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# The Impact of ESG Performance on the Value of Family Firms: The Moderating Role of Financial Constraints and Agency Problems

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**Abstract:** The main objective of this research is to shed more light on how ESG may be seen as a valuable investment for family firms. We study the impact of ESG performance on the value of family firms by considering the moderating role played by financial constraints and agency costs. Using an international sample of 254 firms that belong to the 500 largest family-owned firms worldwide over the period 2015–2021, we report that the overall ESG score is positively associated with firm value. Among the three ESG components, we find that environmental and social performances have a positive and statistically significant impact on firm value. However, we find no evidence of any significant effect of governance score on firm value. More importantly, we also find that the impact of ESG performance on firm value is lower under the presence of financial constraints and agency costs.

**Keywords:** ESG performance; family firms; financial constraints; agency problems



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## 1. Introduction

Family firms play a crucial role in the world economy, providing significant contributions to globalization and to the health of the economy [1,2]. In 2021, the largest 500 family firms generated USD 7.28 trillion in revenues, representing the third largest economic contributor in the world in terms of revenue after the economies of the USA and China, and also proving to be one of the mayor employers worldwide. While a considerable body of literature has investigated how family firms behave and perform differently from non-family firms [3,4], this study examines ESG performance and family firm value for a unique sample which compromises big family firms from 38 different countries. Secondly, heterogeneity has become a prominent topic among scholars in recent years [5]. However, research gaps remain unexplored, for instance, how this heterogeneity in key features of family firms may affect their corporate policies' performance [2,5]. To contribute to closing this gap, we posit three major research questions. The first question to answer in this study is whether or not big family firms show either a positive or negative association between ESG score and firm performance. We take into account the ESG performance of family firms because it is a strategic choice made by the business to increase firm value.

The second question is how each one of the components of ESG performance (environmental, social, and governance) affects the value of family businesses, situated at the intersection of the literature on family firms and ESG investing. Finally, we would like to answer how two important variables related to the heterogeneity of family businesses moderate the relationship between ESG performance and firm value. These dimensions are financial constraints and agency problems.

Theoretically, it is unclear whether family firms are more likely than non-family firms to implement ESG practices. Different theoretical frameworks suggest different perspectives

on the role of family ownership on this issue [6]. According to the socioemotional wealth (SEW) perspective, family managers tend to assign a high priority to non-financial goals such as identity, resource extension and the preservation of a positive family image and reputation [7]. Adopting ESG practices in this situation may be a way to conform to societal norms and achieve high social standing in the community [8]. Moreover, following the approach of stewardship theory [9], family managers can be seen as custodians of the firm. They will therefore favor long-term investments and be more likely to seek broader societal goals such as environmental improvement.

Family firms, however, could be less committed to adopt and implement ESG strategies if "amoral familism" [10] or the dark side of SEW prevails [11,12]. Moreover, kinship might exacerbate conflicts [13–16], to the point in which family firms could avoid risk and invest little in innovative products or technologies, including those necessary to improve, for example, the company's environmental footprint [14].

Our findings reveal that ESG performance has a favorable and statistically significant association with the value of family firms when taking into account a sample of the top family businesses at global level. Furthermore, financial constraints and agency problems moderate this relationship. Among both of them, agency costs are clearly more predominant in moderating the relationship between ESG and the value of family businesses.

This paper contributes to family firm literature in at least three avenues. Firstly, to the best of our knowledge, this is the first article to investigate the relationship between ESG performance and firm value focusing on an international sample of large family firms. We present new evidence to explain how this relation is measured, particularly in large family firms, since the results are not conclusive regarding this relationship. Additionally, we analyze the score of the three dimensions of ESG (environmental, social and governance responsibility), to observe if each one of them either create or destroy firm value. Secondly, we introduce two potential sources of heterogeneity (financial constraints and agency costs) to obtain a better understanding about the impact of ESG on the performance of family firms. Thus, we investigate the moderating effect of financial constraints and agency problems on the relationship between ESG score and firm performance. Finally, this study provides recommendations to investors and companies to make them aware of the role of ESG on the performance of family businesses, thus, contributing to research on the green and sustainable development of family firms, which, as we will show, is consistent with maximizing the shareholder wealth.

