

**VALIDATION OF A MEASURING INSTRUMENT FOR THE RELATIONSHIP  
BETWEEN KNOWLEDGE TRANSFER AND ENTREPRENEURIAL  
ORIENTATION IN FAMILY FIRMS**

**Ascensión Barroso Martínez**  
Universidad de Extremadura  
abarrosom@unex.es

**Tomás M. Bañegil Palacios**  
Universidad de Extremadura  
tbanegil@unex.es

**Ramón Sanguino Galván**  
Universidad de Extremadura  
sanguine@unex.es

**ABSTRACT**

*Family businesses are created due to the entrepreneurial behavior of one or more founders, who find and exploit one opportunity. It is necessary that this Entrepreneurial Orientation (EO) is transmitted to the next generation.*

*We argue that knowledge management within the family business is positively related to entrepreneurial orientation and, therefore, related to firm performance. A scale for measuring the knowledge transfer has been defined in order to determine the degree of relationship between the above elements. The measuring instrument is original because previous measuring scales do not exist in the literature which measure, on the one hand, the sub-constructs that might lead knowledge transfer and, on the other hand, the relationship between this and the other variables.*

*As a result of causal relationship analysis, it concludes with a scale, with a sample of Spanish family firms, and it is the first empirical validation of these dimensions we know so far.*

**Keywords:** knowledge transfer, entrepreneurial orientation, family firm, measuring scale, performance

## INTRODUCTION

To grow and survive in this environment characterized by markets globalization, technological developments, advances in information, and communication technology (Hall, et al., 2001; Pistrui, et al., 2001), it is necessary that the founder's entrepreneurial behavior is transmitted to subsequent generations (Cruz, et al., 2006; Casillas, et al., 2010). Thus, entrepreneurship is seen as an important element in the survival and growth of family firms because it helps to create jobs and wealth for family members (Kellermans, et al., 2008).

Research in the area of the knowledge-based view suggests the importance of transferring, through generations, the tacit knowledge, networking and social capital, passion and entrepreneurship, and competitive advantages that these transfers mean for family firms. In fact, the ability to manage knowledge is currently regarded as the greatest strength in achieving competitiveness. However, there is a gap in the understanding of an effective way to transfer these resources across generations; actually, existing studies on knowledge management in family businesses are scarce (Giovannoni, et al., 2011). For this reason, in this study we focus on family members' knowledge transfer, both intergenerational and intragenerational.

The literature on family businesses needs more research on entrepreneurial processes, especially in the family firms' entrepreneurial orientation (Nordqvist, et al., 2008). It is also necessary to develop more knowledge about the conditions under which family businesses are able to maintain and increase the transgenerational entrepreneurial behavior to survive and grow (Casillas, et al., 2010). It is essential

to promote the entrepreneurial orientation and support the family business's continuity.

For this, the paper aims to define a scale for measuring the knowledge transfer in order to determine the degree of relationship between entrepreneurial orientation and performance. The measuring instrument is original because previous measuring scales that exist in literature could not measure. To achieve this objective, the paper is organized as follows. First, we describe knowledge-based view theory by focusing on knowledge management. Next, we define the concept of entrepreneurial orientation and outline the connections between knowledge management and entrepreneurship. Then, we explain all the methodological approach (method, measures, data analysis). Finally, we show some conclusions.

## KNOWLEDGE MANAGEMENT

With the evolution of resource-based view emerged the knowledge-based view, where knowledge is the company's key or strategic asset (Barney, 1991). This approach provides the theoretical support of this work, both from a content perspective, to analyze the specific knowledge possessed by family firms, and from the analysis of the characteristics that allow family businesses to maintain their competitive advantages over time.

Knowledge management is the function that plans, coordinates, and controls the knowledge flows produced in the company in connection with their activities and their environment (Bueno, 1999). Knowledge management creates essential competencies, as largely explained by the resource and capability theory (Habbershon and Williams, 1999). These knowledge flows

are critical resources, on which depends the company competitiveness. The results of the efficient management of these resources constitute the company intellectual capital or personal, organizational, and technological competence set and relations with their environment (Bañegil and Sanguino, 2007). In addition, knowledge management also allows companies to take advantage of the information and knowledge incorporated in the organisation's employees, documents, processes, and practices in order to produce better, greater, and more rapid innovation in its products and services (Zahra, et al., 2007).

