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Co-operation as a marketing strategy in Mexico's SMEs: An empirical evidence

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La Colaboración como Estrategia de Marketing en la Pyme de México: una evidencia empírica Colaboração e Estratégia de Marketing nas PME no México: a evidência empírica

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Globalización, Competitividad y Gobernabilidad

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1. Contact author: Facultad de Ciencias de la Administración; Universidad del Valle; Univalle San Fernando Edf. 124 Of. 3012; Cali-Colombia Co-operation between organisations is a marketing strategy that grows in a market characterised by high rates of globalisation and competitiveness. This is why co-operation allows SMEs to obtain greater benefits than they could achieve by working individually, since it facilitates the interchange of experience, information, and knowledge among workers. Hence, this paper's objective is to analyse the co-operation rate inside 'Aguascalientes', an SME. The empirical analysis was carried out with a sample of 300 SMEs that had 5–250 workers. The resulting data showed that reduction on purchase costs; financial performance, and innovation have a significant positive influence on co-operation between different organisations.

La colaboración entre las organizaciones es una estrategia de marketing que está ganando cada vez más adeptos en un mercado caracterizado por un alto nivel de competitividad y globalización. Es por ello que la colaboración permite que las pequeñas y medianas empresas (Pymes) participantes obtengan mayores beneficios que los que pudieran lograr trabajando de manera individual, ya que facilita el intercambio de información, conocimientos y experiencias entre los trabajadores. Por lo tanto, este trabajo tiene como objetivo analizar el nivel de colaboración en la Pyme de Aguascalientes. El análisis empírico se llevó a cabo con una muestra de 300 Pymes de 5 a 250 trabajadores. Los resultados obtenidos muestran que la reducción de costos de las compras, el desempeño financiero y el nivel de innovación tienen efectos positivos significativos en la colaboración entre las empresas.

A colaboração entre as organizações é uma estratégia de marketing que está ganhando apoio cada vez mais em um mercado caracterizado por um elevado nível de competitividade e globalização. É por isso que a parceria permite que pequenas e médias empresas (PME) participantes obter maiores benefícios do que eles poderiam conseguir trabalhar sozinho, pois facilita a troca de informações, conhecimentos e experiência entre os trabalhadores. Portanto, este estudo tem como objetivo analisar o nível de colaboração em Aguascalientes PME. A análise empírica é conduzida com uma amostra de 300 PME de 5 a 250 funcionários. Os resultados mostram que a redução dos custos de aquisição, desempenho financeiro e nível de inovação têm efeitos positivos significativos sobre a colaboração entre as empresas.

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1. Introduction

Currently, different studies have analysed and tried to identify different strategies and practices used by organisations (Boldontin *et al.*, 2000), in an attempt to know how organisations develop new products in an environment characterised by its constant changes, with quite different markets and clients; what kind of marketing and development strategies are implemented before this situation; and what characteristics define their organisational culture and their learning practices (Pol *et al.*, 2007).

This is how, nowadays, the success of the design and implementation of any type of project an organisation carries out depends on how highly skilled the organisation is when it comes to co-ordinate and control the co-operation process among participants of the said project (Pol *et al.*, 2007). This is why Whitfield *et al.* (2000) suggests that stocktaking management, planning, and resources from different organisational activities are the most important elements a company must consider when performing a process of cooperation in business operations (Green *et al.*, 2008; Jin, 2006). Likewise, co-operation facilitates the possibility to access specialised knowledge, share risks and costs with suppliers, and better share experience (Martínez *et al.*, 2001; Giannini *et al.*, 2002).

In this context, co-operation between organisations is the result of the multiple benefits obtained by the organisations that have worked together (Asproth and Amcoff, 2008). Therefore, co-operation is not only a means to transfer knowledge between participant organisations but also a means to obtain new knowledge, which creates a kind of synergy in the solution of problems that might show up in the process of collaboration, by which organisations achieve a better position within the market (Hardy *et al.*, 2003).

On the one hand, in order to obtain positive and significant results in the collaboration process, communication and the exchange of information between the participant companies must be as effective and efficient as possible (Pol *et al.*, 2007). Most of the communication and exchange of information that takes place inside organisations involved in a process of co-operation is generally isolated and sporadic, which might reduce competitive advantages considerably (Lipnack and Stamps, 1977; Townsend *et al.*, 1998). On the other hand, confidence is vital for relationships of co-operation since it increases organisations' investments, communication, and the possibility of acquiring new consumers, and it reduces all costs (Kwon and Suh, 2005; Smith and Barclay, 1997; Selnes and Sallis, 2003). On the contrary, if there is not enough confidence between those organisations that wish to have a relationship of collaboration, there might be conflicts that will ultimately slow down investments on future or on-going projects (Inkpen and Beamish, 1997).