The remainder of the paper is organized as follows. Section 2 presents the literature review and the research hypotheses. Section 3 describes the sample and the methodology. Section 4 shows the empirical results, and finally, Section 5 describes the conclusions, limitations and implications of the study for future research.

## 2. Literature Review

This study relates to the rapidly growing literature on the impact of ESG activities on the performance of family firms. In this line, a strand of literature has examined the link between ESG factors and firms' financial performance, providing contrasting results [17]. However, the relationships between family firms, ESG performance and family firms' value remain underexplored [18].

### *2.1. ESG Performance and Firm Value*

From a theoretical point of view, the neoclassical theory suggests that the relationship between ESG and financial performance is uniformly negative [19]. The underlying and reasonable assumption is that the returns of ESG activities do not exceed their costs and, as [20] points out, the maximization of owners' profits is the firm's only social responsibility. Consequently, recent studies show that firms documenting engagement in environmentally friendly activities or winning green awards exhibit negative abnormal returns [21,22]. These findings suggest that investors punish the firm for what they perceive as costly investments [16]. Similarly, other studies have found a nonsignificant association

between ESG score and financial performance [23–25]. For instance, [24] examine the performance of all socially responsible investments (SRI) funds worldwide and show that the risk-adjusted returns of SRI funds are not statistically different from the performance of conventional funds.

Another set of studies argue that ESG practices, particularly corporate social responsibility (CSR), may positively impact firm performance [26,27]. According to the stakeholder theory [28], it is reasonable to expect that socially responsible firms can better satisfy the interests of external stakeholders (e.g., debtors, employees, customers, and regulators), allowing for more efficient contracting [29] and opening new opportunities for further growth and risk diversification [30]. For instance, [31] examined the relationship between ESG performance and firm value in 53 countries, providing evidence of a positive impact of ESG activities on firm value, particularly in countries with lower financial development. Thus, the authors contend that ESG initiatives aid in reducing market failures brought on by institutional gaps.

Along the same lines, several studies have reported a positive link between ESG and nonfinancial performance indicators, such as reduction in material and energy consumption [32], motivating employees and creating a bonding mechanism for them [33], enhancing customer loyalty [34,35], advertising effectiveness and brand reputation [36,37], reduction of regulatory burden [28,38], and overall customer satisfaction [39,40].

### *2.2. ESG Performance and Family Firm Value*

On the association between family-owned firms and the adoption of ESG practices, conflicting forecasts have been made. On the one hand, based on the SEW framework, family firms could be more eager to commit to environmental protection to preserve their family's affective endowment (Indeed, the latter is made up of several dimensions, condensed in the FIBER acronym: family control; identification of members with the firm; binding social ties; emotional attachment, and renewal of family bonds through succession). Overall, this could represent a prosocial and positive stimulus [12], as they can inspire family firms to demonstrate care for their stakeholders. In line with this argument, [11] stated that family businesses would be more inclined to perform social behavior that benefits external stakeholders (such as pollution prevention practices), to obtain greater reputational benefits. Analogously, [41,42] highlighted that family businesses tend to pursue non-financial goals to the benefit of the stakeholders of the firm to build and preserve corporate reputation.

The stewardship theory is a different viewpoint that argues that family ownership and ESG are positively related [9]. Since family managers identify with their firm [43], they tend to pursue the continuity of the family business, which they oversee with the intention of growing and passing it down to the following generation of family members. In this interpretation, family managers will tend to make long-term investments and establish long-lasting relationships with stakeholders. Therefore, strengthening social binding ties can make them more inclined to contribute to wider societal interests through improving environmental and CSR [44].

