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## Article

# Knowledge, renewal and flexibility: Exploratory research in family firms

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Article

# Knowledge, Renewal and Flexibility: Exploratory Research in Family Firms

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**Abstract:** This study aims to explore how family firms pursue strategies that promote strategic flexibility and knowledge-management (KM) practices to respond to strategic-renewal goals. Specifically, based on a knowledge-based view of the firm, the following research question is proposed: Are there heterogeneous groups of family firms in terms of knowledge management, strategic flexibility and strategic renewal goals? To answer this question, an exploratory study using a two-step cluster analysis is developed. It reveals natural groupings from a sample of 288 small and medium-sized Spanish family enterprises (SMEs). The results obtained identified three distinctive clusters of family firms, namely proactive family firms, transitional or adaptive family firms, and rigid family firms. After two-step cluster analysis, we also conducted analysis of variance (ANOVA) to confirm that significant differences amongst the three clusters exist. After heterogeneity been confirmed, a further profile of the cluster solution was provided by using CEO and board characteristics, as well as the generational stage of the company. The findings offer some counterbalance for those studies that tend to study family businesses as a homogeneous entity, thus permitting researchers to access more information, providing rich explanations for renewal managerial decision-making purposes in family firm contexts.

**Keywords:** entrepreneurship; family firm; knowledge; flexibility; strategic renewal

## 1. Introduction

Nowadays, the globalized competitive environment drives organizations to renew themselves at an increasing pace (Kianto 2011), emphasizing the importance of strategic renewal management (Pratap and Saha 2018; Schmitt et al. 2018), which has emerged as a contemporary and flourishing research area (Pérez-Pérez and Hernández-Linares 2020; Klammer et al. 2017). Strategic renewal involves strategy reformulation, reorganization, and organizational change, leading to new combinations of resources (Zahra 1993), and it is considered a dynamic management process for modifying or replacing firm's business models to address emerging environmental opportunities and risks, for long-term survival and prosperity (Schmitt et al. 2018).

Strategic management research, using a knowledge-based view of the firm, mentions both strategic flexibility (Chen et al. 2017; Guo and Cao 2014) and an organization's ability to manage its knowledge internally (Scuotto et al. 2017; Del Giudice and Peruta 2016; Ryan et al. 2012) as essential for supporting strategic renewal goals (Hughes and Mustafa 2017; Del Giudice et al. 2013a, 2013b). These factors are assumed to link synergistically (Chen et al. 2017). This is because the former facilitates the adjustment of internal and external change drivers to ensure organizational survival (Spieth and Schneider 2016), whereas the latter enables the firm to focus and prioritize its investments and efforts so that the knowledge infrastructure supports the achievement of the strategic goals of the firm (Kianto 2011).

The systematic leverage of knowledge and strategic flexibility for continuous strategic renewal requires that the firm has an elaborate and appropriate strategy (Kianto 2011). However, an integrated understanding of how this strategy is managed when increasing strategic renewal goals needs further assessment (Bamel and Bamel 2018), particularly considering that strategic flexibility and knowledge-management practices are conditioned by the characteristics of the organization and its members (Gavana et al. 2019; Bojica et al. 2017; Segaro et al. 2014). In this regard, family businesses are characterized as a special form of company by their “familiness”, which affects not only how they do business in general, but also how they deal with knowledge (Döring and Witt 2019) and flexibility. In this vein, family firms are usually defined as conservative and slow to recognize and respond to changes in their environment (Zahra et al. 2008).

Additionally, according to the socioemotional wealth (SEW) concept, family firms have idiosyncratic strategic behaviors, mostly driven by their long-term orientation and the strong ties among their members, and that their behavior separates them from non-family firms. Furthermore, the extensive literature sustains that family firms share certain characteristics that make them heterogeneous (Dekker et al. 2013; Basco and Rodríguez 2009; Sharma and Nordqvist 2008; Westhead and Howorth 2007), exhibiting differences in their governance structure (Siebels and Knyphausen-Aufseß 2012) and in their attitudes and behaviors (Graves and Thomas 2006) toward strategic renewal goals. For example, “the literature maintains a strong tension between entrepreneurial and innovative family firms and family firms that are reluctant to change and are highly conservative” (Stanley et al. 2019, p. 174). Despite the relevance of considering family firms’ diversity, a close review of the relevant literature revealed that the studies that explore knowledge management (Döring and Witt 2019; Pérez-Pérez and Hernández-Linares 2020) and strategic flexibility (Bamel and Bamel 2018) as supporting anchors of strategic renewal (Zahra 2012) are still limited in the context of family-owned firms. Studies exploring the above relationships use either a sample of family firms (Bamel and Bamel 2018) or examine the family businesses as a specific category of organizations that differs from other categories of organizations—the nonfamily firms—(Pérez-Pérez and Hernández-Linares 2020; Menendez-Requejo 2005) which wrongfully creates the notion that all businesses within this category show similar characteristics and face similar challenges (Melin and Nordqvist 2007). This oversimplifies the essence of a family business to such an extent that the mere presence of family becomes a signifier for all firm behaviors, activities, and outcomes (Dekker et al. 2013), thus making it difficult to appreciate why some family firms are more or less adaptive to their environment than others. As such, the research field is in need of adequate differentiating tools to distinguish between types of family firms (Dekker et al. 2013).

