

Article

Unveiling the Direct Effects of Family Firm Heterogeneity on Environmental Performance

Beatriz Forés , José María Fernández-Yáñez * , Alba Puig-Denia  and Montserrat Boronat-Navarro 

Business Management Department, Universitat Jaume I, 12071 Castellón de la Plana, Spain

* Correspondence: yanez@uji.es

Abstract: By combining agency theory and the resource- and capabilities-based view, this paper aims to unveil the influence of family firm heterogeneity on environmental performance. Previous results are inconsistent about how the specific features of this type of business contribute to better environmental protection performance. We analyse a number of variables related to the management, ownership and corporate governance characteristics of the family business and their individual influence on environmental performance. We test our hypotheses using a database of 748 family firms in the Spanish tourism sector. This economic sector, which is mostly composed of family businesses, puts great pressure on the environment. As such, family firms must take an active role in the resolution of the environmental problems that afflict society. We find that the effects of a family-controlled ownership and management structure on environmental performance are negative. Family-founder firms with a high degree of family control also are shown to have a negative relationship with environmental performance. However, the existence of a formal management mechanism, such as a management committee, emerges as the most powerful structural factor in facilitating the achievement of environmental objectives. The conclusions drawn from this study allow us to outline future lines of research as well as recommendations for practitioners. Our study responds to the call made in the literature to delve deeper into the heterogeneity of the family business, and specifically to determine which of its characteristic features allow this type of business to achieve better environmental performance.

Keywords: family firm; family involvement; management structure; corporate governance structure; founding-family firms; tourism firms



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1. Introduction

Our purpose in this paper is to unveil the heterogeneity of family firms and its influence on their environmental performance. The last three decades have seen the emergence of a broad literature that seeks to understand how firms' objectives [1], strategies [2,3], new technologies [2], and pressures from internal and external stakeholders [4], among other variables, can influence their environmental performance. The issue becomes even more relevant in the light of recent studies that point to the alarming levels of pollution and exploitation of natural resources associated with the prevailing economic and business model. International frameworks, such as the United Nations Sustainable Development Goals, support these research efforts by promoting corporate sustainability at a global scale. As a theoretical lens, the natural-resource-based view (NRBV) [5], which extends arguments from the resource-based view (RBV) [6–8], has been proposed to emphasize the importance of achieving environmental sustainability through the development of firms' resources and capabilities.

Today's environmental demands pose significant challenges to family firms, which have long-established structures and find it more difficult to adapt their business models [9]. Family businesses represent the vast majority of all businesses worldwide and they have

certain specific characteristics that differentiate them from organizations with other ownership and management models [10], and motivations (e.g., transgenerational succession) [9] that affect their strategic behaviour and performance [11]. The first distinguishing feature of family businesses is the involvement of the family in the ownership and management of the business [12]. Secondly, the approach of these companies, guided by the family vision and objectives, tends to be oriented towards long-term interests [13]. Thirdly, those who are part of a family business tend to develop an emotional attachment or closeness to the prevailing culture of the company [14]. Finally, the desire to maintain the family's power and influence in the company encourages family members in the business to create new dynasties through the succession process [15].

The desire to exert strategic control over the business and to pass on to future generations a family business with a positive image and reputation makes this type of company a good candidate for adopting measures aimed at improving its environmental performance [16]. Even though this is a strand of literature that has only recently begun to be explored [17], there is a wealth of empirical research that confirms the superiority of family businesses over non-family businesses in terms of environmental performance (e.g., [18–20]). These contributions show that environmental performance is considered a way to protect the socioemotional wealth and long-term survival of the family business [20].

However, Barbaritano and Savelli [21] claim in a recent study that the way in which family businesses approach the adoption of measures to enhance their environmental performance remains an open question. Indeed, there is a stream of literature whose results point in the opposite direction; in other words, that family firms on average show worse environmental performance than their non-family counterparts (e.g., [22–25]). Drawing on agency theory [26], and the dark side of socioemotional wealth [27], some studies suggest that family firms achieve worse environmental performance because they are more concerned with allocating organizational resources to satisfying purely family objectives [13]. Moreover, a recent meta-analysis study confirms the poorer environmental performance of family firms compared to their non-family counterparts, although the difference is small [28].

This divergence in previous empirical research requires further study of the specific characteristics of family businesses that influence their environmental performance. Accounting for this heterogeneity is critical to advancing family business research [29]. Family businesses are heterogeneous organizations that differ in aspects such as the involvement of family members in the company, especially in management and governance boards; the presence of a family CEO; or the generation at the head of the company [10]. This study responds to the call made in recent publications (e.g., [22,28,30]) for fine-grained analysis of the variables that determine the heterogeneity of family businesses and condition their environmental performance.

The firm's economic and non-economic objectives, decision-making, strategy, and results are dependent on the ownership identity and management style of the family business, which can take many different forms [31,32]. Our study opens up the black box of the influence of family business heterogeneity on environmental performance in the specific context of the Spanish family tourism business. The tourism sector has made a steady and significant contribution to national wealth in terms of employment and GDP during recent decades, only interrupted by the outbreak of the COVID-19 pandemic in 2020 [33]. However, recent studies (e.g., [34,35]) suggest that the tourism sector is less sustainable than ever and that in order to improve its environmental performance measures to reduce its carbon footprint and consumption of natural resources are urgently needed. In fact, the empirical study conducted by [35] involving an analysis of 160 countries estimates that tourism is responsible for 8% of greenhouse gas emissions globally. These figures support the arguments made in recent research (e.g., [2,36]) that tourism companies need to integrate sustainability principles into their business models in order to reduce their environmental impact. Last but not least, it should be noted that the tourism sector in Spain, as in many other countries (e.g., [37]), is characterized by a high presence of family

businesses, accounting for a share of more than 80% of the total number of companies in the sector [38]. Therefore, the tourism sector provides the ideal context for examining the relationships between ownership structure, and corporate and family governance models on the one hand, and environmental performance in family firms on the other.