Regarding theoretical research, there is no consensus on whether family businesses are more likely to adopt ESG policies than non-family businesses. In this sense, different strands of literature provide diverse views about the potential influence of family ownership on this matter [6]. For instance, under the SEW approach, family firms' top management teams tend to prioritize non-financial goals which aim to enhance aspects such as family identity, image and reputation [7].

However, if family economic interests prevail over social wellness ("amoral familism", [10]) or the dark side of SEW predominates, family-owned firms could be unwilling to carry out ESG policies [12]. Furthermore, family-centric behavior prioritizing kindship might worsen relationship conflicts within the controlling family, which may lead firms to avoid risky and innovative investments such as those required for implementing environmental strategies [14,15]. Thus, these assertions imply that, under certain conditions, family

firms would be reluctant or do not have the proper incentives to adopt and implement ESG practices. In summary, the association between ESG performance and family firm value might be either positive or negative.

**Hypothesis 1.** *The relationship between ESG activities and family firm value may go either way.*

According to the SEW approach, businesses can meet their social obligations and improve their CSR among their stakeholders by implementing socially and environmentally responsible business practices [8]. Along the same lines, the stewardship theory considers family firms' managers as guardians of the firm, who must safeguard the firm's long-term success and community wellness, for instance, through environmentally responsible investments [9]. These arguments suggest that family firms tend to adopt ESG practices to strengthen their reputation with different stakeholders.

In terms of environmental responsibilities, most extant literature has focused on examining the ESG environmental performance of large family businesses with operations mainly in developed countries [44,45]. For instance, [45], using a sample of US-listed firms, reported that family-owned firms implement and exhibit a better environmental performance relative to non-family firms to preserve their SEW. In addition, this relationship is unaffected by the type of family ownership. More recently, [44] used a sample of European firms to examine whether the environmental performance in family firms is conditional upon the firm size and the involvement of family members in the top management team. The author finds that the positive effect of family ownership on environmental performance is stronger for small companies with a diversity of family and non-family members in the management team. We postulate the following hypothesis:

**Hypothesis 2.** *There is either a positive or a negative relationship between environmental performance and firm value.*

A group of authors focused on the role of family firms who invest in social activities to pursue their SEW and maximize shareholders' value (Cennamo et al., 2012). Other studies contend that family businesses cannot devote their attention to organizing CSR (Burak and Morante, 2007; Morck and Yeung, 2004). Even some authors argue that opportunism emerges in public family firms when they reach certain positions [6]. Berrone et al. (2012) proposed that the differences in those results are based in the distinction family firms may make along their life. They could prioritize maintaining their good name and reputation above having their SEW be overshadowed by their dominance and influence within the organization.

Regarding empirical evidence associated with the social pillar of ESG, [7] explored the relationship between family ownership and the several dimensions of CSR. Based on a sample of the largest US firms, the study reports that family ownership positively impacts the diversity, employee, and product dimensions of CSR but negatively impacts the community component.

While there is a growing body of literature about the relationship between family firms and the components of ESG in developed economies [46], the empirical evidence in emerging economies is less voluminous. As documented by previous studies [1,47,48], emerging economies are characterized not only by low economic and financial development but also by the low quality of the institutional environment. As [14] pointed out, the institutional environment may also influence the attitude and willingness to carry out ESG practices, particularly those related to the environment. A key factor comprising the institutional environment is regulatory pressure exerted by internal and external stakeholders such as the government [49]. Regarding social responsibility performance and firm value, we do not know the direction of the relationship between them. We considered the following hypothesis:

**Hypothesis 3.** *There is either a positive or a negative relationship between social performance and firm value.*

Firm's corporate governance performance indicates the governance structure of the firm which includes the rights and responsibilities of the management.