Within this context, to respond to the calls from the research field and find effective ways to distinguish between different categories of family firms, this study proposes a main goal to explore how family firms pursue different strategies, that promote strategic flexibility and knowledge-management practices, to respond to strategic renewal goals. More precisely, we aim to analyze the following research question:

How do family firms pursue strategies that promote strategic flexibility and knowledge management (KM) practices to respond to strategic renewal goals?

For this, we will use a two-step cluster analysis to reveal natural groupings from a sample of 288 small and medium-sized Spanish family enterprises (SMEs). Spain was selected as a representative of Western Europe Countries, where family businesses are the dominant corporate figure in the economic structure. Specifically, family business constitutes 90% of the productive fabric, 70% of private employment, and its weight in economic activity is equivalent to 57% of private sector GDP (Instituto de la Empresa Familiar (IEF)). More specifically, this study will generate different family firm groups, so that family firms in a given cluster are homogeneous in some sense, and family firms in different clusters are dissimilar to a great extent. After two-step cluster analysis we conducted analysis of variance (ANOVA) to assess the differences across the clusters. Then, we used CEO and board characteristics, as well as the generational stage of the company, to further profile the cluster solution.

This paper contributes to the literature discussing family firm heterogeneity, as it will allow us to differentiate between family firms, thus permitting researchers to access a fuller range of information, providing rich explanations for managerial decision-making purposes.

The rest of the paper is organized as follows: Section 2 presents an overview of the key literature about the topic of this study; data and methods are presented in Section 3; the Section 4 presents the results of the two-step cluster analysis and the paper closes with a conclusion.

## 2. Literature Review

Strategic renewal is considered a dynamic management process of modifying or replacing an organization's current business model, to address emerging environmental opportunities and risks for long-term survival and prosperity (Schmitt et al. 2018; Pérez-Pérez and Hernández-Linares 2020). Yet, strategic renewal literature suggests that strategic renewal actions over time should be co-aligned with the pace of change in the external environment. This indicates that managers can behave proactively in achieving the firm–environment fit, by intentionally managing change (Ben-Menahem et al. 2013) through active management of the strategic flexibility and knowledge-management practices of the firm, which are considered the two essential anchors for supporting strategic renewal goals (Hughes and Mustafa 2017; Del Giudice et al. 2013a, 2013b; Crossan and Berdrow 2003; Crossan et al. 1999).

Flexibility is largely considered a source of competitive advantage, which has recently gained significance (Singh et al. 2013) in the strategic renewal literature. This is because it facilitates organizations in successfully dealing with the turbulent business environment (Brozovic 2016). Strategic flexibility involves changes in the nature of organizational activities and can be understood as an organization's willingness to change, relative to its current situation (Volberda et al. 2001). In this regard, flexible organizations are able to identify the weak signals in their environment and, thereby, to identify the potential of future business models in a flexible manner, through addressing new customers' demands, defining new markets, or reversing ineffective strategic decisions (Shimizu and Hitt 2004; Young-Ybarra and Wiersema 1999). Therefore, strategic flexibility embodies offensive or defensive actions that can be either proactive or reactive (Zahra et al. 2008) in making rapid modifications and changes, in response to altering situations (Zhou and Wu 2010; Combe et al. 2012). Furthermore, flexible organizations are usually described as open and responsive organizations, or, in other words, organizations that are willing to learn.

Along this vein, research on strategic renewal has also highlighted the importance of knowledge management (KM), which plays a crucial role in a firm's overall ability to renew its competencies, and, therefore, for adapt to environmental change and sustain competitive advantage (Pérez-Pérez and Hernández-Linares 2020; Lengnick-Hall and Inocencio-Gray 2013; Kianto 2011). KM can be defined as a set of activities, initiatives, and strategies that companies use to generate, store, transfer, and apply knowledge within and between organizations (Hussinki et al. 2017; Calvo-Mora et al. 2016; Jayasingam et al. 2013; Zack et al. 2009) under the influence of their history, people, interests, and actions that have been institutionalized in the organizations (Kostova 1999). The newer strategic renewal literature recognizes KM as a synergistic link/capability of strategic flexibility (Lin and Wu 2014; Bamel and Bamel 2018), because cross-functional exchange of knowledge helps organizations quickly understand the changing environment, allowing the firm to plan organizational priorities and actions accordingly (Fernández-Pérez et al. 2013). However, an important factor in KM for achieving a firm's strategic renewal goals is the coordination of the different types of KM practices, and the identification of the most relevant to enable the firm to focus and prioritize its investments and efforts (Kianto 2011). Donate and Pablo (2015) argued that there are four types of KM practices, namely, KM transfer, KM storage, KM application, and KM creation. KM transfer activities allow the firm to share, disseminate, and replicate information, spreading this information to locations that need it by the establishment of informal, formal, personal, or impersonal communication channels. KM storage activities include activities for maintaining a structured organizational memory for the firm (i.e., information stored in electronic databases, documented organizational procedures, etc.). KM application activities focus on

applying existing knowledge to organizational activities to make problem-solving easier and more effective for the firm, through mechanisms based on routines, norms, or decision-making in specific situations. Finally, KM creation activities typically relate to the internal development of knowledge through research and development.