Specifically, we quantitatively test our hypotheses on a sample of 748 Spanish family firms, finding support for the negative impact of family involvement in the business and in management on environmental performance. The concentrated ownership and control of founding-family firms also negatively affects the pursuit of environmental aims. Although having a family member as CEO is found to be an important determinant of strategic issues, its effect on environmental performance is not significant. On the other hand, the existence of an effective formal management instrument such as a management committee seems to improve environmental performance. This mechanism helps to mitigate the negative effects of a family-controlled ownership and management structure, enabling the pursuit of objectives that go far beyond the family's economic security.

Our results have interesting practical implications, so this article responds to the call made by some papers in the literature on environmental performance and family business [39] to avoid ivory tower thinking. The findings represent an important contribution to the literature on family firms, corporate governance, and environmental issues. First, we add to the scarce and mixed empirical evidence identifying the specific characteristics of the ownership, management and corporate governance structures of family firms that bolster or inhibit their environmental performance. There are differing degrees of family involvement in each of these structures and the corresponding effects on the achievement of environmental aims are asymmetric. Second, we unveil the heterogeneity of family firms with the aim of challenging the predominantly static view adopted towards family firms' business models [40]. Therefore, although family firms stand out as being particularly rich in tradition [11], they could seek strategic renewal based on environmental objectives.

The remainder of the article is structured as follows. In the following section we develop our theoretical model to explain the paths leading to environmental performance in privately-held, family-influenced business. After presenting the methodology for the empirical study, we introduce and discuss the results from the empirical models in the results section. The last part outlines the main conclusions of the research, along with the implications for academia and practitioners, and suggests future research lines.

2. Conceptual Framework

Agency theory and the resource and capabilities-based view (RCBV) offer two complementary perspectives suitable for analysing the most relevant aspects of how ownership, management and governance structures impact family business decision-making and thus the achievement of environmental objectives. Accordingly, these theoretical approaches can provide an adequate framework for examining the implications of the design of such company structures for environmental outcomes.

The RCBV emphasizes the critical role played by firms' endowment of resources and capabilities in making them unique entities, capable of achieving a sustainable advantage over their competitors [6,41,42]. In particular, the NRBV, an extension of the RBV, proposes that a firm's competitive advantage depends on how it uses its resources and capabilities in a manner that facilitates environmentally sustainable economic activity [5,43]. In this vein, the NRBV argues that to achieve sustainable competitive advantage in the present business arena, family firms must develop key strategic capabilities such as pollution prevention, product stewardship and sustainable development in ways that enable the firm to improve its environmental performance [5].

Since the deployment of resources and capabilities is the result of business decisions, it is necessary to analyse how these decisions emerge, with a particular focus on the characteristic features of the bodies that hold decision-making power in family businesses. For this purpose, agency theory [26,44,45] is a framework that allows us to identify how the design of the ownership, management and governance structures of the family business

can ensure better decision-making processes, enabling the firm to seize opportunities and adapt to environmental challenges [46]. We have therefore included these characteristics in our theoretical model with the aim of unveiling how the said structures influence the development of resources and capabilities that can help the family business improve its environmental performance.

We adopted a definition of family business based on the concept postulated by Molly et al. [47] but restricted to the dimension relating to family control of the share capital. Therefore, we consider a firm to be a family business when members of a particular family own more than 50% of the share capital. We have not taken into account the other two criteria that those authors use in their definition—majority control of the board of directors by the owning family, and the participation of at least one family member in the management team—as both are included as explanatory variables in our conceptual model, as we explain below.

3. Hypotheses

3.1. Family Involvement in the Business and in the Top Management Team (TMT), and Environmental Performance

Most of the studies on environmental performance in the family firm literature compare the effect of family ownership with that of non-family ownership. The studies that do address different degrees of family involvement consider only limited elements of this construct. Furthermore, those comparative studies of family and non-family firms point to a controversial relationship between family involvement and environmental performance.

On the one hand, studies such as that by Berrone et al. [20] conclude that family firms have better environmental performance than non-family firms, based on an analysis of public firms (a public firm is considered a family public firm when the family has at least 5% of the company's stocks). Han et al. [48] analyse 623 US public firms and find that family involvement (measured by the family board members' voting power and family ownership) has a positive relationship with the implementation of environmental innovations.

On the other hand, studies such as that by Craig and Dibrell [49] find that family firms have a weaker pro-environmental attitude than non-family firms. Miroshnychenko et al. [28] carried out a meta-analysis to study the relationship between family firms and environmental performance, concluding that family involvement negatively affects environmental performance. Aiello et al. [50], based on a study of Italian manufacturing firms, conclude that non-family firms are more likely to implement innovations in green technologies. The fact that a large part of the family's wealth is tied to the company can discourage family managers from investing in highly uncertain projects, such as those linked to environmental improvement [11]; moreover, some family members who hold a position of great responsibility in the firm may try to justify their right to hold such a position by adopting measures and practices aimed solely at improving the economic and financial performance of the company, neglecting social or environmental aspects [16,51,52].

Other studies do not find a clear relationship. For example, the study by Uhlander et al. [53] concludes that the effect of family involvement on the implementation of environmental management practices is positive only for larger business-owning families (three or more owners). For their part, Dekker and Hasso [54], in a study of 1452 private Australian SMEs, find that family firms demonstrate less of a focus on environmental performance than non-family firms, but the opposite result arises for firms that are strongly embedded in the social community.