We were unable to locate any empirical data demonstrating a connection between the ESG governance score and family firm value. Most of the literature concentrates its attention on the relationship between governance parameters such as the role duality of chairperson and CEO; stock ownership on firm performance; board size and board meeting and firm performance. The findings are inconclusive; [50] found a positive and significant relationship between ownership concentration and firm performance, while [51] did not find a significant relationship between ownership structure and firm performance. Regarding ownership concentration and debt-equity ratio, [52] showed this to be the drivers of firms' productivity, [53] found a negative and significant relationship between controlling shareholder board membership and firm performance for Indian firms, and [54] reported a non-significant association between family members on the corporate board, independent non-executive directors, board size, director ownership and firm performance. In terms of the duality of chairman and CEO, [55] found a negative association between role duality and a large board with performance, [56] reported a negative relationship between the board of directors' meeting and firm performance, and no relationship between board size and firm performance, and [57] found a negative association between board size and firm value. As a result, there is no clear evidence linking ESG (governance performance) with company value. Our hypothesis is as follows:

**Hypothesis 4.** *There is either a positive or a negative relationship between governance performance and firm value.*

### *2.3. ESG Performance and Family Firms Value: The Role of Agency Problems*

Agency theory deals with the relationship between two parties, the principal (owner) and the agent (manager). This theory was developed by [58–60]. Agency theory examines the relationship from two perspectives: behavioral and structural. According to the theory, agents will act in a way that maximizes their personal welfare, which will typically be detrimental to the principal (owner) [58,59,61,62]. Therefore, principals will develop mechanisms to monitor the agent in order to mitigate the opportunistic behavior and better align the parties' interests [58,63–65].

In general, firms may face two types of agency problems regarding managers and shareholders (Type I and Type II). In the case of family firms, since there is no separation between ownership and control, companies may not be susceptible to Type I agency problems [59,64,65]. However, [66–68] challenge this logic. They found that family firms face Type I agency problem. Family ownership provides an effective monitoring on the management to mitigate opportunistic behaviors which may reduce the shareholder wealth.

The authors of [69] proposed the agency problem Type II, which consists of the conflict that arises from the principal-principal relationship, i.e., between the major owner and minority shareholders. Other authors also described an owner-owner agency problem [70–75]. The family, being the major shareholder (principal), has incentives to extract wealth from the minority shareholders (principal) for their own benefit (opportunistic behavior). This problem is more intense in family firms with highly concentrated ownership, strong control on corporate governance and tied management of the firm. Under these circumstances, incentives are high to maximize the wealth of the family group [76]. A well-known mechanism to redistribute wealth is through free cash flow [77]. In this scenario, the majority owners might invest any excess cash flows for their own gain, lowering the wealth of the minority owners.

In practice, we can observe some family firms who mitigate agency costs, since for them it is either economically convenient or because they increase their SEW. In other

cases, the agency problem will persist due to the families' opportunistic behavior. There is evidence in both directions. For example, [78] reported that family firms are less efficient than nonfamily firms due to unique agency costs (altruism and family entrenchment). On the other side, for example, [79] demonstrated that having family members on the board lowered employee turnover and acted as a family dispute mediator, both of which saved agency expenses. We believe that there is a high probability of having firms with agency costs (Type II) due to the variety of firms with high ownership concentration in the sample (the major owner in average holds 35.2% of the stocks).

**Hypothesis 5.** *Family firms that have agency problems will exhibit a lower impact of ESG performance on firm value.*

### *2.4. ESG Performance and Family Firms Value: The Role of the Financial Constraint*

Regardless of whether a SEW or stewardship position predominates in the family business, it faces financial restrictions to maintain ESG activities. In fact, family businesses must find funding sources that optimally maximize the value of the firm and the wealth of the family in order to finance ESG activities such as pollution prevention techniques or to contribute to broader societal interests through improving environmental and corporate social responsibility.

The financial literature offers conflicting evidence on how a family firm manages its financial constraints. On the one hand, due to information gaps between outside investors and the family's primary owners, family firms are more constrained financially [80], avoiding the company receiving excessive financing. In turn, family controlling shareholders can prefer long-term debt since they are concerned with reducing their personal risk exposure and avoiding loss of control [81]. On the other hand, compared to non-family firms, there is less asymmetric information and fewer agency issues between family owners and creditors because of the family's long-term commitment and significant ownership in the company. These characteristics make it easier for the family firms to access the capital market, with less dependence on internal funds [82]. In turn, family firms can use intangible assets like family reputation as collateral to obtain external finance sources [83].