One of the great dilemmas of family businesses is that there should be a symbiotic and synergic relationship between family and business to be sustainable in time; it is expected that the company generates value for the family, and this adds value to the company, so the creation of this value is impossible without the family involvement (Chua, Chrisman, and Steier, 2003). In this regard, knowledge management is significant, because during value generation also is generated a creation knowledge process, that is interesting to achieve business competitiveness and the same time to ensure the business sustainability

Knowledge management in family businesses should emphasize the important role of the founder, learning, and succession (Cabrera-Suarez, et al., 2001). We should consider the founder as the person capable of transmitting the culture that led him to set up the company and continue the business, being the main source of knowledge in the family business. In this way, if the founder is for a long time linked to the company, this will enable the knowledge transmission, causing learning

by children who, from an early age, work in the family firm and listen to the family talking about it (Moore, 2009). Then, when the succession process is organized and produced, knowledge will be transferred from generation to generation, configuring the company's culture (Chirico and Nordqvist, 2010).

### **ENTREPRENEURSHIP**

A crucial aspect of entrepreneurship involves the recognition of emerging business opportunities, which are often exploited through the creation of new firms, being a very important socio-economic reality. Audretsch, et al. (2008) suggest that entrepreneurship is also determined by the ability and willingness of innovative entrepreneurs to develop new products and processes based on new knowledge. It implies the search for opportunities beyond the resources that someone really controls (Pistrui, et al., 2001). Thus, entrepreneurship is a useful concept that leads to companies on how to participate in the change and in the processes renewal in order to maintain and improve their competitiveness (Cruz, et al., 2006).

Entrepreneurial orientation (EO) is one of the most studied concepts in the literature of entrepreneurship, which focuses on decision-making styles, practices related to the entrepreneurial activity of business (Nordqvist, et al., 2008).

Miller (1983) suggests that the degree of EO in a firm can be viewed as the extent to which it innovates, takes risks, and acts proactively. These are the main dimensions of entrepreneurial orientation, which we will use in this work. Lumpkin and Desk (1996) added two more dimensions to the concept of entrepreneurial orientation: autonomy and competitive aggressiveness.

The strength of EO and the possible results may vary depending on the context of the enterprise and the type, size, ownership, and age of the company (Nordqvist, et al., 2008). This leads us to think that family businesses are going to influence the force and results.

Family firms constitute a unique context for entrepreneurship due to the specific characteristics of family businesses. These companies have characteristics that can foster entrepreneurial behavior in the company through the ongoing objectives, valuable social relationships, survival and long-term orientation, reciprocal altruism, and so on. Conversely, they have features that can restrict this behavior, such as their aversion to risk, different perception of environment depending on the level of family generations involved, higher levels of ownership concentration, intentions to maintain family control of the business, etc. (Nordqvist, et al., 2008; Memili, et al., 2010; Kellermans, et al., 2008).

The differences of EO in the different generations (Kellermans, et al., 2008; Casillas, et al., 2010) could be explained by knowledge management; that is, we assume that in some cases there is less knowledge sharing than in others. In order to not diminish this, the EO is necessary for effective knowledge transfer.

#### **KNOWLEDGE TRANSFER AND ENTREPRENEURIAL ORIENTATION**

Tacit knowledge transfer is important to preserve and extend competitive advantage, since the success of a family business is often based on the unique experience of predecessors, being important to extend this experience to all the family firm members (Cabrera-Suarez, et al., 2001). An effective knowledge transfer is considered as the key

to the organizational processes and outcomes, including the best practices transfer, new product development, speed learning, and organizational survival.

Lin et al., (2009) point that knowledge transfer is a form of organizational innovation. Through socialization and learning processes, knowledge transfer has the potential to generate new ideas and develop new business opportunities. Recent empirical research supports this relationship, not in the specific field of family business, but in the company in general. For example, Brachos, et al., (2007) concluded that organizations that promote the processes of sharing and transferring knowledge are more successful at innovation at the organizational level. However, these processes are not often developed successfully in organizations, and, as result, performance and entrepreneurship do not improve (Hsu, 2008).