Although the conclusions are inconsistent, the involvement of family members in the firm, particularly in the managerial positions, seems to have some negative implications for the achievement of better environmental performance. According to the meta-analytic review carried out by Miroshnychenko et al. [28], the dominant behaviour in family firms regarding their environmental performance follows agency logic rather than stewardship logic. From a stewardship point of view, family managers and owners act as stewards, and when they try to maximize their objectives, they are also favouring the business [55,56]. On

the contrary, the agency point of view suggests a dark side of family involvement, where family members in ownership or management positions seek to benefit the family over the business, meaning that risk-avoidance and conservatism are prevalent characteristics in family firms [57]. Agency costs also arise in these circumstances when family objectives are pursued over business objectives, when family members do not act in the interest of other parties in the firm, or when appropriation, nepotism and entrenchment occur [16,58,59]. In addition, the stronger the degree of family ties and involvement in the business and in management [57], the greater the prevalence of the dominant view of agency theory found by Miroshnychenko et al. [28] in their review of the effect of family firms on environmental performance.

Moreover, the hiring of family members, especially as managers, is an example of the conservative nature typical of family businesses [60,61]. This conservatism can lead to risk aversion and resistance to change [55], thus encouraging a more cautious approach when adopting strategies that involve long-term investments [28] and limiting more innovative attitudes focused on improvements that go beyond economic performance. The risk aversion could be even greater when there are no non-family managers in the family firm [28].

Specifically, Graafland [62], in a recent study analysing 3816 companies from 12 European countries, finds empirical evidence that family businesses achieve better environmental performance when their management team is made up of diverse members compared to when this body is made up only of family members. Similarly, Ernst et al. [51], in an empirical study of 356 family businesses in Germany, Austria and Switzerland, confirm that the influence of the family in the ownership of the company is beneficial for the adoption of measures and allocation of resources to solve sustainability problems; however, when the owners carry out managerial tasks, environmental performance is negatively affected, since these managerial members of the family may have a risk aversion that dissuades them from developing environmental projects given the economic uncertainty they can generate. Campopiano et al. [63] report similar results, although in a context more closely linked to philanthropic practices, which include the donation of resources to improve environmental sustainability.

Access to human resources is key to be able to successfully plan and implement environmental practices and improve environmental performance [64–67]. Practices such as nepotism [68], favouritism [69] and the desire to hire and provide a career for family members [70] can make it difficult to hire people who bring outside experience and more ground-breaking ideas and to recruit qualified managers [71].

In fact, entrenchment is a common problem in family firms. Adopting new environmental practices and strategies requires new perspectives to introduce innovations. The low employee turnover, which stems from the long-term orientation of family firms, can become a barrier to innovation as it gives rise to high cohesiveness and groupthink, limiting the acquisition of new and external knowledge [72]. When members of the family are in the firm's management team or are hired as employees, their supposed long tenure in the position can promote inertia and hinder the adoption of new strategies needed to improve environmental performance [16]. A higher degree of family involvement means fewer opportunities to include new perspectives and initiatives aimed at enhancing sustainability. These problems are even greater when selection criteria are focused more on family ties than on skills and qualifications [23,28,73].

Therefore, we propose a negative relationship between family involvement in management and in the business in general and environmental performance:

H1. *There is a negative relationship between greater family involvement in the business and environmental performance.*

H2. *There is a negative relationship between greater family involvement in the TMT and environmental performance.*

In an attempt to accumulate more discretionary control over the strategy and day-to-day management of the company, some family firms may have a family member holding the position of chief executive officer (CEO). The position, and especially the succession intention of the CEO, is a differentiating feature between family and non-family firms [74], but also a source of heterogeneity within the group of firms controlled by entrepreneurial families [10]. The study of the person who holds the position of CEO is also important, since the literature (e.g., [17,75]) points out that their personal values, capabilities and their motivations and commitment to long-term initiatives are essential for the implementation of more environmentally sustainable practices [16,63,76].

A family CEO, given his or her identification with and emotional closeness to the family business, may be more sensitive to the positive image of the company in society and adopt measures and assign resources that have a positive impact on the reputation of the family business, such as by improving its environmental performance [16,77]. This responsible or stewardship behaviour of the family CEO may also be encouraged by transgenerational aspirations in the family business [14,16]. However, a less optimistic view suggests that sustainability sometimes requires measures aimed at renewing corporate strategy, resources and competencies [5,78]. Entrenchment, or long tenures of the same family CEO, can lead the company into a situation of organizational inertia and resistance to change that can compromise the implementation of initiatives aimed at improving environmental performance [16].

These two opposing views on the importance of having a family CEO to improve the environmental performance of the family business have both been explored in empirical research, where the results are mixed and far from conclusive. On the one hand, Berrone et al. [20] find that the positive link between family firms and better environmental performance is independent of whether or not the CEO is a family member, or even if the CEO also serves as chairman of the board of directors. On the other hand, Abeysekera and Fernando [22] have more recently reported completely opposite conclusions, pointing out that regardless of whether the CEO is a family member, family firms show weaker environmental performance than their non-family counterparts. Moreover, Campopiano et al. [63] conducted research on a database of 130 Italian family businesses, confirming that the family businesses with the most philanthropic social and environmental behaviour are those where the CEO is not part of the family.