However, considering the relationship between ESG activities and performance in family firms, boosting ESG activities which face financial restrictions would result in a drop in the performance of the family firm. On the other hand, if ESG initiatives have a negative impact on the family business's performance, such financial constraints would make it less successful. Therefore, we put forward the following hypothesis:

**Hypothesis 6.** *Family companies that carry out ESG activities and face more financial restrictions present lower performance compared to those family firms which are less financially restricted.*

## 3. Materials and Methods

### *3.1. Sample Selection*

Based on the Ernest and Young (EY) and University of St. Gallen Family Business Index (https://familybusinessindex.com/, accessed on 15 May 2022), we employed an international sample of the 500 largest family-owned firms worldwide over the period 2015–2021. This study used annual data from Thompson Reuters Eikon, a reputed dataset, at the firm level. Specifically, we obtained financial and market information from this database. We also collected the environment, social and governance disclosure scores (ESG) for each firm from Thompson Reuters Eikon. We removed financial firms because their accounting scheme was different from that of firms in non-financial industries. We eliminated private family firms, because we did not count with market capitalization which was needed to compute the proxy for Tobin's Q. The final sample consisted of 274 publicly traded firms, and after deleting firm-year observations with missing values and extreme

outliers (984 observations were eliminated), our final sample consisted of 968 firm-year observations. This sample includes thirty-eight nations from every continent in the world.

### *3.2. Empirical Strategy*

To analyze the relationship between ESG activities that potentially affect family firms' performance, we proposed the following Equation (1):

$$\begin{array}{c} Tobin's\ Q_{it} = \beta_0 + \beta_1 ESG\_Score_{\ i,t} + \beta_2 Size_{i,t} + \beta_3 ROA_{i,t} + \beta_4 Leverage_{i,t} \\ + \beta_5 Tangibility_{i,t} + \beta_6 OWN_{i,t} + \gamma_t + \varepsilon_i \end{array} \quad (1)$$

To examine the role of financial constraints and agency costs on the relationship between ESG performance and value of family firms, we expanded Equation (1) by separately including each one of our proxy variables for financial constraints and agency costs, as is shown in the following Equation (2):

$$\begin{array}{c} Tobin's\ Q_{it} = \beta_0 + \beta_1 ESG\_Score_{\ i,t} + \beta_2 FinancialConstraints_{\ i,t} + \\ \beta_3 AgencyCosts_{\ i,t} + \beta_4 ESG\_Score_{\ i,t} * FinancialConstraints_{\ i,t} + \\ \beta_5 ESG_{Score\ i,t} * AgencyCosts_{\ i,t} + \beta_6 Size_{i,t} + \beta_7 ROA_{i,t} + \beta_8 Leverage_{i,t} + \\ \beta_9 Tangibility_{i,t} + \beta_{10} OWN_{i,t} \gamma_t + \varepsilon_i \end{array} \quad (2)$$

We used a proxy for Tobin's Q (Market to Book Value of Assets) as our main dependent variable, firm value. As shown in [84], we defined Tobin's Q as the book value of total assets minus the book value of equity, plus the market value of equity, divided by the book value of total assets. Tobin's Q is a variable that measures firm value based on the market value, which is related to the future value of the firms. Our main explanatory variables were the overall ESG score and its component environmental, social and governance scores (ESG_Scores). Based on [84], the environmental disclosure score (Environment) reflects the ability of firms to entirely avoid risks associated with the environment using the ecosystem. The social disclosure score (*Social*) measures the degree of whether or not firms make a continuous effort to maintain confidence and loyalty to employees, customers, and communities. Specifically, the social disclosure score reflects the reputation of firms, which is known as the main determinant affecting firm value in the long term. The governance disclosure score (*Governance*) reflects the ability that firms have to regulate the management and responsibility through the management control process and system, and through the board of directors from the long-term perspective. For example, this measure considers the function of the board of directors, the structure of directors, the compensation policy and the rights of shareholders.