Collating all the above points, it is pertinent to propose that KM enhances the availability of the right knowledge, both reducing error in decision-making and enabling a flexible response to opportunities or threats (Roberts and Stockport 2009), thus favoring the fulfillment of a firm's strategic renewal goals. However, systemic characteristics of firms can influence whether or not they engage in strategic renewal. In this regard, family firms constitute a peculiar organizational context, where the identity overlap between the family and the firm tends to affect both the strategic flexibility and the KM process (Biscotti et al. 2018), thus suggesting the relevance of exploring this singular context (Fang et al. 2018; Gupta and Bhattacharya 2016) considering that family firms cannot be simplistically viewed as homogeneous entities (Sharma 2002; Chrisman et al. 2005). In fact, a recent study from Family Business Review (Stanley et al. 2019) highlights that research in family firm has begun to stress that family firms can be quite diverse and that a lot of variance exists within the family firm population. In this vein, a theory of the family firm must not only differentiate between family and nonfamily firms, but also "explain variations among family businesses" (Stanley et al. 2019, p. 176), which requires identifying the important characteristics by which they may vary. Within this context, this exploratory study proposes the following hypothesis:

**Hypothesis 1 (H1).** *There are heterogeneous groups of family firms in terms of knowledge management, strategic flexibility and strategic renewal goals.*

To answer this research question, based on the SEW model (Gómez-Mejía et al. 2007), this study considers that family businesses' behaviour is influenced by the family members' affective or emotional commitment to the firm (Biscotti et al. 2018; Higginson 2010), as a stock of affective values that the family derives from its controlling position. This cohesiveness and emotional attachment among family members may contribute to their capacity to transfer knowledge-based resources (Chirico and Salvato 2016), or their capacity to collect and store knowledge (Andersén 2015; DiPasquale and McInerney 2010). "Family owners derive utility from exercising authority, acting altruistically regarding family members and preserving the family firm's social capital. Therefore, the identity of the family members is closely tied to the business and the preservation of family owners' SEW becomes an end in itself, guiding firm behaviour by influencing management, strategies and approach towards risk" (Gottardo and Moisello 2015, p. 68). Thus, managerial choices are driven by the desire to preserve and increase the family's SEW, that is, if SEW is threatened, family firms would make decisions to avoid the loss of SEW, in spite of their economic efficiency (Gottardo and Moisello 2015). Moreover, in the scant previous literature about flexibility in family firms, family influence has been described as a barrier to strategic flexibility (Broekaert et al. 2016). This is because strategic flexibility is a context variable that can depend on the chief executive officer's (CEO) personality or team management. Founders are driven to exhibit flexibility behavior, while second and later generations may focus instead on SEW, and be more risk-averse. Additionally, while firms with a family CEO have a greater incentive to reduce firm-specific risk, a nonfamily CEO will likely bring new ideas and skills to the family firm, thus increasing flexibility behavior. In this way, "higher ownership enables particularistic behavior, which allows the family to pursue innovative and riskier strategies, particular as high ownership will give them "slack," as failed innovation does not hinder their pursuit of SEW as their controlling state in the organization is not threatened" (Stanley et al. 2019, p. 179). Strong bonds to the company, or to certain parts of it, can lead to a desire to preserve the status quo and to resist change. Family traditions may create strong path dependencies that inhibit the family firm's adaptability. Strong family members that cling to tradition may preserve a closed company culture that blocks new ideas and change.

### 3. Research Methodology

#### 3.1. Sample and Data Collection

To select a representative sample for this analysis, in a similar way to previous studies (e.g., [Bojica et al. 2017](#)), we identified all small-sized enterprises (businesses with 10–249 employees) registered on the Iberian Balance Sheets Analysis System (SABI) database. Our focus on SMEs is justified by their significant share in the business context ([Stoian and Gilman 2017](#)), as well as by their particularities, in terms of scarcity of resources and limited market power ([Brettel and Rottenberger 2013](#)). These characteristics make them more vulnerable to environmental uncertainty ([Wade and Hulland 2004](#)), hence reinforcing the importance of strategic renewal for these firms.

