a product, or specific knowledge of a country, different markets or the tastes of local consumers. This knowledge can be incorporated into designs, specifications or drawings, because it is embedded in the staff of that organization. Therefore, in order for information to be transmitted between organizations, it is necessary for employees to be willing to collaborate and to work together under a single organization, such as a JV (Hennart, 1988).

To make learning possible, partners have to establish a common knowledge base (Lane et ál., 2001). This similarity between the expertise of partners facilitates the absorption and assimilation of knowledge, and also increases the ability to obtain and develop new knowledge and to apply it to new purposes (George et ál., 2008). The greater the complexity of knowledge to be transmitted, the more important the similarity between the knowledge of the partners. Complexity refers to the number of interdependent routines, individuals, technologies, and resources that support particular knowledge. Therefore, the greater the complexity of learning, the more difficult it is to transfer and imitate (Reed and DeFillippi, 1990).

Another condition for learning from the partner is that the timescale of the agreement has to be broad enough. When learning takes place at a high rate, it becomes a key competitive variable. It may be that, while a partner seeks knowledge in an aggressive manner, the other partner in that process learns more slowly, and even passively (Inkpen, 1998). Often, managers are obsessed with the ownership structure of an alliance, when in fact the firm controls 51 % or 49% of the JV, so in some cases the speed at which partners learn from one another is less important. Therefore, firms that rely on their ability to learn may even prefer some ambiguity in the legal structure of the agreement, as this creates a greater potential to acquire skills and technologies from the partner. Some organizations risk abandonment of the agreement by the other partner when they are not prepared to exit (Hamel et ál., 1989).

Cooperation will continue over time until learning is complete (Doz, 1996) i.e. until the firm learns and acquires knowledge from its partner. The longer the cooperation, the longer time needed for the firm to acquire knowledge (Kale et ál., 2000) and also to learn from the partner. Based on these arguments, we propose the following hypothesis:

Hypothesis 2: Learning knowledge provided by the joint venture partner positively influences cooperative learning.

3. METHODOLOGY.

To select our sample population, we used the ZEPHYR database which we filtered through the Amadeus and Thomson One Banker databases. We identified a population of 1210 firms that had taken part in a JV. We posted and emailed a questionnaire (in different languages) to these firms. We were not able to contact firms in 231 cases, and the questionnaires were returned because the address recorded on the database was incorrect or no longer valid, and 396 did not fit the correct profile needed for the study. The final sample consisted of 81 firms (see Table 1).

As already noted, one of the contributions of this study is the construction and use of a scale to measure the learning of knowledge contributed to the JV by the partner on the one hand, and on the other, cooperative learning (See appendix).

TABLE 1. TECHNICAL DATASHEET OF THE EMPIRICAL STUDY.

Scope and spread of the research	1.210 firms
Sample size	81
Level of confidence	90 % $p = q = 0.5$
Sampling error	± 9 %
Sampling procedure	Convenience sample
Geographical spread	International
Sampling unit	Firms that had carried out a joint venture
Interview type	Web-based and/or <i>Word</i> format questionnaire chosen by the interviewee
Person interviewed	Manager from the firm involved in the joint venture

3.1. MEASURING INSTRUMENTS: DEVELOPMENT AND VALIDATION OF MEASUREMENT SCALES.

We developed measurement scales, based on theoretical concepts and approaches developed during this research. However, in order to test their appropriateness, the measurement scales should contain the necessary psychometric properties.

There are few quantitative empirical studies on learning in the field of partnerships. We therefore chose to develop our own scales, which allowed us to specify the domain and dimensionality of each construct, with reference to fundamental studies in the field such as those of Lane and Lubatkin (1998) and Lane et ál., (2001). The development of a scale is not a merely collection of items (Vila et ál., 2000), as the psychometric properties of the scales should be tested within the model itself for an intended contrast, as the reliability and validity of the constructs may change according to the theoretical model in which they are applied.

3.2. ANALYSIS OF RELIABILITY OF THE MEASURING INSTRUMENT.

To measure knowledge learning, we used eleven items for different threads that represent the learning of knowledge contributed by the partner. This scale was developed from, Levinson and Asahi (1995), Crossan et ál. (1999), Kale et ál., (2000) and Tippins and Sohi (2003) (See appendix).