In light of the above, we believe a family CEO will always strive to satisfy purely family objectives and tend to neglect those objectives that also benefit society as a whole, such as improving environmental performance. Therefore, we propose the following hypothesis:

H3. *There is a negative relationship between the CEO being a family member and environmental performance.*

3.2. Family Generation and Environmental Performance

The willingness of a family business to adopt measures aimed at improving its environmental performance can also be strongly influenced by the stage of development of the business family [54]. Business families, like their businesses, go through a series of stages over time [52,79], in which the generation(s) in charge of the firm can be a key determinant of family firm heterogeneity [80]. Thus, each generation of the same family may differ in their objectives and interests, consequently influencing the commitments, resource allocation and strategies that the family business adopts in relation to environmental sustainability.

Practices that improve a firm's environmental performance are characterized by high uncertainty about how and when the firm can profit from them [23]. As indicated previously, when a firm aims to enhance its environmental performance, it must implement a series of changes in crucial aspects such as decision-making, business processes, as well as investment of resources in green technologies and the deployment of new innovative projects [2,17,54]. Sometimes these changes require new pecuniary and non-pecuniary

endowments for which the family business may need to involve new investors, altering the capital structure and therefore the control of the firm [14].

The family business, especially in the founder generation of ownership, serves as a repository of family wealth [47]. For this reason, founding members may act more conservatively in the face of highly uncertain projects [81] and prefer to commit to initiatives that ensure the economic growth and development of a healthy business, providing opportunities for the coming generations [54]. Therefore, the threat to family control and influence over the company posed by uncertain pro-environmental projects can have a deterrent effect on the implementation of these kinds of initiatives [16,25,82].

Confirming the previous conclusions of the literature, Dick et al. [83], in a study of 205 companies in Poland, find that in family businesses controlled by the founder generation, activities related to improving environmental sustainability are restricted in order to protect their socio-emotional wealth. Likewise, Marqués et al. [84], based on an in-depth analysis of 12 cases of Spanish family business, report that the founders of the family business (i.e., the first generation) are not more committed than their successors to issues related to environmental and social performance. Finally, Yang et al. [85], in a recent study of a sample of 482 Chinese family firms, empirically demonstrate that the process of intergenerational succession has had a positive and significant effect on the environmental investment of these family firms.

Therefore, in line with these arguments, we propose a negative relationship between the founder generation of the business family and environmental performance.

H4. *There is a negative relationship between the family business being in the founder generation and environmental performance.*

3.3. Management Committee and Environmental Performance

To mitigate some of the problems that arise in the family business due to the institutional overlap between the family and the business—such as nepotism, managerialism or agency problems—it is essential to implement appropriate governance structures that provide the company with greater cohesion and professionalization [86,87].

One of the most notable governance structures is the management committee. The management committee is a collegiate body for deliberation and decision-making of a different nature. The different areas or departments of the company are represented in this committee, in addition to the CEO. In this sense, this body provides the company with an overall direction, improves coordination, cohesion, and communication between the different departments, and helps ensure the consistency of the company's vision and mission.

The management committee is an essential governing body for making and executing decisions in relation to the organizational structure and the implementation of strategy [88]. It is also a key body for the company's long-term projection, aligning objectives and guiding the company in a common direction [88,89]. Achieving good environmental performance requires this shared long-term vision [17,23] fostered by the management committee. Moreover, the management committee, by adding to the professionalization of the family firm [86], can help to direct the strategy towards environmental aspects.

Furthermore, as mentioned above, family firms are usually considered reluctant to change, conservative and risk-averse [11,81]; therefore, they are usually reluctant to invest in activities that could pose some risk to their family-centred objectives. In this sense, previous research suggests that there could be short-term penalties for businesses that show environmental proactiveness [90,91]. The existence of a management committee could boost environmental initiatives, preventing family blockholders from easily imposing their family-centred objectives on management and strategy, as they can where there is no diverse management committee to safeguard the interests of the firm as a whole [25,86].

Naturally, the corporate governance literature [92,93] recognizes that even with appropriate governance structures, certain blockholders may be able to impose their agenda.

Nevertheless, we strongly believe that having such a governance structure is beneficial for the environmental performance of the family business.

Therefore, our last hypothesis proposes a positive relationship between the existence of a management committee and environmental performance:

H5. *There is a positive relationship between the existence of a management committee and environmental performance.*

Figure 1 shows the variables suggested by the underlying theories adopted here to explain the environmental performance of family businesses.

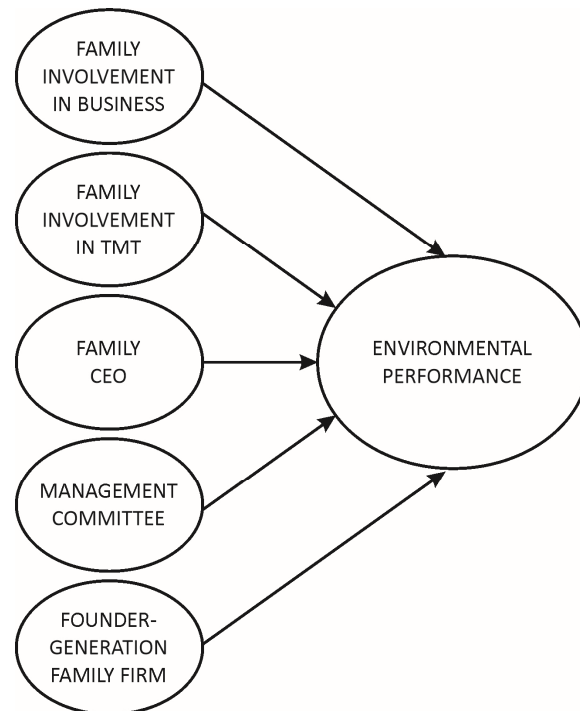


Figure 1. Conceptual model.