Camelo, et al. (2010) confirm that the degree to which knowledge is shared among organization members is positively related to company innovative performance. Hence, innovation involves an extensive process of knowledge sharing among employees, which will contribute to the implementation of new ideas, processes, products, or services.

The context and processes affect organizational entrepreneurship. Individual characteristics of the members may be an inherent barrier to the introduction and spread of entrepreneurship. In our case, family business (context) and the knowledge transmission (process) should also influence entrepreneurship. In family firms, knowledge transfer among its members is easier due to their common life in the company and the family.

Nevertheless, non-family firm members often resist to sharing what they know or even being willing to do so; knowledge is not easily transmitted because to share it is a complex task that requires effort and time (Ardichvili, 2008).

In the same way, Moores (2009) suggests that a climate that promotes a learning orientation in a firm has the capacity to create new knowledge, and subsequently, such knowledge enables the firm to be innovative and thereby improve its performance (Chirico et al., 2011).

## **METHODS**

The population used in this study consists of Spanish family firms associated to Territorial Associations of Family Business. In Spain there are 16 Associations. However, due to the data confidentiality, we only have had information to eight of them. A total of 480 family firms were identified from web pages of Associations and invited to participate. The information was collected via online survey. The collection of information took place over four months, from September to December 2012. The unit of analysis for the study was a successor of the firm, that is, a member of the second or later generation. In all, 57 questionnaires were returned, yielding a response rate of 11.88 %

Although the Structural Equation Model (SEM) values in a single, systematic, and inclusive analysis two aspects, the measurement model and the structural model, this paper focuses on the first part. This is because the design of this model is broad and ambitious as to consider that which deserves an independent study (Cepeda-Carrion, et al., 2012).

The questionnaire design was based on the literature review described above. We modeled knowledge transfer (KT) and entrepreneurial orientation (EO) as formative second-order constructs. We measured KT by ten first-order factors or dimensions. OE was measured using three first-order factors or dimensions. One question that arises when taking a multidimensional approach (using second-order measures) is whether these constructs (KT and EO) should be modeled as reflective or formative indicators. This choice therefore depends primarily on whether the first-order factors or dimensions are viewed as indicators or causes of the second-order factors (Chin, 1998). We opted to use a formative structure for our two second-order constructs. In this way, an increase in the level of one dimension does not imply an increase in the level of the other dimensions.

## **Measures**

Previous to the empirical analysis, it is necessary to clarify what we understand by family firm. Although there is no general consensus in the literature with regard to their conceptualization (Neubauer and Lank, 1998), the different definitions that scholars have proposed can be grouped, following Neubauer and Lank, (1998), into three widely used definition criteria. First, there is a large number of works that define family firms as those organizations whose majority of stock belongs to the members of one family. Other authors, on the contrary have preferred to take a more subjective point-of-view linked to the perception of the business as a "family business" (Gasson et al, 1988). Thirdly, the family business has also been conceptualized according to who really is in control, taking into account the extent to which management of the business is in the hands of the members of a single

family. In this work, the concept of what constitutes a family business is based on a single criterion. We have opted for the ownership structure as the distinguishing criterion that allows for a wide, more objective discrimination than that proposed by Gasson et al. (1988).

This study mainly used existing scales taken from the literature. The following questionnaire constructs were used.

#### ***Knowledge Transfer (KT)***

As described above, this construct comprises ten dimensions: trust between family members, commitment to the family business, intergenerational relationships, intragenerational relationships, psychological ownership of the family business, successor's aspects and training, predecessor involvement in the successor's training, relationships with Family Business Associations, organizational culture, and joint decision making (Cabrera-Suárez, et al., 2001; Chirico, 2008; Kellermanns, Eddleston, Barnett y Pearson, 2008; Zahra, Neubaum y Larrañeta, 2007; Naldi, Nordqvist, Sjöberg y Wiklund, 2007). Items were measured using a seven-point Likert scale from many studies.

#### ***Entrepreneurial Orientation (EO)***

Entrepreneurial orientation was measured using the dimensions proposed by Miller (1983): innovation, risk, and proactivity; which have dominated research on EO (Casillas, et al., 2010; Chirico, et al, 2011).