Turning to the control variables, we followed previous literature [85–87]. Leverage is a proxy variable that considers the impact of financial distress costs, which is measured as total debt over total assets. ROA is a proxy for returns on assets measured as the earnings before interest and tax divided by total assets. Size is a proxy variable for firm size, measured as the natural logarithm of total assets. $\gamma_t$ represents the time fixed effect and $\varepsilon_i$ is the error term.

We estimated Equation (1) using the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). Based on previous papers, we chose this approach because it offers several key benefits. First, data panel methodology has certain advantages due to the ability to control by means of individual heterogeneity. In other words, this methodology allowed us to control unobservable heterogeneity and provides estimators with a superior efficiency compared with other estimation methods [88,89]. Second, the presence of endogeneity may cause inference errors, which may invalidate the consistency of fixed effects estimators [90]. The standard way to solve this problem is the instrumentalization of variables. Thus, we lagged all independent variables and used them as instruments in differences for those equations in levels, just as we used the estimators system from [91,92].

The consistency of the estimators depends on the absence of second-order serial autocorrelation of the remainders and on the validity of instruments. Thus, in our estimations,

we present a statistic test of the absence of a second-order serial autocorrelation (2). To prove the instruments' validity, we used the Hansen test on overidentifying restrictions under the null hypothesis of no correlation between instruments and the error term.

## 4. Results

### *4.1. Descriptive Statistics*

Table 1 shows the main descriptive statistics for the variables used in the study. The mean (standard deviation) value of Tobin's Q is 1.246 (0.846) and the minimum and maximum values are 0.069 and 4.991, respectively. These results would indicate a high heterogeneity in terms of financial performance among family firms at an international level. Turning to the explanatory variables, the mean (standard deviation) value of the overall ESG score (*ESG*) is 3.801 (0.580), which ranges from a minimum value of 0.116 to a maximum value of 4.531. Regarding the main explanatory variables, the mean (standard deviation) values of *Environment*, *Social*, and *Governance* are 3.739 (0.895), 3.832 (0.683), and 3.679 (0.636), respectively, indicating that the social disclosure score has the highest mean value, followed by the environment and governance disclosure scores, respectively. Thus, these findings allow us to infer that family firms are deeply committed to their social reputation, i.e., on making continuous efforts to maintain confidence and loyalty to employees, customers and communities.

**Table 1.** Descriptive statistics.

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| Qtob | 968 | 1.246 | 0.846 | 0.069 | 4.991 |
| ESG | 809 | 3.801 | 0.580 | 0.116 | 4.531 |
| ESG-E | 767 | 3.739 | 0.895 | −2.130 | 4.587 |
| ESG-S | 812 | 3.832 | 0.683 | −0.420 | 4.587 |
| ESG-G | 811 | 3.679 | 0.636 | −0.021 | 4.545 |
| Size | 968 | 16.058 | 0.989 | 13.881 | 20.077 |
| Leverage | 968 | 0.284 | 0.159 | 0.000 | 0.984 |
| Tang | 939 | 0.623 | 0.185 | 0.073 | 0.982 |
| ROA | 968 | 7.813 | 5.846 | −5.752 | 61.375 |

Notes: This table exhibits selected descriptive statistics for all the main variables of this study. In Section 3, we provide a detailed variable description.

In relation to the control variables, the mean (standard deviation) values of Size, Leverage, Tangibility, ROA and Ownership are: 16.058 (0.989), 0.284 (0.159), 0.623 (0.185), 7.813 (5.846), and 0.352 (0.218) respectively. Additionally, the results exhibited in Table 1 show a high dispersion in the value of these control variables. For instance, ROA ranges from a minimum value of −5.752 to a maximum value of 61.375, and Leverage from 0 to 0.984.