Given the nature of this research, and the consequent lack of secondary information, data used in this paper were collected through a survey. Before launching the survey, five pre-tests with family firms' company executives, not included in the final sample, and academic experts in research methods and family firms, took place to validate the questionnaire. We attempted to ensure that items were interpreted unambiguously and displayed high content validity ([Chirico and Salvato 2016](#)). Then, the questionnaire was applied by telephone to CEOs, using a random sample (probability sample), during winter, 2018. These CEOs are the executives with the highest information access ([Hernández-Perlines 2016](#)) from a wide range of departments and are considered to be a reliable source in upper-echelon research ([Pérez-Pérez et al. 2019](#); [Eddleston et al. 2013](#); [Kellermanns et al. 2008](#); [Sharma et al. 2003](#)). In addition, the use of similar informants across organizations (CEOs) implied that the level of influence of all informants in their organizations would be constant, thus increasing the validity of the variable's measurement ([Aragón-Correa et al. 2007](#)). After this process, 400 questionnaires were fully completed. Similar to previous studies ([Ahn et al. 2017](#)), non-response bias was tested by analyzing differences between respondents and non-respondents for a given set of variables.

Finally, given the difficulty of identifying family businesses a priori, we identified them ex post, through a subjective criterion ([Pérez-Pérez and Hernández-Linares 2020](#); [Cooper et al. 2005](#)). As there are a large number of definitions and criteria for defining a family firm (e.g., see [Hernández-Linares et al. 2018](#)), we used a mix of objective and subjective criteria. Thus, the CEOs were asked to determine which of these firms were family-owned (the majority of equity owned by a family), had multiple family members involved in their operations, and were recognized as a family business by the family CEO or senior executive member ([Chirico and Salvato 2016](#)). The two first criteria represent the two most widely used in the literature criteria to identify family business, namely family ownership and family management ([Hernández-Linares et al. 2018](#)). The third criterion (self-definition) was similar to previous studies (e.g., [Casillas et al. 2010](#); [Stanley et al. 2019](#)), and allows us to capture the "essence" of being a family firm ([Chua et al. 1999](#)), as well as the most heterogeneity among the family firms. These criteria allowed us to identify 288 family SMEs. The main characteristics of the final sample used in the study are described in Table 1.

#### 3.2. Measures

The study mainly used validated scales obtained from the literature. Selected scales were modified to make them relevant to the family business context. All of them were measured using a five Likert-type scale, anchored by "strongly disagree" and "strongly agree". The items and sources for the constructs used in this study are listed in Appendix A. The constructs used are described in the following sections.

##### 3.2.1. Knowledge Management Practices

Although several measures of KM practices exist ([He and Wong 2009](#)), we relied on the instrument developed by [Donate and Pablo \(2015\)](#). This choice increases the comparability of our findings, given that previous empirical research has employed this scale ([Pérez-Pérez and Hernández-Linares 2020](#);

Samad et al. 2019). In particular, we operationalize KM practices through four variables, namely KM transfer, KM storage, KM creation, and KM application (see specific items in Appendix A).

**Table 1.** Main characteristics of the sample.

	N	%
Number of Employees		
10–49	254	88.2
50–250	34	11.8
Total	288	100
Sector		
Industry	73	25.3
Construction	33	11.5
Services	182	63.2
Total	288	100
CEO Founder		
Yes	91	31.6
No	197	68.4
Total	288	100
Family CEO		
Yes	256	88.9
No	32	11.1
Total	288	100
CEO with a university degree		
Yes	164	56.9
No	124	43.1
Total	288	100
Board of directors		
Yes	106	36.8
No	182	63.2
Total	288	100
Second family generation involvement in the management team		
Yes	124	43.1
No	164	56.9
Total	288	100

### 3.2.2. Strategic Renewal

Based on Burgers and Covin (2016), Simsek et al. (2007), and Zahra (1996), we measured the extent to which a firm pursues strategic renewal as a variable represented by five items (e.g., redefining the industries in which the firm competes).

### 3.2.3. Strategic Flexibility

This construct was measured following the four-item scale proposed by Grewal and Tansuhaj (2001), assessing a firm's ability to respond to environmental variations. The scale is considered conceptually robust, valid, and reliable (Nadkarni and Herrmann 2010).

### 3.3. Measures' Reliability

The reliability of all the variables used in this study is summarized in Table 2. As can be seen, all variables present good measurement properties. Cronbach's-Alpha values for each variable exceed the recommended minimum value of 0.5.