#### ***Performance***

Performance measured by asking respondents to compare the performance of their firm with the performance exhibited by their two main competitors in terms of profit, sales growth, cash flow, and growth of net worth. The scale has been validated in previous research (Naldi, et al. 2007).

#### **Data Analysis**

The questionnaire was validated using partial least squares (PLS), a structural equation modeling (SEM) technique employing a principal-component-based estimation approach (Chin, 1998). PLS was selected because of the characteristics of our model and sample. Our model uses formative indicators, and our data is non-normal. Other techniques of structural equation modeling (e.g. the covariance-based model performed by LISREL or AMOS) cannot be applied in these circumstances. This study uses SMART-PLS software Version 2.0.M3.

To analyze the relationships between the different constructs and their indicators, we have adopted the latent model perspective, in which the latent variable is understood to be the cause of the indicators and we therefore refer to reflective indicators for first-order constructs or dimensions (Cepeda-Carrion, et al., 2012). The model contains one reflective construct: performance. Two constructs, KT and EO, are modeled as second-order formative constructs.

We began by assessing the individual item reliability of the measurement model (Table 1). The indicators exceeded the accepted threshold of 0.505 for each factor loading (Falkner and Miller, 1992). There are 59 initial indicators, and in order to do an iterative procedure to obtain the final 53 indicators, we decided to eliminate those with lower factor loadings.

From an examination of the results, shown in Table 2, we can state that all of the constructs are reliable. Their values for both the Cronbach alpha coefficient and composite reliability are greater than the value of 0.7 required in the early stages of the research and the stricter value of 0.8

required for basic research. The AVE should be greater than 0.5, meaning that 50 % or more variance of the indicators should be accounted for. All constructs of our model exceed this condition, except successor concerning Cronbach alpha (0.69) and composite reliability (0.79) (Table 2).

To assess for discriminant validity, we compared the square root of the AVE (the diagonals in Table 3) with the correlations between constructs (the non-diagonal elements in Table 3). On average, each construct is more strongly related to its own measures than to others.

**Table 1: Factor Loadings of Reflective Constructs**

<b>Item</b>	<b>Factor Loading</b>	<b>Item</b>	<b>Factor Loading</b>	<b>Item</b>	<b>Factor Loading</b>
AEF1	0, 87	Dec4	0, 80	Proact2	0, 89
AEF2	0, 82	Dec5	0, 73	Proact3	0, 81
AEF3	0, 73	Innov1	0, 79	Psic1	0, 71
AEF4	0, 94	Innov2	0, 85	Psic2	0, 78
AEF5	0, 92	Innov3	0, 72	Psic3	0, 87
Comp1	0, 91	Inter1	0, 87	Psic4	0, 70
Comp2	0, 83	Inter2	0, 78	Psic5	0, 87
Comp3	0, 85	Inter3	0, 64	Rend1	0, 75
Conf1	0, 70	Inter4	0, 87	Rend2	0, 56
Conf3	0, 87	Intra1	0, 83	Rend3	0, 80
Conf4	0, 85	Intra2	0, 88	Rend4	0, 75
Cult1	0, 79	Intra3	0, 60	Riesg1	0, 92
Cult2	0, 73	Intra4	0, 88	Riesg3	0, 89
Cult3	0, 74	Pred1	0, 77	Suc1	0, 84
Cult4	0, 90	Pred2	0, 81	Suc2	0, 51
Cult5	0, 81	Pred3	0, 86	Suc4	0, 89
Dec1	0, 82	Pred4	0, 54	Suc5	0, 53
Dec3	0, 74	Proact1	0, 91		