4. Methodology

Sample and Data Collection

The research conducted here relies on a database constructed from a primary study of the Spanish tourism industry. The sample universe was Spanish tourism companies listed in the 2009 update of the Central Business Directory (Directorio Central de Empresas, DIRCE, 2009). To select this initial sample, we used a stratified random sampling procedure with proportional allocation to ensure the representativeness of the sample in terms of activity (four groups), size (taking the number of employees as a measure of firm size) and location.

After cleaning the database of incomplete data, the end result of the field work was a sample of 1019 companies, representing a 95% confidence level and a margin of error of $\pm 3.1\%$. This final sample represents a response rate of 25.6% of the initial sample. A total of 748 firms in the final sample were family firms, which are the focus of this study. A company is classified as a family firm if the founder and/or their descendants hold majority ownership and control the strategic decisions [94,95].

To collect the data, a questionnaire was administered to the CEOs or General Managers, by means of face-to-face interviews conducted from December 2009 to March 2010 by a company specialized in tourism market research, and in close collaboration with the research team responsible for the project. Drawing on this primary source, the firms in the sample were categorized as either family or non-family businesses. In order to mitigate the problems associated with questionnaires as a data collection method, and to improve the

response rate and the quality of the information, we applied a modified version of Dillman's Total Design Method [96]. In the first two weeks of November 2009, the questionnaire was pre-tested on a group of five academics who specialize in the fields of tourism and strategy and changes made accordingly. The resulting questionnaire was then administered to eight managers from firms of different sizes and activities in the tourism sector, and their comments and suggestions were taken into account in the final questionnaire design.

Before conducting the face-to-face interviews, which were arranged by telephone or e-mail, the questionnaire was sent to the manager to ensure they had time to read it and consider their responses. Those firms that initially declined to participate in the study were substituted by others with the same socio-demographic characteristics. We completed the final database by adding financial information from 2008 to 2016 sourced from the Sistema de Análisis de Balances Ibéricos (SABI) database.

5. Variables

5.1. Dependent Variable: Environmental Performance

This construct is composed of five items adapted from previous studies (e.g., [97]) that have been empirically validated in recent literature (e.g., [2,98–100]), i.e., 'Reduction in the consumption of materials for service provision' (EP1), 'Reduction in the energy consumption for service provision' (EP2), 'Reduction in the time required for service provision' (EP3), 'Reduction in the environmental impact' (EP4), and 'Improvement of equipment efficiency' (EP5). These items were measured with a seven-point Likert-type scale reflecting managers' perceptions of the firm's level of achievement of the environmental objectives (1 = "very low", 2 = "low", 3 = "quite low", 4 = "average", 5 = "quite high", 6 = "high", and 7 = "very high") as compared to competitors. The measurement of this variable has been shown to be consistent and reliable, with a Cronbach's Alpha of 0.897, well above the 0.7 threshold proposed by Hair et al. [101]. In addition, following a recommendation by Brown [102], we perform principal component analysis (PCA) and confirmatory factor analysis (CFA) to identify similarities and differences in the data, and to test how well the measurement items represent the construct. The eigenvalue and percentage of variance explained for the environmental performance construct is shown in Table 1. The cumulative percentage of variance explained is 70.84% for this construct, with factor loading values ranging from 0.750 to 0.870, as shown in Table 1.

Table 1. Results of PCA and CFA for environmental performance.

Item	PCA			CFA		
	Factor Loading	Eigen Value	Percentage of Variance Explained	Robust Standardized Loading	z	$p > z $
EP1	0.838	3.542	70.836	0.819	31.97	0.000
EP2	0.879			0.870	46.93	0.000
EP3	0.829			0.756	31.85	0.000
EP4	0.823			0.750	27.59	0.000
EP5	0.837			0.758	26.40	0.000

5.2. Independent Variables

Family Involvement in Business (INVOLB). This variable represents the percentage of employees who are family members.

Family Involvement in Top Management Team (INVOLTMT). This variable captures the percentage of the TMT comprised by family members.

Family CEO (FCEO). A dichotomous variable indicating whether or not the managing director or CEO is a member of the family.

Management Committee (MANCOM). This is also a dichotomous variable that reflects the existence of a management committee in the firm.

Founder-Generation Family Firm (FOUNGEN). We introduce a dichotomous variable indicating whether or not the family firm is in the first generation.

5.3. Control Variables

We also included several control variables based on previous related studies (e.g., [2,103,104]) which could have an effect on environmental performance.

Size (SIZE) is measured as the total number of employees.

Age (AGE) is measured as the number of years since the first establishment was opened.

Return on Sales (ROS) is measured using a 7-point Likert-type scale that compares the firm's performance to that of its competitors.

The strategic archetypes correspond to the typology put forward by Miles et al. [105], with three dichotomous variables that capture the defender (DEF), prospector (PROS) or analyser (ANAL) strategy profiles, leaving the reactor profile as a reference variable.

Another important size-related variable to consider in the tourism sector is group or chain affiliation (CHAIN) [106]. CHAIN is a dichotomous variable that takes a value of 1 if the firm is part of a chain and 0 otherwise.

We also include non-quality costs (NQUACOST) as the percentage of services provided that were considered unacceptable by customers [107].

Hierarchy levels (HIERARCHY), measured as the number of hierarchical levels between the CEO and customer service employees, are related to the propensity to adopt more flexible structures and decision-making processes that are needed for pro-environmental purposes [108,109].

Finally, four dummy variables were included to capture the various subsectors of tourism firms in the sample, which presumably display different patterns of environmental performance. They are accommodation firms (HOTEL), restaurants (RESTA), travel agencies and tour operators (TOUR), and transport organizations (TRANSP), with complementary firms as the reference subsector.

Table 2 shows the descriptive statistics and correlations among the study variables. There is a low level of correlation (below 0.6) between the variables (see Table 2) [110], which confirms the discriminant validity of the model.