**Table 2.** Measures properties.

Variable	Mean	Median	Standard Deviation	Cronbach's Alpha	Kaiser–Meyer–Olkin Test	Barlett's Test
Knowledge Management (KM) Storage	3.2541	3.3333	0.94311	0.776	0.766	650.234 ***
KM Transfer	3.3316	3.3750	0.88608	0.862	0.894	1215.161 ***
KM Application	3.1215	3.2500	0.94075	0.769	0.767	394.210 ***
KM Creation	2.7234	2.6667	1.18165	0.838	0.674	548.945 ***
Strategic Flexibility	1.94	2	0.849	0.836	0.794	613.214 ***
Strategic Renewal	3.265	3.3333	1.20119	0.856	0.664	256.983 ***

$p < 0.10$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

Furthermore, because we must rely on the perceptions of these executives, we must also consider common method bias. Following Podsakoff et al. (2003), we tried to avoid this problem by appropriately designing the questionnaire. Ex post, we examined the potential bias using Harman's single factor test. The procedure consists of loading all observed variables in a study into an exploratory factor analysis and then examining the unrotated factor solution, to ascertain how many factors are necessary to account for the majority of the variance present in the collected data. The logic of the test is that, if a substantial amount of common method variance is present in the sample, either a single factor will emerge from the preceding analysis, or one factor will account for a majority of the variance among the variables (Podsakoff et al. 2003). In this study, common method variance does not appear to endanger our results, as the first factor accounts for only 31.191% of the total variance explained in the exploratory factor analysis, below the 50% threshold (Aguirre-Urreta and Jiang 2019).

### 3.4. Data Analysis

To investigate the heterogeneity among family firms when identifying important characteristics by which they may vary, without compromising the ability to meaningfully analyze the data (Stanley et al. 2019), this study employed a two-step cluster analysis approach to reveal natural groupings in the dataset (Rundle-Thiele et al. 2015; Norusis 2008). This analysis was conducted using SPSS 22-software. The two-step method identifies pre-clusters in the first step, then treats these as single cases in the second step, using hierarchical clustering. This method simultaneously succeeds in delineating groups or segments which differ on criterion variables, and establishing significant relationships between the segments and the categorical and continuous variables, by simultaneously offering the benefits of both the structural, as well as the functional, techniques (Satish and Bharadhwaj 2010). Two-step cluster analysis was considered the most appropriate technique for this study, as it is the only type of cluster analysis in SPSS which forms clusters based on both continuous and categorical data (Norusis 2008). Furthermore, this procedure helps to identify the variables that significantly differentiate these segments from one another. The two-step cluster analysis is a scalable cluster analysis algorithm that was designed to determine which number of clusters is "best". Cluster solutions were compared using Schwarz's Bayesian information criterion (BIC), which is considered one of the most useful and objective selection criteria, as it avoids the arbitrariness of traditional clustering techniques (Rundle-Thiele et al. 2015; Norusis 2008).

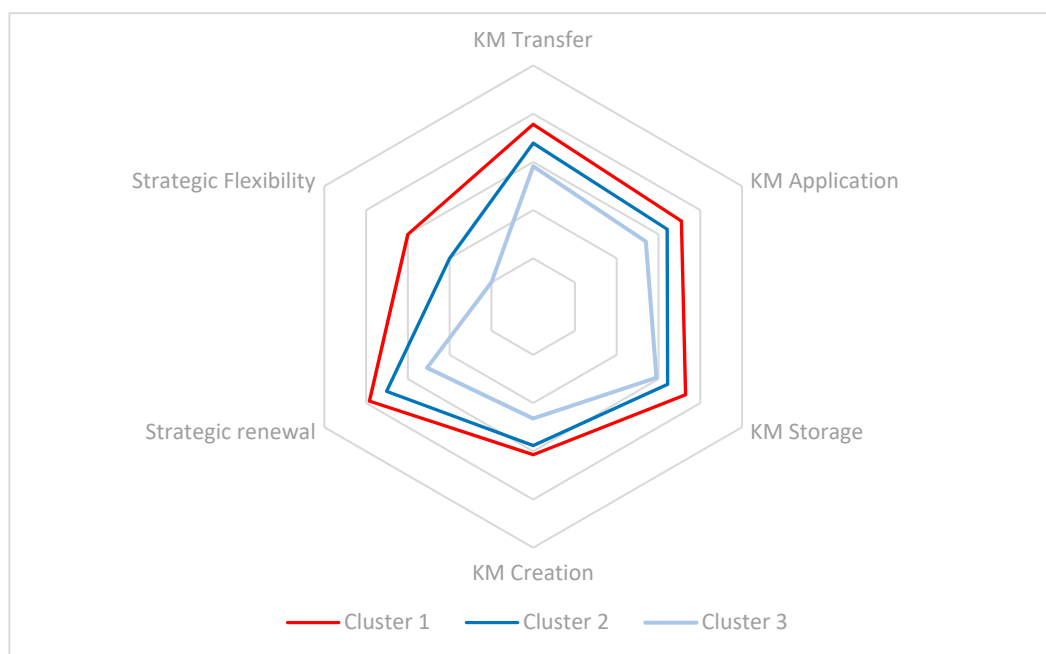
## 4. Results

Two-step clustering results revealed that the dataset can be split into three clusters (see Table 3 and Figure 1). From the overview summarized in Table 3 and Figure 1, it is worth noting that a correspondence exists between the level of KM practices, the level of strategic flexibility, and the level of strategic renewal behavior of family businesses. More specifically, when higher values of strategic flexibility and KM practices are observed, it is expected that the firm has higher strategic renewal results.