**Table 2: Descriptive Statistics**

	<b>Mean</b>	<b>Cronbachs Alpha</b>	<b>Composite Reliability</b>	<b>AVE</b>
GC	5,89	n.a.	n.a.	n.a.
Compromiso	5,99	0,83	0,90	0,74
Confianza	5,49	0,74	0,85	0,66
Psicolog	6,37	0,85	0,89	0,62
Interg	5,57	0,80	0,87	0,63
Intrag	5,68	0,81	0,88	0,65
Predecesor	6,02	0,74	0,84	0,57
Sucesor	6,00	0,69	0,79	0,51
AEF	5,84	0,91	0,93	0,74
Cultura	6,03	0,86	0,90	0,64
Decisiones	5,27	0,77	0,86	0,60
OE	5,52	n.a.	n.a.	n.a.
Innovacion	6,15	0,70	0,83	0,62
Riesgo	4,40	0,78	0,90	0,82
Proactividad	5,43	0,84	0,90	0,76
Rend	5,27	0,69	0,81	0,52

Table 3: Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 AEF	<b>0,86</b>															
2 Comp	0,14	<b>0,86</b>														
3 Conf	-0,06	0,31	<b>0,81</b>													
4 Cult	0,42	0,38	0,39	<b>0,80</b>												
5 Dec	0,07	0,37	0,43	0,48	<b>0,77</b>											
6 GC	0,31	0,74	0,64	0,73	0,65	<b>n.a.</b>										
7 Innov	0,09	0,18	-0,01	0,19	0,12	0,22	<b>0,79</b>									
8 Interg	0,02	0,37	0,72	0,39	0,56	0,72	0,13	<b>0,80</b>								
9 Intrag	0,11	0,36	0,57	0,35	0,46	0,70	0,21	0,66	<b>0,81</b>							
10 OE	0,16	0,38	0,08	0,24	0,14	0,43	0,72	0,34	0,35	<b>n.a.</b>						
11 Predec	0,09	0,57	0,35	0,36	0,25	0,58	-0,11	0,23	0,27	0,10	<b>0,75</b>					
12 Proact	0,27	0,37	0,13	0,26	0,09	0,46	0,45	0,34	0,37	0,91	0,16	<b>0,87</b>				
13 Psic	0,16	0,72	0,25	0,44	0,29	0,71	0,31	0,26	0,35	0,44	0,39	0,46	<b>0,79</b>			
14 Rend	0,08	0,27	0,14	0,04	-0,10	0,19	0,34	0,16	0,20	0,51	0,14	0,52	0,15	<b>0,72</b>		
15 Riesgo	-0,13	0,28	0,01	0,00	0,17	0,21	0,15	0,29	0,17	0,56	0,11	0,38	0,11	0,19	<b>0,90</b>	
16 Sucesor	0,25	0,41	0,15	0,43	0,32	0,57	0,04	0,33	0,23	0,25	0,39	0,26	0,37	0,02	0,24	<b>0,71</b>

Note: The bold numbers on the diagonal are the square root of the AVE. Off-diagonal elements are correlations between constructs.

The evaluation of the formative dimensions of two high-order constructs, KT and EO, is not the same as for the reflective dimensions. The appropriate procedure for formative dimensions is through an examination of the weights, which is a canonical correlation analysis and provides information about how each indicator contributes to its respective construct (see Table 4). Weights do not need to exceed any particular benchmark because a census of indicators is required for a formative specification. The concern with regard to

formative dimensions is the potential multicollinearity with overlapping dimensions, which could produce unstable estimates. Results of a collinearity test show that the variance inflation factor scores of each second-order construct for all dimensions are far below the commonly accepted cut-off of 10 (<1.92). We also confirmed the validity of the formative dimensions, using the procedures suggested by Fornell and Larcker (1981) (see Table 4).

**Table 4: Weights of Formative Constructs**

	<b>Weights</b>	<b>Student's t</b>
KT		
Commit	0,168293	4,98
Trust	0,115483	3,82
Psicolog	0,222427	4,59
Interg	0,179504	5,34
Intrag	0,188878	7,17
Predec	0,112858	4,31
Sucesor	0,096676	3,39
AEF	0,107319	2,12
Cult	0,207144	5,59
Dec	0,118629	3,34
EO		
Innov	0,390682	6,50
Risk	0,262865	4,06
Proact	0,631893	9,19

## **DISCUSSION AND IMPLICATIONS**

It is necessary to put into action the knowledge accumulated in the organization to generate new knowledge that allows them to improve, innovate, and be more competitive. A growing body of research suggests that family firms have to adapt to changing markets to survive, obtain profit, grow, and create wealth. In this way, to have a greater entrepreneurship is a good way for family businesses to thrive.

