

# International entrepreneurship in local SME supplier networks

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**Abstract:** *The objective of this study is to analyse the influence of a multinational corporation (MNC) on the productive network of the host territory and the proliferation of entrepreneurs. In particular, an attempt has been made to analyse the influence on the exporting activities of local SMEs – both suppliers and non-suppliers. The study has shown that strategic integrated suppliers show greater exporting tendencies than those that are not considered to be strategic suppliers for an MNC. Similarly, those companies whose founder and/or part of the executive team have worked previously in a multinational corporation show greater levels of export activity compared with those founded by local entrepreneurs.*

**Keywords:** *international entrepreneurship; internationalization; SMEs; multinational corporations; networks; externalities*

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The successful internationalization process of a company is achieved when a significant combination of decisive and specific resources is present (Kogut and Zander, 1993; Hitt *et al.*, 1997). This makes internationalization possibly one of the most complex strategies a company will have to face (Aitken *et al.*, 1997; Fernández and Nieto, 2002).

The availability of information on foreign markets and the ways to enter them make up one of the fundamental resources that can influence both the decision to initiate the exporting process and its subsequent success (Aitken *et al.*, 1997; Eriksson *et al.*, 1997).

Companies that enter international markets show a superior initial performance when compared with non-exporting companies (Álvarez and López, 2003). In this respect, small companies show little propensity for exporting and do not always have the skills and resources necessary to enter into successful exportation. Nevertheless, the multinational corporations (MNC) are in a far better position in this respect. The network of

their subsidiaries as well as the knowledge gained through experience in foreign markets provides them with a strategic asset.

Some authors point out that an MNC can affect the exporting activities of the host territory (Barry and Bradley, 1997). One of the sources that generate positive externalities is the relationship between companies (Fujita *et al.*, 1999). Thus, the productive or spatial interaction between an MNC and its suppliers could facilitate the transmission of part of this strategic knowledge of foreign markets to its auxiliary companies.

The objective of this paper is to advance the knowledge of the existence of positive externalities arising from the factories belonging to an MNC. In particular, it aims to provide an in-depth analysis of the mechanisms for the diffusion of information and knowledge related to the opening of new markets, among the local suppliers of an MNC.

This paper analyses the existing relationship between

the propensity for exporting of local SMEs and the nature of the links that these companies maintain with the MNC. As well as aiming to prove whether local companies can learn from the MNCs how to export, the study also aims at further understanding of the determining factors that intervene in the said learning process.

Among the results obtained, it is shown that those companies that maintain close, direct links with the MNC and, likewise, play a strategic part in the production process, show a greater propensity for exportation. Another determining factor comes into play when the firm owner has in the past worked in an MNC factory. In both cases, the propensity for exportation is greater than that of local SMEs, whose internationalization strategy is that of adopting an imitation of the foreign company.

The paper is divided into four sections. Section 1 includes the conceptual framework and the presentation of the hypotheses being studied. Section 2 shows the methodology and data that were utilized. Sections 3 and 4 present the results of the research and main conclusions.

## **Theoretical foundations**

A study of the available literature shows a scarcity of work on export spillovers (Sousa *et al.*, 2000). In fact, some authors point out that the identification of these spillovers is due more to mere chance than to the existence of studies that have rigorously analysed the role of foreign direct investment (FDI) as the driving force behind local exporting (Aitken *et al.*, 1997).

Studies carried out up until now have found a positive relationship between a company's decision to export and the exporting activities of nearby companies (Lin, 2000). Similarly, a significant relationship has been detected between the concentration of exporting activity of foreign companies and the volume of exporting of local companies (Bedi and Cieslik, 2000). Likewise, there seems to be a proven correlation between the spatial concentration of companies and the probability that they are involved in exporting (Becchetti and Rossi, 2000).

The work of Aitken *et al.* (1997) demonstrates the existing correlation between the spatial proximity of the foreign plant and the increase in local companies' propensity to export. They also point out the reduction of market access costs as one of the principal externalities being generated. Sousa *et al.* (2000), in their study found, in the case of the UK, the existence of positive externalities of the multinational corporations both in the local companies' decision to export, as well as in their propensity to export.

Often, part of the necessary knowledge for the internationalization of companies comes from their links

to customers and suppliers. The availability of accurate information on foreign markets lessens the perceived risk on the part of the suppliers (Henderson *et al.*, 1995) and they decide to initiate the exporting process.