Also, if there's a high rate of confidence among the organisations that perform processes of co-operation, controlling this process will be easier, which will generate a greater reliability on the means to exchange information; conflicts among the participant organisations will be reduced; and propensity to work on projects that facilitate the increase of clients and consumers which brings along mutual benefits will be created (Jain *et al.*, Key words SMEs, corporate social responsibility, competitiveness.

PALABRAS CLAVE PYME, responsabilidad social corporativa, competitividad.

PALAVRAS-CHAVE PME, responsabilidade social corporativa, a competitividade.

> JEL Codes **M190, M310**

2006; Lane *et al.*, 2001). Therefore, the confidence rates between organisations working together reduce the perception of risks, opportunism, and conflicts, which facilitates the generation of proper environment for investments and joint projects (Fang et al., 2008; Kale *et al.* 2000).

Within this context, the research presented shows the results obtained analysing the effects of collaboration on Aguascalientes. For this objective, a sample of 300 enterprises was used. The paper is organized as follows: first the presentation of the theoretical frame, previous empirical results and the research hypothesis; then the explanation of research methodology; finally the data analysis, the main conclusions and implications of the study.

2. Literature review

Current literature shows that collaboration between organisations is a vital business strategy that allows companies to achieve better results in a highly globalised and competitive market (Fang *et al.*, 2008). In order to achieve goals otherwise harder to accomplish, cooperation on marketing activities facilitates knowledge and identification among the workers of the collaborating partners (Lajara and Lillo, 2004).

In this sense, companies perform activities of collaboration owing to different reasons. Among the most important reasons, we have developing new products (Rindfleisch and Moorman, 2001), strengthening the supply chain (Wathne and Heide, 2004), reducing costs of production (Cannon and Homburg, 2001; Williamson, 2008), opening new markets (Bamford *et al.*, 2004), improving marketing activities (Fang *et al.*, 2008), strengthening learning mechanisms (Spekman *et al.*, 2002), sharing or creating knowledge (Sivakumar and Roy, 2004; Wu, 2008; Wagner and Buko, 2005; Wang and Wei, 2007). Also, organisations commonly perform activities of collaboration with other enterprises in order to generate value and to reach goals and objectives that would be almost impossible to achieve when working alone and isolated (González and Gálvez, 2008).

Under this paradigm, developing countries' SMEs are not exempt from applying this kind of business strategy, for even when SMEs play a vital role in developing a country's economy (Sengenberger *et al.*, 1990), infrastructure (governmental support, efficient ports and resources, etc.) tends to limit their development and internationalisation significantly (Banomyong and Supatn, 2011). Therefore, SMEs need to dodge these diverse barriers that will hold back or limit their investment rates, productivity, and the development of channels to distribute their goods internationally (Vaaland and Heide, 2007).

In order to reduce these limitations to a minimum, a number of important SMEs are currently promoting and performing joint actions with other enterprises through contracts of collaboration (Storper, 1997; Markusen, 1999; Tallman *et al.*, 2004). Like this, through collaboration, SMEs are capable of sharing skills, solving issues of productivity (Amin and Thift, 1992; Pouder and St. John, 1996), exchanging knowledge and technology (Storper, 1997), developing responsibilities regarding an increasing demand (Tendler and Amorim, 1996; Tallman *et al.*, 2004; Canina et al., 2005), improving rates of exportation (Schmitz, 1995), accessing global markets (Towers and Burnes, 2008), or transforming relationships between SMEs (Quayle, 2003).

Despite the importance of these activities, SMEs in developing countries have weaknesses of infrastructure to adapt them, and governments don't provide help to correct this problem (Mesquita and Lazzarini, 2008); besides an inefficient legal system, the application of governmental policies at one's discretion, and an inefficient regulation of business activities tend to slow down or inhibit investments, creating a highly risky and uncertain environment (North, 1990; Mesquita, 2003).