Therefore, this research has determined that, although entrepreneurship depends on many factors at different organizational levels, the willingness of people to share their knowledge plays an important role in the entrepreneurial capacity. We conclude that the entrepreneurial orientation involves an extensive process of sharing knowledge among family members.

The analysis presented is a step towards the validation of the structural model that demonstrates the link between knowledge

transfer, entrepreneurial orientation, and performance. The validation of the model that includes these linkages that are empirically reliable help entrepreneurs and successors to understand why they should pay attention to issues of knowledge management and what to expect from the efforts they make towards entrepreneurship, even beyond economic performance.

The KT scale defined and validated in this work how to determine the extent to which guidance through KT is an explanatory variable of Spanish family businesses performance and EO. It is considered that the present work has come to define a set of indicators that define the KT, as a result of a dynamic process of relationships between family members, rather than the end in itself of the organization. The large scale set for the initial KT of 59 indicators has been reduced to 53 indicators that maintain the balance between the family and the business aspects.

It also indicates that work should continue using the validated measurement scale for the testing of a structural model that analyzes the causal relationship of KT, EO, and performance. The results of this model will show that if KT influences or largely explains family firm competitive success, it will be an interesting strategy to be developed by these companies.

#### REFERENCES

- Ardichvili, A. (2008): "Learning and knowledge sharing in virtual communities of practice: motivators, barriers, and enablers". *Advances in Developing Human Resources*, vol. 10, n°. 4, pp. 541-554.
- Audretsch, D, Bönte, W., & Keilbach, M. (2008): "Entrepreneurship capital and its impact on knowledge diffusion and economic performance". *Journal and Business Venturing*, vol. 23, p. 687-698.
- Bañegil, T. M. & Sanguino, R. (2007): "Intangible Measurement Guidelines: a Comparative Study in Europe". *Journal of Intellectual Capital*, vol. 8, n° 2, pp. 192-204.
- Barney, J. B. (1991): "Firm resources and sustained competitive advantage". *Journal of Management*, vol. 17, n°. 1, p. 99-120.
- Brachos, D., Kostopoulos, K., Soderquist, K. E., & Prastacos, G. (2007): "Knowledge effectiveness, social context and innovation" *Journal of Knowledge Management*, vol. 11, n°. 5, pp. 31-44.
- Bueno, E. (1999): "Dirección del conocimiento y aprendizaje: creación, distribución y medición de intangibles". Instituto Universitario Euroforum Escorial. Madrid.
- Cabrera-Suárez, K., Saá-Pérez, P., & García-Almeida, D. (2001): "The succession process from a resource-and knowledge-based view of the family firm". *Family Business Review*, vol. 14, p 37-48.
- Casillas, J., Moreno, A., & Barbero, J. (2010): "A configurational approach of the relationship between entrepreneurial orientation and growth of family

- firms". *Family Business Review*, vol. 23, n° 1, p. 27-44.
- Cepeda-Carrion, Cegarra-Navarro & Jimenez-Jimenez, (2012): "The effect of absorptive capacity on innovativeness: context and information systems capability as catalysts". *British Journal of Management*, vol. 23, pp. 110-129.
- Chin, W. W. (1998): 'The partial least squares approach to structural equation modeling'. In G. A. Marcoulides (ed.), *Modern Methods for Business Research*, pp. 295-336. Mahwah, NJ: Lawrence Erlbaum.
- Chirico, F. (2008): "Knowledge accumulation in family firms: evidence from four cases studies". *International Small Business Journal*, vol. 26, p. 433-462.
- Chirico, F. & Nordqvist, M. (2010): "Dynamic capabilities and trans-generational value creation in family firms: the role of organizational culture". *International Small Business Journal*, vol. 28, n° 5, pp. 487-504.
- Chirico, F., Sirmon, D. G., Sciascia, S., & Mazzola, P. (2011): "Resource orchestration in family firms: investigating how entrepreneurial orientation, general involvement and participative strategy affect performance". *Strategic Entrepreneurship Journal*.
- Chua, Chrisman, & Steier (2003): "Extending the theoretical horizons of family business research". *Entrepreneurship Theory and Practice*, pp. 331-338.
- Cruz, C., Habbershon, T., Nordqvist, M., Salvato, C., & Zellweger, T. (2006): "A conceptual model of transgenerational entrepreneurship in family-influenced firms". *International Family Enterprise Research Academy*. – Jönköping.
- Giovannoni, E., Maraghini, M. P., & Riccaboni, A. (2011): "Transmitting Knowledge Across Generations: The Role of Management Accounting Practices" *Family Business Review*, vol. 24, n°. 2, pp. 126-150.
- Habbershon, T. & Williams, M. (1999): "A resource-based framework for assessing the strategic advantages of family firm". *Family Business Review*, vol. 12, n° 1, p. 1-25.
- Hall, A., Melin, L., & Nordqvist, M. (2001): "Entrepreneurship as radical change in the family business: exploring the role of cultural patterns". *Family Business Review*, vol. 14, p. 193-208.
- Hsu, I. (2008): "Knowledge sharing practices as a facilitating factor for improving organizational performance through human capital: a preliminary test", *Expert Systems with Applications*, vol. 35, pp. 1316-1326.
- Kellermans, F., Eddleston, K., Barnett, T., & Pearson, A. (2008): "An exploratory study of family member characteristics and