Table 2 displays correlations among the variables of the study. A positive and statistically significant correlation can be observed between Tobin's Q and ESG score. Similarly, Tobin's Q is positively and significantly related to the three ESG components except for *Governance*, which is positive but not statically significant. Additionally, Tobin's Q is negatively and significantly correlated with *SIZE*, *Leverage*, *Tangibility* and *Ownership*. So far, our results suggest that the ESG performance of family firms is positively associated with Tobin's Q.

**Table 2.** Pearson Correlation Matrix. Cambiar a puntos, están con.

| | Qtob | ESG | ESG-E | ESG-S | ESG-G | Size | Leverage | Tang |
|---|---|---|---|---|---|---|---|---|
| ESG | 0.149 | | | | | | | |
| | 0.000 | | | | | | | |
| ESG-E | 0.123 | 0.817 | | | | | | |
| | 0.001 | 0.000 | | | | | | |
| ESG-S | 0.161 | 0.912 | 0.698 | | | | | |
| | 0.000 | 0.000 | 0.000 | | | | | |
| ESG-G | 0.049 * | 0.677 | 0.346 | 0.463 | | | | |
| | 0.167 | 0.000 | 0.000 | 0.000 | | | | |
| Size | −0.045 * | 0.223 | 0.156 | 0.197 | 0.166 | | | |
| | 0.166 | 0.000 | 0.000 | 0.000 | 0.000 | | | |
| Leverage | −0.124 | 0.033 * | −0.033 * | 0.032 * | 0.066 * | 0.075 | | |
| | 0.000 | 0.348 | 0.361 | 0.360 | 0.061 | 0.020 | | |
| Tang | −0.154 | −0.045 * | −0.047 * | −0.034 * | −0.011 * | 0.027 * | 0.326 | |
| | 0.000 | 0.212 | 0.202 | 0.337 | 0.769 | 0.405 | 0.000 | |
| ROA | 0.590 | 0.048 * | 0.048 * | 0.033 * | 0.045 * | −0.001 * | −0.120 | −0.107 |
| | 0.000 | 0.177 | 0.188 | 0.343 | 0.199 | 0.965 | 0.000 | 0.001 |

Notes: This table reports the Pearson correlation coefficients for all the variables. All the variables are explained in detail in Section 3. (*) means non-significant at 10% of confidence level. The rest of the coefficients are significant at 1% level of confidence.

### *4.2. ESG Performance and Value of Family Firms*

We start by reporting a set of panel regressions over the period of 2015–2021 to analyze whether and how ESG performance affects the value of family firms. Table 3 presents the results for the different estimations of Equation (1) considering Tobin's Q as the main dependent variable to proxy for firm value, the main variables of interest (*ESG*, *Environment*, *Social* and *Governance*), and the set of control variables related to the family firms' characteristics. In each specification, we separately included each variable related to ESG performance, including all the control variables. Column 1 shows a positive and statistically significant association between the overall ESG score and Tobin's Q, indicating that a higher overall ESG performance increases family firms' performance. This result supports the idea that ESG performance is considered by the family firms as a mechanism to improve the firm value for all shareholders, and opposes the alternative explanation in which the dark side of SEW prevails. This finding supports the hypothesis 1 (H1) prediction, suggesting the existence of a positive relationship between ESG disclosure scores and family firm value.

**Table 3.** Firm Value and ESG performance.

| Variables | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| ESG | 0.410 *** | | | |
| | (0.076) | | | |
| ESG-E | | 0.238 *** | | |
| | | (0.071) | | |
| ESG-S | | | 0.276 *** | |
| | | | (0.062) | |
| ESG-G | | | | 0.101 |
| | | | | (0.089) |
| Size | −0.129 *** | −0.053 | −0.101 ** | −0.145 *** |
| | (0.041) | (0.049) | (0.040) | (0.053) |