To measure cooperative learning, we developed a series of seventeen research items based on the work of Kale et ál. (2000) and Kale et ál. (2002). We took special care to include items representing the various phases of a JV. In building this scale, we had fewer empirical references compared to the previous scale, so we opted for a larger number of items (See appendix).

In order to measure each construct, we used a 5-point Likert scale. We asked respondents to state to what extent they agreed with each of the statements (1 = totally disagree; 5 = totally agree).

The calculation of Cronbach's alpha for the scale of "learning skills" shows us an appropriate value of 0.860. We can see that no items should be removed to improve this indicator, as shown in Table 2.

TABLE 2. RELIABILITY OF THE SCALE OF KNOWLEDGE LEARNING.

Items	Average scale if the item is deleted from the scale	Variance if the item is deleted item-total	Corrected item-total correlation	Squared multiple correlation	Cronbach Alfa after deleted item
1	37.43	51.511	.492	.592	.845
2.	37.70	52.822	.459	.427	.847
3	37.49	52.516	.445	.634	.848
4	37.62	52.720	.423	.635	.850
5.	37.62	49.502	.608	.759	.837
6	37.45	50.340	.705	.740	.832
7	37.55	49.905	.647	.725	.834
8	37.96	49.520	.534	.525	.843
9	37.74	49.846	.641	.729	.835
10	37.53	51.341	.621	.571	.837
11	37.40	52.507	.531	.552	.843
Alpha 0.860					

The „cooperative learning“ scale has a Cronbach alpha of 0.900. Once items 12, and 27 were removed, this index rises. After eliminating element 12, the corrected correlation for total- item is 0.236, which is less than 0.35. We chose to maintain element 27 as the total-item correlation was greater than 0.35 (See Table 3).

TABLE 3. RELIABILITY OF THE COOPERATIVE LEARNING SCALE.

Items	Average scale if the item is deleted from the scale	Variance if the item is deleted item-total	Corrected item-total correlation	Squared multiple correlation	Cronbach Alfa after deleted item
12	55.87	97.849	.236	.426	.906
13	55.93	88.018	.695	.799	.890
14	55.72	89.496	.703	.772	.890
15	56.28	86.429	.680	.749	.891
16	55.63	95.083	.584	.521	.895
17	55.59	93.092	.659	.832	.893
18	55.57	93.362	.676	.872	.892
19	55.63	93.527	.489	.778	.897
20	56.20	91.094	.665	.622	.892
21	55.83	92.858	.654	.752	.892
22	55.98	94.422	.415	.605	.900
23	55.65	94.987	.476	.659	.897
24	55.70	92.616	.597	.725	.894
25	56.15	93.732	.569	.822	.895
26	55.85	93.599	.433	.787	.899
27	56.13	95.183	.368	.562	.901
28	56.22	86.041	.763	.830	.887
Alpha 0.900					

To obtain the necessary data, both for calculating the composite reliability index (CRI) and the convergent validity, it is necessary to perform a confirmatory factor analysis (CFA). The CFA was performed using EQS 6.1. The CFA was estimated through a maximum verisimilitude procedure (ML), we then analyzed the goodness of fit, and continued to interpret the model. The analysis points to the need to eliminate some items to obtain a better fit. We thus calculated the composite reliability with the remaining item. In Table 4 we summarize the reliability values of the different scales that form a part of the measuring instrument developed for this research.

Normally, in the field of Business Management there is not just one but several constructs involved. The Cronbach Alpha taken separately for each factor does not take into account the influence on the reliability of the other constructs. Consequently, Fornell and Larcker (1981) propose the calculation of the composite reliability index (CRI). Others authors also propose the calculation of the average variance extracted (AVE), which must have values greater than or equal to 0.5.

TABLE 4. COMPOSITE RELIABILITY OF THE MEASURING INSTRUMENT.