Also, SMEs have to avoid these barriers and acquire complimentary skills in order to develop a proper environment for activities of collaborations. As such, SMEs must invest in specific resources and in improving their infrastructure in order to have appropriate conditions to do joint projects with other organisations and generate expectancies of success when doing projects of collaboration that would otherwise be very hard to obtain if the required investments are not made, which might create an environment where organisations minimise risks when doing processes of collaborate (Hoskisson et al., 2000; Mesquita and Lazzarini, 2008). In this sense, in order for collaboration processes to have the expected outcomes, SMEs must contribute their tangible and intangible resources with the sole intention of generating projects jointly, establishing joint objectives, and gaining mutual benefits. Hence, the participant organisations must work hard in order to integrate tangible and intangible resources, given that the failure or success of these processes of collaboration and their outcomes is closely tied to this integration of resources (Bordonaba-Juste and Cambra-Fierro, 2009). Likewise, the employees assigned to develop a new product or to work jointly with other enterprises are accountable for successful team work in order to develop the said product; to this end, they must share their mutual knowledge and technology so that the expected results are achieved (Fang et al., 2008).

On the one hand, collaboration between SMEs is particularly complex given that, commonly, relationships between different organisations exist at different levels simultaneously, which might bring about diverse conflicts among the participants (Pedersen, 2009; Fang *et al.*, 2008). However, in countries such as Germany, Japan, and Italy, where SMEs are integrated within institutionalised commercial associations, there is an efficient system open to cooperation or collaboration with competitors (Hollingsworth, 1997; Hage and Alter, 1997; Biggiero, 1998). Also, as in the case of the U.S.A., which has a weak business association, those efforts of collaboration carried out by SMEs involve the national and state government, academic institutions, industrial associations, and non-profit organisations (Luna and Tirado, 2008).

On the other hand, Mexico's case is that there is relatively low investment on research and development and, commonly, what is invested by the government is done through universities and public research centres (Casas *et al.*, 2000). Likewise, co-operation between governmental institutions and the industrial ones is really poor, which is why most companies would rather purchase international technology than produce it themselves; this causes SMEs to acquire obsolete technology from the bigger companies since their co-operation with the government or the bigger companies is also very low (Cimoli, 2000).

In this context, the Mexican government could use its resources more efficiently if it promoted agreements of collaboration between enterprises and institutes of higher learning, with which economic and organisational growth would be higher than it is currently (Luna and Tirado, 2008). Also, Mexican businessmen associations are not integrated within an institutionalised system, and are commonly defined by four essential features: they are highly centralised, for they are basically corporatists and sectorial; they are extensive and highly heterogeneous (Tirado, 1998).

Thus, collaboration between organisations should be a priority policy to Mexican governmental authorities. Otherwise the economic development of enterprises and SMEs will be relegated (Tirado, 1998), given that it is widely recognised by literature that organisational association is the most common form of collaboration used to improve economic activities (Hollingsworth and Boyer, 1997), since it is through collaboration that the products demanded by consumers can be produced and improved on.

Lastly, developing associations facilitates joint work with other companies in the short run. Organisations are each day more interested in processes of collaboration since they help research, development of organisational policies, implementation of training and educational (both formal and informal) programs, designing international marketing strategies, etc. (Boyer and Hollingsworth, 1997; Bennett, 1999; Luna and Tirado, 2008).

Hence, according to previous theoretical approaches about co-operation among SMEs it would be appropriate to pose the following hypotheses:

H1: The higher the level of collaboration, higher the level of costs reduction

H2: The higher the level of collaboration, higher the level of financial performance

H3: The higher the level of collaboration, higher the level of innovation

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3. Methodology

In order to corroborate the previously presented hypotheses, an empirical study was applied to the theoretical model regarding the SME known as Aguascalientes, using the 2009 directory known as SIEM (Mexico's business information system), which had 1342 registered enterprises, these enterprises have between 5 and 250 employees. The survey was designed to be answered by managers and was applied via personal interview to a sample of 300 SMEs randomly selected, with a top error of $\pm 5\%$ and a rate of reliability equal to 95%, which represented 23% of the population to be studied. To this study's effect, only preliminary results will be presented, given that, to date, only 134 surveys have been completed.

The variables employed here are collaboration, reduction of purchase costs, financial performance, and innovation. These are defined by one-dimensional scales, and were measured as a 5-point likertkind of scale, with 1= 'completely disagree' and 5= 'completely agree' as limits. Collaboration was measured with a 15-item scale adapted from Heide and John (1990), Zaheer *et al.* (1998), and Corsten and Felde (2005). Reduction purchase cost was measure using a 6-point Likert scale, which was adapted from Cannon and Homburg (2001). Financial performance was measured with another 6-item scale adapted from Dröge and Germain (2000) and Gilley and Rasheed (2000). Lastly, innovation was measured with a 6-item scale that was adapted from Gilley and Rasheed (2000).