- involvement: effects on entrepreneurial behavior in the family firm". *Family Business Review*, vol. 21, p. 1-14.
- Lin, H., Lee, H., & Wang, D. (2009): "Evaluation of factors influencing knowledge sharing based on a fuzzy AHP approach". *Journal of Information Science*, vol. 35, n° 1, pp. 25.
- Lumpkin, G. & Dess, G. (1996): "Clarifying the entrepreneurial orientation construct and linking it to performance". *Academic of Management Review*, vol. 21, n° 1, p. 135-172.
- Memili, E., Eddleston, K. A., Kellermanns, F. W., Zellweger, T. M., & Barnett, T. (2010): "The critical path to family firms success though entrepreneurial risk taking and image". *Journal of Family Business Strategy*, vol. 1, pp. 200-209.
- Miller, D. (1983): "The correlates of entrepreneurship in three types of firms". *Management Science*, vol. 29, p. 770-791.
- Moore, K. (2009): "Paradigms and theory building in the domain of business families". *Family Business Review*, vol. 22, n° 2, pp. 167-180.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007): "Entrepreneurial Orientation, Risk Taking and Performance in Family Firms". *Family Business Review*, vol. 23, p. 33-47.
- Nordqvist, M., Habbershon, T. G., & Melin, L. (2008). "Transgenerational entrepreneurship: Exploring entrepreneurial orientation in family firms". En Landström, H., Smallbone, D., Crijns, H., & Laveren, E. (Eds.): *Entrepreneurship, sustainable growth and performance: Frontiers in European entrepreneurship research*, p. 93-116. Londres: Edward Elgar.
- Pistru, D, Huang, W., Oksoy, D., Jing, Z., & Welsch, H. (2001): "Entrepreneurship in China: characteristics, attributes and family forces shaping the emerging private sector". *Family Business Review*, vol. 14, n° 2, p. 141-152.
- Zahra, S., Neubaum, D., & Larrañeta, B. (2007): "Knowledge sharing and technological capabilities: the moderation role of family involvement". *Journal of Business Research*, vol. 60, p. 1070-1079
- Ascensión Barroso Martínez, PhD** has attended the best family business conferences and she has published articles in indexed journals. His doctoral thesis entitled "The importance of the knowledge management in the entrepreneurial orientation in family firms". She current teaches Quality Management, Business Economics.
- Tomás M. Bañegil Palacios, PhD** has over 25 years teaching undergraduate and postgraduate in different European universities, as well as Brazil Argentina, and Ecuador. He has published some articles in very prestigious journals. He's currently Director of the Department of

Business Administration. Finally, he has directed more than 10 doctoral theses.

**Ramón Sanguino Galván, PhD** has more than 12 years teaching undergraduate and postgraduate in different European

universities, as well as in Brazil and Columbia. He has published some articles in very prestigious journals. His research interests are related to Knowledge Management, City competitiveness, Entrepreneurship, and Family Business.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.