**Table 3.** Two-step clustering analysis results.

Cluster	N	% of Total	Variables Evaluated	
1	113	39.22	KM Transfer	3.78
			KM Application	3.55
			KM Storage	3.65
			KM Creation	3.07
			Strategic Renewal	3.92
			Strategic Flexibility	3.00
2	80	27.78	KM Transfer	3.39
			KM Application	3.22
			KM Storage	3.21
			KM Creation	2.98
			Strategic Renewal	3.51
			Strategic Flexibility	2.00
3	95	33	KM Transfer	2.91
			KM Application	2.70
			KM Storage	2.95
			KM Creation	2.32
			Strategic Renewal	2.54
			Strategic Flexibility	1.00
Total	288	100		



**Figure 1.** Two-step clustering analysis results.

Furthermore, an analysis of variance (ANOVA) test allowed us to confirm that significant differences amongst the three clusters exist (see Table 4). Thus, the results show that the different groups of family firms identified are heterogeneous in the management of their strategic flexibility and KM practices to be more entrepreneurial. The hypothesis proposed is therefore accepted.

**Table 4.** Analysis of variance (ANOVA) test results.

	F	Sig.
KM Transfer	29,937	0.000
KM Application	25,110	0.000
KM Storage	15,714	0.000
KM Creation	12,205	0.000
Strategic Renewal	47,839	0.000

Table 5 summarizes the main characteristics of these three heterogeneous clusters, with regards to the CEO and board characteristics, as well as the generational stage of the company. Each of the clusters is described below.

**Table 5.** Cluster characteristics.

Variable		Cluster 1	Cluster 2	Cluster 3
CEO Founder	Yes	36.3	33.1	18.5
	No	63.7	66.9	81.5
	Total	100	100	100
Family CEO	Yes	92.9	85.1	88.9
	No	7.1	14.9	11.1
	Total	100	100	100
CEO with a university degree	Yes	68.1	69.4	59.3
	No	31.9	30.6	40.7
	Total	100	100	100
Board of directors	Yes	38.9	41.3	22.2
	No	61.1	58.7	77.8
	Total	100	100	100
Second family generation involvement in the management team	Yes	40.7	36.4	38.9
	No	59.3	63.6	61.1
	Total	100	100	100
Size	Small	78.9	93.8	92
	Medium	21.1	6.3	8
	Total	100	100	100
Type of activity	Service	35.8	33.7	39.8
	Industry and Construction	64.2	66.3	60.2
	Total	100	100	100
Average age		22.1	23.86	25.36

The first cluster is the highest (n 113), and it identifies the “proactive family business”. Businesses that compose this cluster are intensively active in all KM practices, and exhibit higher flexible responses and strategic renewal actions. That is, family firms of this cluster promote a knowledge-creating culture comprising the implementation of persistent KM practices, that delves into the communication channels or information filters which provide integrated repertoires for action increasing the organizational memory of the firm. This cluster is dominated by small and younger enterprises with international activity. Among the three clusters identified, this cluster contains the highest proportion of CEO founders (36.3%) or family CEOs (92.9%), who in most cases hold a university degree (68.2%). Furthermore, it is also the cluster that has the highest proportion of second family generation involvement in the management team of the firm. The data suggest an open, flexible, and responsive strategy, or, in other words, a proactive strategy. Family firms that compose this cluster are willing to learn and have the ability not only to hold multiple interpretations simultaneously, but also to incorporate them into the strategy process. Such behavior is especially important when an environment is too unstable or complex to comprehend, or too imposing to defy.

Representing the smallest group (n 80), the second cluster could be identified as “transitional or adaptive family firms”. Family firms that compose this cluster have middling values of KM practices and strategic flexibility, with less emphasis on strategic renewal goals than cluster 1. This cluster does not markedly differ from cluster 1 with regard to the proportion of CEO founders (39.1%) and its academic formation (69.4%). However, cluster 2 is markedly different from the other clusters regarding the degree of professionalization of the family firms that compose it. Data show that cluster 2 has a smaller percentage of directors and managers who are family members. Furthermore, there is less second-generation involvement in the management team (36.4%), as well as a higher proportion in the board of directors (41.3%). These characteristics suggest a higher degree of professionalization, that could affect the strategic process. In this respect, strategy participation could be more widespread, with decentralized decision-making, and broader learning attitudes for promoting cultures and strategic actions which are more predisposed to creativity. This statement can be justified in light of the values of KM practices—the data show that KM creation practices present values very close to those obtained in cluster 1 (2.88 and 3.07, respectively).