Factors or scales	Number of items	Cronbach Alpha	Number of items	CRI	Significant items
Learning of knowledge	11	0.860	6	0.837	V1,V5, V6 V7,V8,V9
Cooperative learning	16	0.900	7	0.932	V13, V14, V15, V16,V17,V18,V19

As table 4 shows, the CRI values of the factors are beyond the mentioned limit, and thus we opted to keep this scale. Composite reliability is also gauged using the measurement developed by Fornell and Larcker (1981) known as average variance extracted (AVE). The values should be above the threshold of 0.5 suggested by Bagozzi (1981), indicating that over 50% of the construct variance is due to its indicator.

The results of the AVEs, which are listed in Table 5, are reasonably satisfactory. All of them are above 0.5, except for knowledge learning which is 0.472, but as it is very close to 0.5, we opted to keep the scales.

TABLE 5. SCALE RELIABILITY.

Factors or scales	Number of items	Cronbach Alpha	Number of items	CRI	AVE
Learning of knowledge	11	0.860	6	0.837	0.472
Cooperative learning	16	0.900	7	0.932	0.663



3.3. VALIDITY OF THE MEASURING INSTRUMENT.

Validity is a multifaceted concept that has different dimensions that must be explained and analyzed separately, as should the content validity, validity or concept construction (convergent and discriminatory) and criterion validity. There are dimensions that tend to complement one another.

3.3.1. CONTENT VALIDITY.

Content validity is defined as the degree to which the scale includes all the dimensions of the concept being measured. Content validity is related to the proper selection of the items comprising the scale (Vila et al., 2000). This depends largely on the level of literature reviewed and the researcher's value judgments, so it cannot be expressed in an indicator. There is no well-defined or objective criterion (Nunnally and Bernstein, 1994).

3.3.2. CONSTRUCT VALIDITY OR CONCEPT: CONVERGENT VALIDITY AND DISCRIMINANT VALIDITY.

Construct validity seeks to reflect the extent to which a measure would behave in the same way as the concept being measured, with respect to other measures already in place for other concepts. A scale has construct validity when it has convergent validity and discriminant validity.

Convergent validity exists when using different instruments to measure the same construct (different items for the same latent variable), so these instruments are highly correlated (Vila et al., 2000). If all the factor loadings that measure the same construct are statistically significant, this fact verifies the convergent validity of these indicators. In our case, we conducted a confirmatory factor analysis (CFA) by analyzing the items, eliminating the non-significant ones and maintaining the significant ones. In the cooperative learning factor, seven items remained from the scale and for knowledge learning five items remained.

The results of the CFA, as shown in Table 6, reveal very good estimations with a high level of significance (t-statistics are all greater than 3.291 and therefore, are significant for $p < 0.001$, while standardized λ all have high values of more than 0.4).

The statistical goodness of fit reaches values of around 0.9. In general, for cooperative learning, the indicators of the goodness of fit achieved the desired values except AGFI with a value of 0.784 and SRMR, which has a value of 0.038. However, as they are close to the recommended values, we consider the measurement scale to be of an exploratory nature. Therefore, we argue that convergent validity is confirmed for this model.

We examine the discriminant validity by comparing the correlations of the factors and the Cronbach alpha for each of them; if the latter is higher, discriminant validity is assured (Sánchez and Sarabia, 1999). The calculated corre-

lation between F1 and F2 was 0.504. If we raise this to a squared value, it gives a result of 0.254, which is lower than the AVE of F1 (0.472) and the AVE of F2 (0.663); hence, these results confirm the discriminant validity of the measuring instrument used¹.

TABLE 6. CONFIRMATORY FACTOR ANALYSIS MODEL.