Lautanen (2000) found that one of the principal stimuli for small business owners when it came to exporting was the transmission of information gained through relationships with other business people. Thus, the proximity in the local community, the ease of communication and the relationships between foreign companies and local SME suppliers facilitate the transmission of information from one to the other (Henderson *et al.*, 1995).

An MNC can therefore act as a 'flagship' (Rugman and D'Cruz, 1997, 2000) by becoming the leader in the exporting process of a local production system. In this case, the spillovers will be numerous if, among other reasons, the MNC uses local suppliers for intermediate products and if the distance between the foreign plant and the rest of the local companies is not great (Soreide, 2001).

According to Sousa *et al.* (2000), an MNC can influence the exporting activity of local companies in three ways: through generation of externalities of information related to exportation; by demonstration effects; and lastly, due to an increase in competition in the local market. Given the objectives of this paper, we will focus our attention on the first two.

Information on exporting can be transferred to local suppliers through the communication channels that are opened when a strategic relationship of cooperation between an MNC and a supplier is established.

The MNC may be interested in transferring this knowledge to its local suppliers (Smarzynska, 2002) because the absence of spillovers would cause significant disparities in productivity between foreign and local companies (Kathuria, 2000). For that reason, occasionally it is the foreign company itself that motivates and provides incentives to local business owners to adopt internationalization strategies both in production (diversification of clients) and in supply (diversification of suppliers), thus generating an improvement in the competitiveness of the value system.

Local companies can apply the knowledge acquired in this way to products, processes and foreign market conditions in order to carry out their own exportation (Aitken *et al.*, 1997; Blomström and Kokko, 1998). Another way that local companies can learn about foreign markets is by observing the exporting activities of other companies that have successfully carried out the process of internationalization.

In this way, the exporting activities of the MNC can generate externalities that improve the exporting prospects for local companies (Rhee and Belot, 1990; Bedi

and Cieslik, 2000; Lin, 2000; Bernard and Bradford, 2001), since the imitation strategy uses the foreign company as a point of reference. Thus, local companies adopt the more advanced practices being used by the foreign company (Kathuria, 2000). The benefits obtained through this imitation in themselves constitute a market-access spillover (Blomström and Kokko, 1998).

With the above in mind, a set of hypotheses related to the influence that an MNC exerts on the exporting propensity of local suppliers, as well as other local companies, can be established:

H1: The exporting tendency of the MNC suppliers will be greater than that of non-supplier companies.

This means that companies working directly for the MNC will have access to greater amounts of information than those companies in the territory that opt for an imitation strategy. Additionally, the information made available in this way will be more reliable and accurate.

It is also suggested that those companies that form a strategic part of the production process of the MNC will be exposed to a greater amount of information of better quality than other companies specializing in processes or products not considered by the MNC to be strategic. This can be attributed to the fact that the cooperative relationship maintained with strategic suppliers establishes a more fluid and dynamic channel of communication than that with non-strategic suppliers, with whom the relationship will be more hierarchical, with the suppliers taking a more passive role. This leads us to a new hypothesis:

H2: Strategic suppliers' propensity to export will be greater than that of non-strategic suppliers.

The transmission of information is also produced through the hiring of workers and executives trained and prepared in the subsidiary (Gorg and Strobl, 2002), or when these same employees form their own companies.

According to Katz (1987), local business owners in Latin America frequently begin their professional careers in subsidiaries of multinational corporations, where they are trained and acquire the necessary skills. Bonaccorsi (1992) maintains that, in the case of Italy, many of the companies established in the 1980s were created by entrepreneurs who had worked in factories belonging to multinational corporations and had frequently received help from the company that had employed them previously.

Gorg and Strobl (2002) also state that companies created by former employees of multinational corporations show greater productivity than those of other local companies, which means that these workers are incorporating knowledge acquired in their previous employment

in their new companies. In this case, the transference is helped by the rotation of labour and/or with the adoption of downsizing strategies that imply a reduction of the workforce.