The third cluster (n 95) comprises “rigid family firms”. They have the smallest level of strategic renewal and strategic flexibility values. Unlike the other clusters, this one contains family firms that place less emphasis on the implementation of KM practices—the lowest values of KM transfer, application, and creation practices were identified—and a limited implementation of KM storage practices. These results suggest the lack of an elaborated strategy for managing knowledge. This cluster contains the ancient enterprises and the lowest proportion of CEO founders (18.5%), as well as the lowest proportion of respondents with a university degree. The small proportion of CEO founders could suggest less cohesiveness and emotional attachment among family members, that could affect the capacity of the firms that compose this cluster to transfer, apply, and create knowledge-based resources. The presence of family CEOs is greater than in cluster 2, which suggests a desire to preserve the status quo and resist changes, preserving a closed company culture that blocks new ideas and change. This is because family traditions may create strong path dependencies that inhibit a family firm’s adaptability, thus limiting the strategic flexibility response of the firm. Furthermore, cluster 3 has the lowest percentage of board of directors (22.2%).

## 5. Discussion

The results obtained in this study make several theoretical contributions to the research in this field and have practical implications for family firms. Firstly, they contribute to the family firm and entrepreneurship literature, usually focused on the differences between family and non-family firms, by providing empirical evidence that increases our understanding of how family firms manage their strategies for achieving strategic renewal goals. In particular, this study makes a step forward by examining how strategic flexibility and knowledge management together enable and constrain strategic renewal. The results obtained in the study suggest a central role for both strategic flexibility and KM practices in supporting the strategic renewal process. This result is in line with previous studies that have explored the effect of either of these drivers in isolation, suggesting that either knowledge management, by reducing error in decision-making (Pérez-Pérez and Hernández-Linares 2020; Klammer et al. 2017), or the implementation of flexibility actions to respond to opportunities or threats (Pérez-Pérez et al. 2019; Broekaert et al. 2016; Roberts and Stockport 2009), enable the development of firm’s strategic renewal goals. Thus, organizations should realize the importance of promoting both of them to achieve growth and development through the potential of strategic renewal (Jain and Moreno 2015; Crossan and Berdrow 2003). This study is particularly relevant for SMEs, given the special challenges they face adapting to environmental changes with their limited resources (Drnevich and Kriauciunas 2011).

Secondly, in line with previous studies (Stanley et al. 2019; Randolph et al. 2017; Pérez-Pérez et al. 2019; Chrisman et al. 2015; Chrisman et al. 2012), the gathered evidence of this exploratory study confirms the existence of heterogeneity among the family firms population. Our findings suggest that

the varied strategic renewal orientations of family firms are impacted by the CEO's characteristics (Nadkarni and Herrmann 2010), the level of family involvement (Glaser et al. 2015) and the firm's unique capabilities of acquiring and promoting knowledge (Pérez-Pérez and Hernández-Linares 2020). This is a relevant finding, that can offer some counterbalance to those studies that tend to study family businesses as a homogeneous entity, thus instigating further discussion of family firm heterogeneity. For example, the higher presence of CEO founder and family board members among proactive and transitional family firm clusters could suggest that renewal benefits from the active involvement of the owner (Pérez-Pérez and Hernández-Linares 2020), who can take an active resource role in triggering and supporting change. Owners, as the SEW model proposes, can act as catalysts for the renewal process (Sievinen et al. 2019; Huff et al. 1992) by making, for example, symbolic acts to stabilize disruptive managerial actions, facilitating strategy renewal implementation, or promoting knowledge management practices that create commitment to the new strategic direction. In this vein, our exploratory results suggest that KM application and KM transfer practices appear relevant for businesses attempting to become more entrepreneurial. It is consistent with previous research that sustains that organizations should demonstrate a willingness to learn in order to foster strategic renewal (i.e., Klammer et al. 2017). Firms that promote knowledge management practices tend to execute a higher degree of strategic renewal, in contrast, firms that are resistant to learning tend to struggle to successfully renew their strategies. This result offers valuable managerial information by adding to the understanding of the most effective KM practices to promote strategic flexibility in influencing strategic renewal results. Based on the results, managers might promote different mechanisms, based on routines or norms, to share, disseminate, and replicate information, maintaining an organizational memory of existing knowledge of the firm that supports the long-term orientation of family firms.

In addition, this paper has practical implications. Firstly, this study could serve as guidelines in the decision-making process for family firms' managers interested in promoting strategic renewal goals through flexibility and KM practices. More precisely, managers could identify their own characteristics and behaviours by identifying the cluster their enterprises could be positioned in. In this vein, managers from the "rigid family firms" cluster should change their views related to KM practices and flexibility. Firms from "transitional or adaptative family firms" cluster are progressing in the correct way, and they should invest in KM practices. Finally, firms from "proactive family firms" cluster should continue with their policies.

Besides the theoretical and practical contributions noted earlier, this article is not exempt from limitations. The study's main potential limitations are its cross-sectional design and the use of subjective measures. In addition, this research is exploratory in nature, and it is limited to only one country (Spain). Finally, the generalizability of our findings is also limited by the nature of the samples used in this study (SMEs), and it remains for future studies to determine whether these results will be similar for larger companies.