Variable	λ	t	Δ standard	Adjustment level indices
F1 Knowledge learning				χ^2 (9grados de libertad) = 14.556
V1F1	2.340***	6.780	0.645	BENTLER-BONETT NORMED FIT INDEX = 0.936
V5F1	2.054***	6.265	0.606	BENTLER-BONETT NON-NORMED FIT INDEX = 0.957
V6F1	2.996***	9.704	0.840	COMPARATIVE FIT INDEX (CFI) = 0.974 LISREL GFI FIT INDEX = 0.951 LISREL AGFI FIT INDEX = 0.885 STANDARDIZED RMR = 0.050
V7F1	3.058***	10.513	0.886	
V8F1	1.558***	5.056	0.506	
V9F1	1.931***	5.614	0.553	
F2 Cooperative learning				χ^2 (14 grados de libertad) = 45.347
V13F2	2.906***	11.780	0.921	BENTLER-BONETT NORMED FIT INDEX = 0.919
V14F2	3.023***	10.829	0.876	BENTLER-BONETT NON-NORMED FIT INDEX = 0.913
V15F2	3.129***	10.341	0.852	COMPARATIVE FIT INDEX (CFI) = 0.942 LISREL GFI FIT INDEX = 0.892 LISREL AGFI FIT INDEX = 0.784 STANDARDIZED RMR = 0.038
V16F2	2.175***	7.737	0.697	
V17F2	2.468***	7.178	0.659	
V18F2	3.239***	10.341	0.852	
V19F2	3.101***	9.586	0.811	
Significance level: * p<0.5; **p<0.1;***p<0.001; (t (499) two-tailed) t (0.05, 499) = 1.964; t (0.01, 499) = 2.585; t (0.001, 499) = 3.291				

In the structural model, we propose the analysis of the causal relationships, as determined by the formulation of the hypotheses formulated in our theoretical framework, using structural equation models.

¹ We note that the data used for analysis of the measurement model were treated statistically with the SPSS and EQS.



4. RESULTS.

In this section, our goal is to expose, analyze and discuss the results of our research and test the hypotheses resulting from the theoretical framework, after having tested the psychometric properties of reliability and validity. In the model analysis we obtain an acceptable fit as shown in Table 7, and we can thus proceed to test our hypothesis.

TABLE 7. INDICES OF GOODNESS OF FIT OF THE MODELS.

	χ^2	gl	p	GFI	AGFI	SRMR
Model	25.457	13	0.0916	0.933	0.872	0.051

The first hypothesis states that cooperative learning in a joint venture has a positive effect on knowledge learning and we found that H1 is confirmed, as we have found a significant relationship between both variables. For this hypothesis, the t statistic has a value of 4.168, as shown in Table 8.

TABLE 8. ESTIMATED PARAMETER FOR KNOWLEDGE LEARNING.

HYPOTHESES	Influence	Standardized loadings	t
H.1. Cooperative learning in the joint venture has a positive effect on learning skills.	Cooperative learning in the learning of knowledge	0.390***	4.168
H.2 Knowledge learning in the joint venture has a positive effect on cooperative learning.	Learning skills in cooperative learning	0.453***	5.011
p* < 0.05; t > 1.964; p** < 0.01; t > 2.585; p*** < 0.001; t > 3.291;			

Hypothesis 2 which referred to the inverse relationship established in H1, was also accepted as the most significant statistic is t = 5.011. Therefore, as a partner is learning skills through the joint venture, learning increases cooperation. Although both types of learning are two parallel processes, they are closely related and positively influence each other.

In light of these results, we can say that the learning process through the joint venture is the result of two threads of learning: learning knowledge and cooperative learning. Both processes feed one another and are necessary for interorganizational learning through the joint venture.

Our results suggest that the capacity for cooperation is necessary to internalize and acquire the knowledge possessed by the partner. This capacity will

develop as the partners interact and they adjust to the changes that take place in the relationship and in the JV. Learning new knowledge and also cooperative learning can be complicated processes since the latter may involve changes in organizational behavior, customs, values, routines and established ways of working in order to cooperate.

5. CONCLUSIONS.

The aim of this study was to examine the relationship between learning knowledge provided by the partner in a JV and cooperative learning for the particular context of entrepreneurship through a JV in which both types of learning are generated. Our results suggest a positive influence in both directions between the learning processes.

In this research, we firstly consider the JV as a tool for entrepreneurial and interorganizational learning, distinguishing it from cooperative learning and considering both types of learning separately. We secondly examine the ways in which knowledge is learnt. We are thus better able to analyze how learning occurs between partners in a JV, and also determine that the relationship between learning is bidirectional, and not only one-way as previous studies suggest.