Table 2. Descriptive statistics and correlations of the study variables.

VARIABLES	μ	σ^2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. ENVPERF	3.678	1.366	1																		
2. HOTEL	0.306	0.461	0.125 ***	1																	
3. RESTA	0.406	0.491	-0.138 ***	-0.550 ***	1																
4. TOUR	0.097	0.296	0.096 ***	-0.218 ***	-0.272 ***	1															
5. TRANSP	0.044	0.205	0.089 ***	-0.143 ***	-0.178 ***	-0.071 **	1														
6. SIZE	28.567	127.824	0.091 ***	0.090 ***	-0.051 *	-0.020	-0.008	1													
7. GROUP	0.204	0.402	0.018	0.036	-0.108 ***	0.124 ***	0.069 **	0.042	1												
8. HIERARCHY	1.816	0.914	0.001	0.171 ***	-0.074 **	-0.034	-0.027	0.207 ***	0.145 ***	1											
9. AGE	19.618	20.616	0.086 ***	0.142 ***	-0.040	-0.079 **	0.007	0.003	0.010	0.049 *	1										
10. ROS	3.877	0.970	0.132 ***	0.099 ***	-0.098 ***	0.048 *	0.018	0.073 **	0.083 **	0.070 **	0.054 *	1									
11. NQUACOST	3.820	7.090	-0.019	0.032	-0.049 *	0.095 ***	0.046	0.005	0.075 **	0.073 **	-0.006	0.015	1								
12. DEF	0.342	0.474	-0.092 ***	-0.057 *	0.097 ***	-0.009	-0.004	0.021	0.020	-0.023	0.023	-0.044	0.091 ***	1							
13. PROS	0.068	0.252	0.084 **	0.131 ***	-0.094 ***	0.018	-0.058 *	-0.013	0.073 **	0.049 *	-0.015	0.079 **	0.079 **	-0.195 ***	1						
14. ANAL	0.346	0.476	0.156 ***	0.053 *	0.016	-0.012	0.049 *	0.012	0.064 **	0.100 ***	-0.066 **	0.079 **	-0.044	-0.525 ***	-0.197 ***	1					
15. INVOLMT	0.913	0.246	-0.128 ***	-0.201 ***	0.117 ***	0.109 ***	-0.041	-0.014	-0.036	-0.117 ***	0.150 ***	-0.019	-0.138 ***	-0.024	-0.006	-0.068 **	1				
16. INVOLB	0.430	0.297	-0.170 ***	-0.214 ***	0.165 ***	-0.020	-0.038	-0.017	-0.167 ***	-0.215 ***	0.199 ***	-0.142 ***	-0.039	0.077 **	-0.124 ***	-0.094 ***	0.260 ***	1			
17. FCEO	0.936	0.242	-0.104 ***	-0.213 ***	0.137 ***	0.030	0.003	-0.002	-0.183 ***	-0.077 **	0.044	-0.045	-0.012	0.036	-0.017	-0.055 *	0.087 ***	0.127 ***	1		
18. MANCOMM	0.236	0.319	0.173 ***	0.170 ***	-0.131 ***	0.046	0.050 *	0.140 ***	0.189 ***	0.211 ***	-0.049 *	0.091 ***	0.087 ***	0.017	0.056 *	0.070 **	-0.100 ***	-0.213 ***	-0.154 ***	1	
19. FOUNGEN	0.768	0.42194	-0.202 ***	-0.207 ***	0.157 ***	0.031	0.010	-0.040	-0.085 **	-0.091 ***	0.322 ***	-0.057 *	0.051 *	0.055 *	-0.015	-0.067 **	0.147 ***	0.170 ***	0.119 ***	-0.231 ***	1

*** Correlation significant at the 0.01 level (bilateral). ** Correlation significant at the 0.05 level (bilateral). * Correlation significant at the 0.1 level (bilateral).

6. Method of Analysis and Validity Tests

To test the research hypotheses, we ran a hierarchical regression analysis using SPSS 25.0. Before incorporating the moderating effects, the main variables were mean centred to reduce multicollinearity [111,112]. The variance inflation factors (VIF) confirmed that multicollinearity is not a problem: the highest VIF is 2.405, i.e., below the threshold of 10 [111]. We applied a residual analysis and various graphs and statistics available in the SPSS program to verify that the basic assumptions for linear regression analysis are met (that is, linearity, independence, homoscedasticity, normality and no collinearity). In addition, control variables which have a bivariate correlation of less than 0.3 [113] with the other variables in the model were included.

7. Results

The estimation of the model involves a two-stage procedure, first including the control variables (Model 1) and then adding the explanatory variables (Model 2). The significance of the F-statistic for the two estimated models (Table 3) indicates acceptable explanatory power (0.130).

Table 3. Estimation results.