Thus, it is expected that those companies founded by former workers and/or executives of the MNC count on a greater amount of strategic skills than those companies founded by entrepreneurs in the territory. This is due to the fact that former executives/workers incorporate the training received from the MNC into the new company, and consequently, possess and apply executive skills that are superior to those being applied by other entrepreneurs in the territory. Because of this, we offer a third hypothesis:

H3: Local companies founded by former workers of the MNC will show a greater propensity to export than those companies founded by local entrepreneurs with no links to the MNC.

## **Methodology**

### *Characteristics of the sample*

The information found in this study originates from a larger study whose objective was to study the influence of a multinational corporation on the productive network of the host territory. Specifically, it attempts to analyse the nature and intensity of the impact and to detect which are the acting mechanisms and the determining factors in the process.

With this goal in mind, a local production system (LPS) was selected from Martos (Jaén), which is located in the region of Andalucía in the south of Spain. This LPS, involved in the production of lighting systems for automobiles (main and auxiliary headlamps and rear lighting), is made up of small and medium-sized companies and led by a single multinational corporation, which contracts out to local industry. This analysis includes suppliers to the multinational as well as non-suppliers.

The research was begun in November 2000 in the form of a questionnaire. The initial version was based on an existing bibliography. This first questionnaire was subjected to pre-testing during the months of January and February 2001. This involved sending it to a small number of companies in the LPS, both suppliers and non-suppliers to the MNC. The result of these interviews was a significant improvement of the survey.

In April 2001, the final questionnaire was sent to all auxiliary companies which made up the LPS (25), using this as a sample of the population. The questionnaire was to be answered by the highest ranking executive in the company. Table 1 gives details of the technical data.

**Table 1. Technical data.**

Characteristics	Survey
<ul style="list-style-type: none"> <li>Objective universe</li> <li>Geographical domain</li> </ul>	<ul style="list-style-type: none"> <li>Auxiliary industrial companies</li> <li>Local productive system in Martos (Jaén-Spain)</li> </ul>
<ul style="list-style-type: none"> <li>Temporal domain</li> <li>Unit of sample</li> <li>Size of the sample</li> <li>Sampling error</li> </ul>	<ul style="list-style-type: none"> <li>Period, 2000</li> <li>Companies</li> <li>21</li> <li>E = 0.075 (due to small size of universe) confidence 95.5%</li> </ul>
<ul style="list-style-type: none"> <li>Date of fieldwork</li> <li>Subject of the questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>1 April to 15 May 2001</li> <li>General manager or firm owner</li> </ul>

**Table 2. Characteristics of the sample.**

Number of employees	Percentage of companies	Number of companies
1–50	56.3	12
51–100	25.0	5
More than 100	18.8	4
Mean	57.38	
Std dev	54.84	
Total billing (million euros)	Percentage of companies*	Number of companies
0–1.50	50.0	9
1.51–3.00	27.8	5
More than 3.00	22.2	4
Mean	4.12	
Std dev	6.40	
Industrial segment	Percentage of companies	Number of companies
Injectors	28.6	6
Moulds and matrices	42.9	9
Final assembly and pre-assembly	9.5	2
Recycled plastics	4.8	1
Embossing	4.8	1
Others	9.5	2

\*Valid percentage.

The response rate was 84%. The sample utilized for the statistical analysis included around 95% of the industrial employment generated by the auxiliary companies and approximately 98% of the total turnover of this type of company. Non-production companies were not included in the analysis. Table 2 shows the principal characteristics of the sample.

*Variables analysed*

In order to test the hypotheses, a set of variables related to the nature of the links binding the auxiliary companies to the MNC was used. Thus, the independent variables used are those related to the level in the subcontracting chain that the auxiliary company occupies, the strategic importance, or lack thereof, in the production process for the foreign company, and the relationship of the background of the firm owner or part of the firm’s board of directors with the MNC. For the dependent variable, the propensity to export was used, calculated with the quotient obtained by dividing the export volume by volume of turnover.

Before testing the hypotheses, we computed the Cronbach Alpha as a measure of internal consistency of the variables used. Results relating to the reliability analysis proved to be amply acceptable, with a Cronbach Alpha of 0.7813 obtained. The scale used is presented in Table 3.

**Results**

First, we analyse the influence of the function carried out by the company within the LPS on its exporting activity. To do this, we use a contingency table with the production segments, distinguishing the local companies by their activity as ‘exporters’ or ‘non-exporters’.