In order to evaluate our scales' reliability and validity, a factor analysis was performed using EQS 6.1 software, which provides a top verisimilitude (Bentler, 2005; Brown, 2006; Byrne, 2006). Likewise, our scales' reliability is analysed starting from Crobach's alpha coefficients and the composite reliability index (Bagozzi and Yi, 1988). Each one of our values meets the recommended rate of 0.7 regarding Crobach's coefficient and the composite reliability index provides evidence that our scales are reliable and justifies the scales' internal reliability (Nunally and Bernstein, 1994; Hair *et al.*, 1995).

Table 1 shows that all of Crobach's alpha values and the composite reliability index surpass the recommended rate (0.7), which provides evidence of reliability (Nunnally and Bernstein, 1994; Hair *et al.*, 1995) and suggests that our model offers a nice adjustment (S-BX2 = 551.7431; df = 344; p = 0.000; NFI = 0.897; NNFI = 0.907; CFI = 0.908; RMSEA = 0.067), all items from the related factors are significant (p < 0.001), the size of all factorial loadings is superior to 0.6 (Bagozzi and Yi, 1988) and the index of variance extracted of each pair of related constructs is superior to 0.5 (Fornell and Larcker, 1981).

$ \begin{tabular}{ c c c c c } \hline CO1 & 0.721*** & 1.000^{a} \\ \hline CO2 & 0.73^{***} & 11.283 \\ \hline CO4 & 0.716^{***} & 11.601 \\ \hline CO6 & 0.734^{***} & 10.0654 \\ \hline CO7 & 0.808^{***} & 10.658 \\ \hline CO9 & 0.797^{***} & 10.119 \\ \hline CO11 & 0.800^{***} & 9.924 \\ \hline CO12 & 0.807^{***} & 10.651 \\ \hline CO13 & 0.639^{***} & 7.267 \\ \hline CO14 & 0.791^{***} & 11.005 \\ \hline CO13 & 0.639^{***} & 7.267 \\ \hline CO14 & 0.791^{***} & 11.005 \\ \hline CR2 & 0.727^{***} & 12.838 \\ \hline CR3 & 0.667^{***} & 7.754 \\ \hline CR4 & 0.859^{***} & 7.754 \\ \hline CR6 & 0.734^{***} & 7.088 \\ \hline FP1 & 0.795^{***} & 1.000^{a} \\ \hline FP2 & 0.865^{***} & 16.809 \\ \hline FP2 & 0.865^{***} & 16.808 \\ \hline FP4 & 0.871^{***} & 15.968 \\ \hline FP4 & 0.831^{***} & 16.018 \\ \hline FP5 & 0.853^{***} & 12.752 \\ \hline FP6 & 0.824^{***} & 13.043 \\ \hline Innovation & IN3 & 0.721^{***} & 11.860 \\ \hline IN6 & 0.726^{***} & 10.534 \\ \hline S-BX^2 (df = 344) = 551.7431; \ p < 0.000; \ NFI = 0.897; \ NNFI = 0.907; \ CFI = 0.908; \ RMSEA = 0.067 \\ \hline a Value parameters in the identification process \\ \hline \end{tabular}$	Variable	Indicator	Factor Loading	Robust t-Value	Cronbach's Alpha	Composite Realiability	Variance Extracted	
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$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		FP1	0.795***	1.000 ^a		0,942	0,73	
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$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		IN1	0.922***	1.000 ^a	0,877	0,878	0,593	
IN4 0.608*** 6,458 IN6 0.726*** 10,534 S-BX ² (df = 344) = 551.7431; p < 0.000; NFI = 0.897; NNFI = 0.907; CFI = 0.908; RMSEA = 0.067		IN2	0.834***	16,717				
IN6 0.726*** 10,534 S-BX ² (df = 344) = 551.7431; p < 0.000; NFI = 0.897; NNFI = 0.907; CFI = 0.908; RMSEA = 0.067	Innovation	IN3	0.721***	11,860				
<i>S-BX</i> ² (df = 344) = 551.7431; p < 0.000; NFI = 0.897; NNFI = 0.907; CFI = 0.908; RMSEA = 0.067		IN4	0.608***	6,458				
		IN6	0.726***	10,534				
* = Value parameters in the identification process								
*** = p < 0.001		he identification	process					

Table 1. Internal Consistency and Convergent Validity of the Model

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Table 2 displays the discriminating validity through two tests. First, with a 95% reliability interval, none of the individual factors contains a value of 1.0 (Anderson and Gerbing, 1988). Secondly, the variance extracted from each pair of constructs is higher than their corresponding Index of Variance Extracted (IVE) (Fornell and Larcker, 1981). Therefore, we may considerer that this theoretical model presents enough reliability and convergent and discriminating validity.