		Model I		Model II		Collinearity	
		(1)	(2)	(1)	(2)	Tolerance	VIF
	Constant	12.418 ***(3)	2.644	5.156(3)	1.065		
Control Variables							
1	HOTEL	0.148 ***	2.782	0.089 *	1.681	0.416	2.405
2	RESTA	0.017	0.321	0.033	0.632	0.425	2.352
3	TOUR	0.151 ***	3.466	0.150 ***	3.498	0.630	1.586
4	TRANSP	0.124 ***	3.128	0.112 ***	2.901	0.776	1.289
5	SIZE	0.087 **	2.432	0.084 **	2.388	0.936	1.068
6	GROUP	−0.035	−0.959	−0.074 **	−2.036	0.883	1.132
7	HIERARCHY	−0.057	−1.554	−0.093 **	−2.540	0.865	1.157
8	AGE	−0.073 **	2.039	−0.007	0.189	0.849	1.178
9	ROS	0.093 ***	2.616	0.075 **	2.137	0.944	1.059
10	NQUACOST	−0.043	−1.210	−0.048	−1.364	0.933	1.072
11	DEF	0.041	0.909	0.034	0.767	0.594	1.684
12	PROS	0.116 ***	2.941	0.108 ***	2.811	0.783	1.277
13	ANAL	0.181 ***	3.964	0.160 ***	3.578	0.581	1.720
Explanatory Variables							
1	INVOLMT			−0.076 **	−2.076	0.863	1.159
2	INVOLB			−0.076 **	−1.985	0.799	1.252
3	FCEO			−0.057	−1.581	0.909	1.100
4	FOUNGEN			−0.136 ***	−3.588	0.812	1.231
5	MANCOMM			0.087 **	2.334	0.835	1.198
	F		6.450 ***	7.192 ***			
	R ²	0.103		0.151			
	Adjusted R ²	0.087		0.130			
	Changes in R ²	-		0.048			

(1) Standardized regression coefficients. (2) t-values (3) Non-Standardized Beta. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3 presents the estimates from the two models. An initial look at the results confirms that a number of aspects have an influence on environmental performance.

With respect to the variables related to family involvement, a higher percentage of family employees, and a higher percentage of family TMT members have a significant and negative influence on environmental performance. These results confirm hypotheses H1 ($-0.076, p < 0.05$) and H2 ($-0.076, p < 0.05$). However, H3, which predicted that the top executive being a family member would have a negative effect on environmental performance could not be accepted ($-0.057, n.s.$).

The analysis of the ownership characteristics linked to the family generation in control reveals that founder-generation family firms have a negative impact on environmental performance, as predicted by H4 ($-0.136, p < 0.01$).

With regard to the corporate governance structure, H5 ($0.087, p < 0.05$), which predicted that the existence of a management committee has a positive effect on environmental performance, is also confirmed.

8. Discussion

This study evaluates how the distinctive features of the family firm affect its environmental performance, which is crucial for organizational sustainability, according to the postulates of the NRBV [5]. While there have been some theoretical contributions that analyse certain family firm specific advantages and disadvantages when it comes to pursuing environmental objectives and developing related actions [16], the empirical evidence is limited and fragmented.

Existing empirical papers focus on unveiling the family firm effect on environmental outcomes as an aggregate impact (e.g., [18,20]) or focusing on specific, isolated characteristics, such as long-term orientation (e.g., [114]), transgenerational succession (e.g., [15]) and family influence in management (e.g., [51]). To the best of our knowledge, the study by Samara et al. [115], using a qualitative technique, is the only one that analyses different combinations of family management and control mechanisms for environmental purposes. There are no corresponding empirical quantitative studies that attempt an analysis of family firm heterogeneity related to management, ownership, and corporate governance characteristics. The results confirm previous studies which point out that the effect of family firm management, ownership and governance structures on environmental performance is complex and depends on various factors [28].

On the one hand, this study shows that family involvement in the business and in management has a negative impact on environmental performance. Family control of the operations and the management structure is shown to act as a brake on the achievement of environmental objectives, probably because of the more conservative behaviour of the family firms [60], which can lead resistance to change and innovation, undermining pro-environmental outcomes [28]. Employing family members in management positions and throughout the organization even when they are not sufficiently qualified could also hamper the entrepreneurial spirit [16]. Characteristics such as entrenchment and nepotism are common in family firms; if prevention mechanisms are not in place, consequences could include the hiring of insufficiently qualified family members.

The existence of a family CEO has a non-significant effect on the achievement of environmental outcomes, confirming previous research on the ambiguity or the lack of significance of this effect (e.g., [22]) for bringing about a reduction of materials and energy consumption and mitigating the environmental impact. Although a family CEO will always take care of a business that can be passed onto future generations [14], at the same time certain characteristics such as long tenure can be a source of inertia and resistance to organizational change that compromises pro-environmental initiatives [16].

Founder-generation family firms also have a negative relationship with environmental performance. This could be explained by the fact that family founders are more conservative and can thus be expected to limit investment in innovation and environmental projects that are by nature uncertain, and require diverse industrial and technological capabilities [54,81].

Intergenerational succession should make the firm more inclined towards risk-taking, enhancing management's commitment to assigning greater levels of resources to seize environmental opportunities [116,117].

However, the existence of a management committee has a positive impact on environmental performance. Therefore, this corporate governance mechanism seems to correct the conservative tendencies and risk aversion that could divert resources away from environmental aims [86].

This finding points to the need for further analysis of the results. The tourism sector is composed of a large number of micro and small enterprises, whose main priority is ensuring the financial well-being and security of the family, even in the short-term, and retaining control over the strategic direction of the firm. These objectives can dissuade the firm from pursuing non-economic objectives. However, environmental performance can be linked to the perpetuation of the family identity and the maintenance of the family firm's reputation [118]. The impact of family control could thus be contradictory, with the assignment of resources for new value creation and a robust reputation, linked to environmental care.

As for the control variables, this study confirms the positive effect that both size and experience exert on environmental performance, confirming previous results in the literature (e.g., [104]). As expected, more profitable companies also perform better in environmental terms, thanks to the economic resources these firms can devote to pursuing non-economic objectives [20,119]. The results also show that prospector and analyser strategies are the only ones that spur the organization to engage in pro-environmental actions, again confirming the findings of recent studies (e.g., [2]). Furthermore, the results indicate that hotels, tour operators and travel agencies, and transport companies are the most environmentally responsible. Although the tourism sector is notably heterogeneous, research on environmental performance in this sector usually focuses on hotel firms. The introduction of the tourism subsector control variables allows us to study the impact of the different subsectors on environmental performance, thereby accounting for the heterogeneity of the sector. Hospitality, intermediaries and transport companies, which are all dynamic subsectors, continually face new challenges that they must address to remain competitive, such as those related to sustainability. In this regard, they must adapt their operations and strategy to comply with new regulations and to meet growing consumer demand for a greater commitment to sustainability [2].