In this case, with an acceptable level of significance of less than 0.05, we can confirm the existence of a

**Table 3. Set of variables used.**

Independent variables		Items used
Direct supply relationship	1	Direct
	0	Indirect
Strategic supply relationship	1	Strategic
	0	Non-strategic
Former labour links with firm owner	1	Owner is an MNC former executive or worker
	0	Owner is not an MNC former executive or worker
Former labour links with executives	1	At least one local firm executive is a former MNC executive
	0	No local firm executive is a former MNC executive
Dependent variable		Export percentage
Exporting propensity	0	0
	1	0 < x ≤ 10
	2	10 < x ≤ 20
	3	> 20

**Table 4.** Contingency table showing the productive segment of local firms and export activity.

Segment of activity	Non-exporting		Exporting activity		Total
	Percentage*	Number	Percentage*	Number	
Injection of plastics	33.3	2	66.7	4	100.0
Construction of moulds and matrices	60.0	5	40.0	3	100.0
Final assembly, pre-assembly	100.0	2	0.0	0	100.0
Embossing	100.0	1	0.0	0	100.0
Other	50.0	1	50.0	1	100.0
$\chi^2$ Pearson	Value 4.825	Degree of freedom 5		Significance 0.043	

\*Valid percentage.

**Table 5.** Factor analysis.

Component	Direct supplier	Strategic supplier	Exporting propensity	Labour links with firm owner	Labour links with executives	Sum of squared saturations of rotation		
						Total	Percentage of variance	Accumulated percentage
1	0.735	0.795	0.776	0.635	0.728	2.169	43.383	43.383
2	0.572	-0.154	-0.507	0.683	-0.465	1.829	36.576	79.959
Barlett test	$\chi^2$ 29.980		Degree of freedom 10		Significance 0.001	Kaiser-Meyer-Olkin 0.556		

certain relationship between the function of the production process in the specialization of the local company and the possibility that that company is an exporting company. The data are presented in Table 4.

Here, 66.7% of the companies connected with plastics injection are exporters, compared with the 40% of companies involved in construction, repairs and maintenance of moulds.

The injector companies are the most advanced suppliers in the LPS; they are involved in the design, development and production of essential components of the final products in the LPS and they cooperate from the design phase in each component; thus, they show a higher technological and administrative level. At the same time, they are larger, both in number of employees and in volume of turnover.

If indeed both segments are direct suppliers to the MNC, the domestic role in the LPS shows different strategic levels with respect to the MNC. Thus the injector companies maintain close links of permanent cooperation with the foreign plant and they find themselves in the midst of a process of continuous improvement in technology and quality, while those companies involved in the construction of moulds are relegated to a more passive role.

Among the non-exporting companies however, those dedicated to assembly and pre-assembly as well as to embossing, should be noted. In both cases, 100% of the companies carry out no foreign exporting activity. They

deal with non-strategic functions. In the first case, it is work involving a great deal of unskilled labour, and in the second, it is a mature technology on the decline. In both cases, the competitive advantage comes from cost competition.

A factorial analysis was carried out on the principal components in order to group the variables used in this work for a statistical testing of our hypothesized factor structure (the scale used is presented in Table 3). The results will also be used to define the number of groups in the cluster analysis. The Barlett test of sphericity is used to test the hypothesis and prove that the correlation matrix is an identity matrix. Since one of the goals of the factor analysis is to obtain factors that help explain these correlations, the items must be related to each other for the factor model to be appropriate. The Barlett test index confirms the adequacy of the model. The analysis showed a Kaiser-Meyer-Olkin sampling adjustment of 0.556, higher than the 0.5 needed to validate it, and with a level of significance equal to 0.001. The variables utilized were grouped by two factors, which have an accumulated percentage of total explained variance of 79.959. The results are shown in Table 5.

Factor No 2 groups the related variables according to the direct supplier relationship existing between the local company and the MNC, and the previous professional tie between the founder of the company and the foreign plant. In other words, both variables constitute a

**Table 6.** Typology of companies according to the relationship with the MNC.

Cluster	Direct supplier	Strategic supplier	Exporting propensity	Labour links with firm owner	Labour links with executives	Percentage of companies	Number of companies
1	0	0	0.00	0	0	26.70	5
2	1	1	1.17	1	1	40.00	8
3	1	0	0.00	1	0	33.33	7
ANOVA	Squared mean	0.825	0.983	2.450	1.250	0.800	
	Degree of freedom	2	2	2	2	2	
	Significance	0.001	0.009	0.000	0.000	0.009	

direct channel of information transfer from the MNC to the local company. In the first case, the information transfer is carried out on a continuous, daily basis, and the second is found in the skills acquired by the founder during his time with the MNC. This group of variables explains the 36.576% of variance.