Variables	1	2	3	4
1. Collaboration	0,576	0,066	0,077	0,268
2. Costs Reduction	0.132 0.380	0,611	0,044	0,053
3. Financial Performance	0.128 0.428	0.082 0.338	0,730	0,043
4. Innovation	0.332 0.704	0.087 0.375	0.038 0.378	0,593

Table 2. Discriminating Validity after Measuring the Theoretical Model

Diagonal represent the average variance extracted (AVE), while above the diagonal the shared variance (squared correlations) are represented. Below the diagonal the 95% confidence interval for the estimated factors correlations is provided.

4. Results

The structural equations method was used in this research in order to confirm our model's conceptual structure and to contrast the presented hypotheses: the relationship between collaboration and reduction of purchase costs, innovation, and financial performance. Our theoretical model's nomological validity was analysed through the Chi-squared test, where the theoretical model was compared to the model's measurements (Anderson and Gerbing, 1988; Hatcher, 1994).

Hypothesis	Path	Standarized Path Coefficients	Robust t-Valued			
H1: The higher level of collaboration, higher level of costs reduction.	Collaboration — Costs Reduction	0.341***	5,125			
H2: The higher level of collaboration, higher level of financial performance.	Collaboration — Financial Performance	0.381***	5,409			
H3: The higher level of collaboration, higher level of innovation.	Collaboration ——— Innovation	0.557***	7,664			
S-BX ² (344) = 551.7374; p < 0.000; NFI = 0.897; NNFI = 0.907; CFI = 0.908; RMSEA = 0.067						
*** = P < 0.001						

Table 3. Results from the Structural Equation Model

Table 3 displays the results obtained in this research regarding H1. The obtained results were ($\beta = 0.341$, p < 0.001), which indicates that the reduction of purchase costs has a positive influence on collaboration. As to H2, the data ($\beta = 0.381$, p < 0.001) indicates that financial performance has a positive effect on collaboration. Lastly, the results regarding H3 ($\beta = 0.557$, p < 0.001) show that innovation also has a positive influence on collaboration. Summing up, we have conclusive data which demonstrates that the 3 variables that make up collaboration have a positive influence on the SME known as Aguascalientes, which leads us to conclude that organisational co-operation has a positive influence on SMEs that apply it.

5. Conclusions and discussion

Organisational co-operation is an effective marketing strategy that has a positive impact on the organisation, given that joint activities between two or more organisations facilitate teamwork, the exchange of knowledge, improves financial performance and innovative processes, and reduces operational costs. Therefore, organisational collaboration allows organisations to implement joint actions so that individuals and groups can be reached.

In this sense, the applied collaboration, mainly among SMEs, requires them to have an agreement regarding the set of activities in which they will collaborate, besides establishing control mechanisms so that both companies are equally involved, as well as suppliers, clients, and offered products and services, in order for the business impact to be as positive as possible.

On the one hand, collaboration among SMEs brings about a significant reduction of costs, which means that the product's or service's price will be lowered or that more advertising may be implemented in order to increase the participants' sales. Also, reducing costs means a higher profit margin for SMEs, which means more incoming resources that could be reinvested on future joint projects.

On the other hand, co-operation brings along a significant financial improvement on the participants' performance, which is quite attractive since it increases the amount of resources of the partners Co-operation leads to risk reduction, which may significantly increase investments on other projects and developing businesses. This means improvements on production processes through the acquisition of new technology, information, and communication.

Likewise, co-operation allows innovation rates to increase, meaning broader benefits for the participants, given that innovation can be done on higher-quality products, services, or systems, which increases SMEs' capability to compete more efficiently. Also, innovating new products or services might bring more competitive advantages to organisations, which presents a positive effect on the organisations' growth, market participation, competitiveness, and development rates; this facilitates obtaining more resources in order to support new projects.

Also, in a complex relationship of collaboration, both participants and suppliers must obtain mutual benefits, for future processes of collaboration and competitiveness depend on it. To that end, organisational co-operation must not only focus on individual performance, but on a balanced participation of all the organisations involved in this process. This balance must regard purchase-costs reduction, financial performance, and innovation.

Finally, managers need to be more involved in the decisions taken within these processes, since they will have an impact on all the participating organisations. Therefore, managers must look for new ways of measuring performance in the collaborative process. Additionally, different business sectors have different degrees of co-operation with other organisations and suppliers. This is why an organisation must always seek to collaborate with other organisations that already have a certain degree of experience dealing with processes of collaboration.

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