We found that participation in a JV for learning knowledge involves learning how to cooperate, and through cooperation, a firm can learn knowledge from the other partner. Thus, both types of learning processes are interrelated and parallel in time, feeding and strengthening one another. In the development of interorganizational learning to create new business through a JV, there are two possible results. The first refers to the increase of the stock of knowledge that firms can obtain as a result of this learning. Once the process is finished, the second result reveals that firms gain experience in cooperating with others, as they learn to establish the necessary mechanisms, developing routines “for” and “from” cooperation.

This research makes a dual contribution to the literature. Firstly, we study the relationship between learning knowledge contributed by the partner involved in the agreement and cooperative learning in the context of the JV in which both learning processes take place, highlighting the positive relationship between the two ways of learning. However, although an abundance of studies exists on interorganizational learning in the context of partnerships, there are still only a small number of articles that examine some aspect of cooperative learning. Moreover, most of these studies analyze the effect of cooperative learning of a firm, and more specifically, its experience in cooperation, and the performance of future alliances.

Secondly, despite the growing interest in recent years among researchers on interorganizational learning, few studies attempt to develop a measurement scale designed to assess learning, and even less attempt to measure the learning achieved by the partners of a JV. One of the most important contributions

of this article is the construction and validation of a measurement scale for both cooperative learning and learning knowledge provided by the partner within a JV. The questionnaire developed involved a great deal of effort in constructing the items in order to measure all the variables proposed in the research. In most of the cases, these items were created by the authors and others were adapted from known research, after a thorough review of existing studies of the literature in the field. Particular care was taken to check and validate the psychometric properties of all the scales developed for this study.

The results of this research have implications not only for academia but also for business practitioners. Indeed, this study allows us to outline the usefulness of a joint venture as a learning instrument for accessing new markets, new businesses and new industries. Especially, for those firms that do not have much experience in cooperation.

It should be mentioned that the information we obtained was from just one of the partners involved in the JV; this is a common limitation of studies on alliances and it is difficult to overcome this limitation.

Research should continue to develop measurement scales for learning in organizations that are involved in cooperative activities, because there are only a small number of existing quantitative and empirical studies, demonstrating the difficulty of this task but also the need for further progress in the measurement of interorganizational learning.

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APPENDIX

1 Your firm devoted resources to analyzing knowledge contributed by your partner to the JV with a view to adopting the best aspects
2 Your firm assimilated knowledge exactly in the way it was contributed by your partner via the JV
3 At the end of the JV, your firm was capable of using knowledge gained, without the support of the partner and in the same conditions it was used during the JV
4 Your firm used some of the knowledge contributed to the JV by the partner under the same conditions, substituting what was previously in place
5 Your firm dedicated the necessary means to apply the knowledge gained to other uses
6 Your firm has had to invest in specialised staff and machinery to exploit the knowledge gained
7 Your firm applies/applied knowledge gained to the firm's own products or procedures
8 Once you had established the best work practices learnt from the JV, your firm applied them to other uses
9 At the end of the JV, your firm was capable of using the knowledge gained without the support of the partner in conditions other than those present in the JV
10 Your firm has gained the knowledge it expected to learn via the JV
11 Your firm has gained knowledge it did not expect to learn prior to the JV
12 Undertaking this JV allowed your firm to establish protocol for collaboration with other firms
Taking part in the JV allowed your firm to establish specific norms or regulations to:
13 Identify and select partners for future JVs
14 Negotiate and renegotiate future JV agreements
15 The management and control of future JVs
16 Produce an agreement before the expected date in future JVs
Taking part in the JV allowed your firm to have a better understanding of the evolution of the cooperation process with regard to
17 Circumstances of the cooperation process that change over time
18. Learning to adapt to changes that occur in the agreement
19 Establishing systems of communication systems with the partner(s)
20 Detecting latent conflicts
21 Establishing systems for detecting possible "opportunistic behaviour" on the part of a partner
After this experience, the behaviour of the managerial team in future JVs would be:
22 Less likely to adapt to changes in the circumstances of the agreement
23 Less permissive/ less communicative with the partner(s)
24 More focused on anticipating, detecting and avoiding latent conflicts
25 More careful in keeping a check on the development of the JV
26 More careful about sharing knowledge that is not transferred as part of the JV
27 More careful in the choice of staff involved in the JV
28 Errors made in the previous JV(s) helped you to resolve unforeseen situations in this one