Next, a cluster analysis was used to detect whether there were different groups of companies in terms of the nature of their links with the MNC (suppliers or not, strategic supplier or not, or if the founder or part of the board of directors worked previously for the MNC). The results are shown in Table 6.

Cluster No 2 obtained the highest score for the five variables. The companies belonging to this cluster show the greatest level of exportation in the LPS and are characterized by being direct suppliers of the MNC. They are considered to be strategic suppliers by the foreign plant and additionally, their founder, as well as being part of the board of directors, worked for the MNC in the past.

Cluster No 3 shows those companies that are direct suppliers of the MNC, but are not, however, considered by the foreign plant to be strategic suppliers, and therefore, are not integrated into the daily operations of the company and do not participate in the design and development of products.

Companies belonging to this cluster show a lower level of propensity to export than that of the integrated suppliers. Nevertheless, the founders of these companies did work for the MNC, although members of the board of directors did not.

In this case, the capacity for transmission of information from the MNC to the local company is limited. The amount of available information is reduced, and possibly the quality of the information is also affected, since the channel is not developed as a result of daily cooperation. The founder does, however, incorporate the training and skills acquired during his time working for the MNC into the local company. This is reflected in the greater propensity for exporting than that of the companies in cluster No 1. This cluster is denoted as *Suppliers not integrated with the MNC*.

Finally, cluster No 1 is made up of those companies in

the LPS that are not direct suppliers of the MNC. This means that they do not supply the MNC directly, but they do provide products for the direct suppliers or those who provide products for them. They are also characterized by the fact that neither their founders nor members of their boards have previously worked for the MNC.

These are companies started by local entrepreneurs who saw market opportunities open up with the presence of the MNC and decided to establish their company using an imitation strategy. This means they imitated those workers and executives who decided to leave the MNC in order to set up their own company.

The same thing happened with the management of the company. These entrepreneurs do not have first-hand information from the MNC. There is no channel of direct communication with the directors of the MNC, and their directors do not incorporate the superior skills and knowledge acquired in the MNC. These companies show the least propensity for exporting in the whole LPS under study. Their international expansion strategy, when it exists, is based on observation of the strategies implemented by the MNC and by those companies that are its direct suppliers.

On occasion, no strategy for international expansion exists because, as seen above, these are production segments such as assembly and pre-assembly, which are labour-intensive and require geographical proximity to direct suppliers. This could also influence the segment of construction and repairing of moulds, owing to the size of the products themselves as well as to the work of adjustments and repairs. Nevertheless, this last production segment shows a greater propensity for exporting than the previous one, and one for which geographical proximity is desirable but not essential. This cluster can be called *Companies with no direct or prior relationship with the MNC*.

In order to prove a possibly limiting effect on the international strategy of these companies as a result of the need for geographical proximity of these suppliers to their customers, we used a T-test for independent samples to enable us to compare the means of clusters 1 and 3. In this respect, for the Levene test the results obtained for F were equal to 9.689, with a level of

Table 7. Contingency table showing the relationship of local firms with the MNC and export activity.

		Exporting propensity (%)			Total
		0	0 < x ≤ 10	10 < x ≤ 20	
Relationship with the MNC	Labour links with firm owner	50.0	40.0	10.0	100.0
	No labour links with firm owner	66.7	33.3	0.0	100.0
χ <sup>2</sup> Pearson	Value	Degree of freedom		Significance	
	8.310	2		0.066	
		Exporting propensity (%)			Total
		0	0 < x ≤ 10	10 < x ≤ 20	
Relationship with the MNC	Labour links with executives	0.0	75.0	25.0	100.0
	No labour links with executives	75.0	25.0	0.0	100.0
χ <sup>2</sup> Pearson	Value	Degree of freedom		Significance	
	8.000	2		0.018	
		Exporting propensity (%)			Total
		0	0 < x ≤ 10	10 < x ≤ 20	
Relationship with the MNC	Strategic supplier	16.7	66.7	16.7	100.0
	Non-strategic supplier	80.0	20.0	0.0	100.0
χ <sup>2</sup> Pearson	Value	Degree of freedom		Significance	
	6.519	2		0.038	

significance of 0.026. Thus, we can affirm that there are significant differences between both groups with respect to the need for geographical proximity of their customers.