## 6. Conclusions

This study aimed to explore how family firms pursue strategies that promote strategic flexibility and knowledge-management (KM) practices to respond to strategic-renewal goals. Specifically, by developing an exploratory research, the following research question was answered: Are there heterogenous groups of family firms in terms of knowledge management, strategic flexibility and strategic renewal goals? To explore this research question, this study used survey data from a sample of 288 Spanish family SMEs, and applied a novel data-mining tool called two-step cluster analysis using Schwarz's Bayesian Criterion (BIC), whereas an ANOVA test allowed us to confirm the heterogeneity of the groups of family firms identified. The results of the study revealed that the data set could be split into the three following clusters:

- (1) Proactive family firms: a cluster composed of open and flexible firms that usually have international activity and a strong family ownership structure. These firms are intensively

active in all KM practices, and exhibit higher rates of flexible responses and strategic renewal actions, thus defining firms that are willing to learn.

- (2) Transitional or Adaptive family firms: a cluster composed of family firms that have a higher degree of professionalization, and emphasize KM transfer and KM application. Among these firms, strategic participation could be more widespread, with decentralized decision-making and broader learning attitudes, to promote cultures and strategic actions that are more predisposed to creativity.
- (3) Rigid family firms: a cluster composed of family firms that place less emphasis on the implementation of KM practices, and exhibit lower flexible responses and strategic renewal. These firms lack an elaborated strategy for managing knowledge, which could suggest less cohesiveness and emotional attachment among family members, affecting the capacity of the firms that compose this cluster to transfer, apply, and create knowledge-based resources.

Future studies could complement this exploratory research by using other methodologies that explain causality. For example, the influence of the owners' behaviour could be empirically evaluated in its temporal context by future studies (Ahn et al. 2017). In addition, it would be interesting to explore if employee diversity (Bogers et al. 2018) or the succession process of family firms affects the enhancement of a learning culture that promotes KM practices and strategic renewal processes. Hence, extending our research to other Western European Countries and cultural contexts would enrich our results.

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## Appendix A

**Table A1.** Knowledge Management Practices.

KM Transfer	
Item 1	Information technologies (internet, intranet, e-mail, etc.) are used, in order to encourage information flows and improve employees' communication
Item 2	The firm's objectives and goals are clearly communicated to all the organizational members
Item 3	There are frequent, well-distributed internal reports that inform employees about the firm's progress
Item 4	There are periodical meetings in which employees are informed about the new initiatives that have been implemented
Item 5	There are formal mechanisms that guarantee best practices to be shared in the firm (for instance, among departments or business areas)
Item 6	There are projects with interdisciplinary teams to share knowledge
Item 7	There are employees that compile suggestions from other employees, customers, and suppliers, and produce structured reports to distribute throughout the company
Item 8	There are communities of practices or learning groups to share knowledge and experiences

Table A1. Cont.

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<b>KM Application</b>	
Item 1	All the employees have access to relevant information and key knowledge within the firm
Item 2	There are interdisciplinary teams with autonomy to apply and integrate knowledge
Item 3	Suggestions from employees, customers, or suppliers are frequently incorporated into products, processes, or services
Item 4	Knowledge that has been created is structured in independent modules, which allow for its integration or separation to create different applications and new usages
<b>KM Storage</b>	
Item 1	Organizational processes are codified and documented in manuals or other types of devices
Item 2	There are databases that allow employees to use knowledge and experiences that have previously been loaded into the databases
Item 3	It is possible to access knowledge repositories, databases, and documents through some kind of internal computer network (for instance, an intranet)
Item 4	Databases are frequently updated
Item 5	There are databases with updated information about customers
Item 6	There are procedural guidelines, manuals, or books including problems that have been solved successfully
<b>KM Creation</b>	
Item 1	There is a strong commitment (for example, training, equipment) to depend on internal R&D activities to develop or improve technologies (products, processes)
Item 2	There is a strong investment in R&D activities to develop or improve technologies internally (products, processes)
Item 3	There is a strong commitment to maintain a highly qualified R&D unit to internally develop or improve technologies (products, processes)
<b>Strategic Flexibility</b>	
Item 1	Our strategy emphasizes exploiting new opportunities arising from environmental variability
Item 2	Our strategy reflects a high level of flexibility in managing political, economic, and financial risks
Item 3	Our strategy emphasizes versatility and empowerment in allocating human resources
Item 4	We frequently change our strategies and structures to derive benefits from environmental changes
<b>Strategic Renewal</b>	
Item 1	We have divested several unprofitable units
Item 2	Our organization has changed its strategy for each unit
Item 3	We have initiated several programs to improve the productivity of our units
Item 4	We have reorganized operations to ensure increased coordination and communication among units
Item 5	Our organization has renewed the portfolio of activities within units

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