Overall, this research has interesting academic implications for the literature on family firms and environmental performance. It contributes to the previous literature by analysing the influence of several different family firm characteristics, which are a prominent source of heterogeneity among family firms, on environmental performance in the tourism sector—one of the most polluting sectors [35]. In this sense, our analysis shows the importance of accounting for the heterogeneity of characteristics that define family firms when analysing their environmental performance, as this performance varies according to the business design determined by family involvement in the business and in management, and ownership and corporate governance structures. Furthermore, our research empirically demonstrates the importance of having corporate governance structures such as a management committee, which can help family businesses to broaden their focus beyond the family-centred vision and objectives, toward other goals that impact society as a whole, such as environmental improvement. The study thus shows that it is worth considering these variables in any analysis aimed at explaining the environmental performance achieved by a family business. Therefore, our results actively contribute to the debate on the governance antecedents of environmental practices and impacts (e.g., [115,120]), and to the growing literature on the professionalization of the management and corporate governance structures of family businesses (e.g., [121]).

In an effort to avoid ivory tower thinking [39], valuable practical implications can be drawn from the findings of this study. Indeed, they can help guide owning families on the best way to orient their business to prevent or overcome obstacles that undermine

the accomplishment of their environmental goals. In turn, it is crucial that they achieve those goals to ensure the renewal and ultimate survival of the firm. Having a management committee is found to be key for improving family firms' environmental performance.

The presence of such a committee seems to have the effect of including more people in the company in decision-making and planning roles [86], thus enabling discretion, transparency and a more strategic approach to accumulating the necessary intangible skills and competencies for achieving environmental aims. The management committee provides the firm with a more professional managerial approach, endowing it with a vision that looks beyond the family to focus on how to incorporate more innovative practices that also protect the environment [48]. A managerial committee could also encourage non-financial or CSR reporting in these family firms [122], which would have important implications for the firm's environmental approach and formal practices, and its efforts to address stakeholders' concerns.

Conversely, in order for family firms to have a positive influence on the achievement of environmental outcomes, they must prevent a high level of family involvement in operations and management. Family firms should foster the potential for behaviour and reasoning guided by competence and professional logic rather than affective ties. Therefore, the decision as to who should occupy positions of management responsibility in the family business must always be guided by criteria of meritocracy and professionalism, avoiding nepotistic behaviours that could jeopardise the long-term viability of the family business.

The firm's founder tends to be a strategic innovator with primarily economic motivations. Descendant-controlled firms have more opportunities to adopt a more open innovation model, sharing leadership with employees outside the family sphere, and targeting strategy at the most profitable opportunities to create value for the firm and for its shareholders (while also caring for the environment), regardless of whether or not they align with the founder's original guiding principles. The succession of the family firm can also be seen as a factor that brings 'new blood' into the business, allowing for the implementation of strategic changes aimed at environmental sustainability [85].

9. Conclusions, Limitations and Directions for Future Research

This study analyses how some of the most relevant characteristics of family firms impact environmental performance. Most of the previous literature has opted to analyse family firms as an aggregate construct, and those studies that do account for family firm heterogeneity do not consider the specific characteristics of the ownership, management and corporate governance structures that create certain advantages and when it comes to achieving environmental aims.

The main elements that undermine the improvement of environmental performance in the family firm are (a) certain designs of management structure that entail a high degree of involvement of family members in both the management bodies and the actual business operations, which tend to give rise to conservative strategic positioning that blocks entrepreneurship; and (b) an ownership structure linked to the founders, which also perpetuates resistance to change and risk aversion. A management committee is found to be a powerful tool for preventing or alleviating these negative effects, as it enables the absorption and creation of new knowledge, fostering debate and transparency, which in turn have an impact on the development of formal practices that support environmental sustainability.

Our conclusions should be extrapolated with caution as they refer to a specific industry; therefore, while they are valuable for the Spanish tourism industry, further studies could try to confirm their relevance to other sectors and even countries. Our data are cross-sectional in nature, meaning we cannot infer causality from our results. Although cross-sectional designs are common in family business studies, we need longitudinal data to be able to corroborate the causal inferences.

Regarding the measurement instruments, the scales were based on managerial self-assessment, a technique which has attracted some criticism; however, we have tried to

minimize the problems of this methodology by taking a rigorous approach to data gathering, as reflected in the reliability and validity measures.

According to the results of the study, future research should control for the moderating effect that the size of the family firm could exert on the relationship between family firm characteristics related to its ownership, management and corporate governance structures and environmental performance.

There is also a need to better understand the functioning of the management committee and other corporate governance mechanisms of family firms, what decisions they make and how they actually exercise their power to set environmental guidelines. It would also be interesting to examine how the members of these corporate bodies are selected and what their strategic objectives are. The analysis of the specific composition of the managerial committee could thus help explain family firm heterogeneity in terms of environmental management and performance.

Another aspect that could impact the environmental performance of family firms is their location in tourist destinations. The identity of the family firm within its community and its territory has been shown to influence family firms' sensitivity to stakeholder requirements [123] and environmental practices [124]; it would be interesting to control for the moderating effect of this variable on the relationships proposed in this study.

Finally, future studies could also seek to unveil the heterogeneity of the tourism industry itself, by performing a multi-level study contrasting and comparing the model effects for different tourism subsectors.

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