In order to contrast the influence of the company founder having worked (or not) for the MNC, we used a contingency analysis. The data appear in Table 7. For this case, with significance levels of less than 0.05, the contingency tables show that a greater influence on the exporting propensity is found in local companies where some board members previously worked for the MNC than in the prior labour relationship of the founder with the MNC. Therefore, this factor is important in so far as the founder of the small company is a former executive in the MNC, not a manual labourer. In this way, the skills acquired during the time spent at the MNC can be transferred to the new company.

## Conclusions

In this study, we analyse the influence of a multinational corporation on the productive network of the host territory and the proliferation of entrepreneurs. In particular, it aims to advance the study of the mechanisms for the diffusion of information and knowledge related to the opening of new markets among the local suppliers of an MNC. This paper analyses the existing relationship between the propensity for exporting of local SMEs and the nature of the links that these companies maintain with the MNC, both as suppliers and non-suppliers.

With this aim, the paper analyses the case of a local production system (LPS) involved in the production of lighting systems for automobiles, made up of small and

medium-sized companies and led by a single multinational corporation, which contracts out to local industry.

This case allows geographical isolation of the influence of an MNC on a local SME supplier network. The local environment analysed is constituted by the settlement of a single foreign plant within a rural area with no previous industrialization. Thus, this is an ideal framework for a detailed study on the effects related to the presence of the foreign company within the territory, in the absence of dispersive factors.

We have validated the formulated hypotheses, which proposed that the type of relationship that a local company maintains with the MNC is a determining factor for the generation of positive externalities of information associated with foreign markets.

The results obtained show that those companies that maintain close, direct links with the MNC, and which are also involved in part of the strategic production process, show a greater propensity for exporting. Similarly, it has been shown that the past working relationship of the founder of the local company with the MNC is a determining factor in the level of propensity for exportation in the companies under study, where a channel of transmission of important information can be perceived. In both cases the propensity for exportation is greater than in those local companies that base their internationalization strategy on adopting strategies of imitation of foreign firms. Thus, we can see that, in this case, this is the least effective channel of information transfer to the local companies.

In this respect, the different intensity in the relationship of the local companies with the MNC will entail a different volume of information transfer, and therefore, a different level of propensity for exportation. Thus, an

integrated supplier will have access to a greater volume of information than a non-integrated supplier, who will in turn, have a greater volume of information available than those companies that lack links with the MNC.

As we saw at the beginning of this work, one of the sources that generate positive externalities is the relationship between companies (Fujita *et al.*, 1999). Thus, the productive or spatial interaction between an MNC and suppliers could facilitate the transmission of some strategic knowledge of foreign markets to its auxiliary companies.

The results show that, after the MNC's adoption of flexible forms of organization within the new framework of a subcontracting relationship, the productive interaction between the MNC and its suppliers facilitates a higher channel of information transfer with respect to spatial interaction. Consequently, new methods of strategic subcontracting could give the opportunity to local firms in the host territory to benefit from a transfer of better knowledge about access to new markets.

With respect to the limitations of this research, the work is focused on one local suppliers' network. Consequently, the size of the population studied is small. The number of local firms (21) is not sufficient for global inferences. It only shows a very local experience and analyses how the forces work in this case.

In the same way, this work has important limitations linked to the difficulty in measuring the intensity of every channel of information transfer. In this respect, in the case of strategic suppliers it is very difficult to separate the effects of the information transfer derived from the productive link (as a spillover process) and the effects derived from direct MNC support in accessing new markets (as a tutorial process).

On the other hand, this work analyses the generation of externalities from the MNC to the local suppliers' network, but does not consider the effects of information transfer to local suppliers' networks, because the local firms have commercial relationships with each other.

For the future, it would be very interesting to carry out a larger study comparing several cases of local suppliers' networks (including the existence of a previous spin-off process) in different countries. It would also be interesting to identify the existence of significant differences in the information transfer process between different organizational modes to check for the effect of organizational permeability.

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