**Table 3.** *Cont.*

| Variables | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Leverage | −0.421 | −0.304 | −0.490 | −0.562 |
| | (0.285) | (0.345) | (0.306) | (0.345) |
| Tang | −1.221 *** | −1.009 *** | −1.351 *** | −1.096 *** |
| | (0.250) | (0.278) | (0.259) | (0.321) |
| ROA | 0.107 *** | 0.110 *** | 0.100 *** | 0.100 *** |
| | (0.009) | (0.010) | (0.010) | (0.012) |
| OWN | −1.075 *** | −1.133 *** | −1.004 *** | −1.201 *** |
| | (0.146) | (0.161) | (0.156) | (0.219) |
| Constant | 1.501 ** | 0.832 | 1.747 ** | 2.925 *** |
| | (0.740) | (0.920) | (0.753) | (0.963) |
| Observations | 786 | 744 | 789 | 788 |
| Number of ct | 247 | 240 | 247 | 247 |
| Year FE | YES | YES | YES | YES |
| F-Test | 783 | 6548 | 948.6 | 221.1 |
| Auto (2) | 0.228 | 0.0622 | 0.243 | 0.288 |
| Hansen-Test | 47.98 | 45.04 | 48.22 | 55.51 |
| Hansen *p*-value | 0.555 | 0.672 | 0.545 | 0.275 |

Note: This table reports the estimation results for Equation (1) using the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). We control for unobservable firm-invariant and time-invariant fixed effects. Hansen-Test and Hansen *p*-Value are the Hansen J statistic and *p*-Value, respectively. Auto (2) is the test of second-order autocorrelation (*p*-Value reported). Robust standard errors are in parentheses. ** and *** denote significance at the 5% and 1% levels, respectively.

From Columns (2) to (4) we separately analyzed the three ESG components that comprised the ESG overall score. Columns (2) shows that environmental performance is positively associated to firm performance, suggesting that family firms with higher environmental performance have higher firm value. In economic terms, this finding indicates that when the ESG environment score increases by one standard deviation, the Tobin's Q rises by 23.8%. In particular, those family firms that promote environmental practices tend to have a higher firm value, which is consistent with environmental choices made with an eye toward increasing shareholder wealth. Nevertheless, this does not preclude the possibility of a result which is consistent with the extended SEW approach which seems to maximize both family SEW and minorities' shareholders wealth. This relationship is statistically significant at the 1% confidence level and confirms H2.

Similarly, Column (3) exhibits that higher social performance results in higher firm value. Specifically, the results suggest that if the social disclosure score increases by one standard deviation, the firm value grows by 27.6%. Therefore, if family firms are deeply committed with their social reputation, i.e., on making continuous efforts to maintain confidence and loyalty to employees, customers, and communities, they can reach a higher firm value. The relationship between family firms' social activities and firm value is the strongest among the three ESG components, being statistically significant at the 1% confidence level. Therefore, we might again be observing the extended SEW approach behind the results. This finding supports the H3 prediction. As was pointed out previously, Column (4) reports that the effect of governance performance on Tobin's Q is positive but not statistically significant at the conventional levels. One potential explanation is that governance decisions are delivered by the market through other channels such as annual reports, because in this instance, the effects of these decisions are already reflected in stock prices without significantly affecting the impact of the governance score on firm value. Thus, the reported result does not support H4.

Concerning the control variables, *ROA* exhibits a positive and statistically significant effect on Tobin's Q in all four columns, suggesting that a higher return on assets of a family firm increases the firm value. In particular, the magnitude of the coefficient estimates on *ROA* ranges from 0.10 to 0.11, with an average value equal to 0.105, and is statistically significant at 1% confidence level. In that case, an increase of 10 percentage points in return on assets would lead to an increase by 1.0 percentage points in Tobin's Q. In all estimations,

the Hansen and Arellano-Bond AR (2) tests show that our instruments are appropriate and that there is no detectable second-order serial correlation.

We took the origin of each country's legal system into account to see how it may affect the results (common law, French civil law, German law, Scandinavian law and others). This characteristic has been shown in the finance literature to be relevant, since the type of law reflects the degree in which minority shareholder rights are protected (La Porta et al., 1997). The highest protection is under Common law and the lowest is under French civil law. The fact that we could expect a higher incentive to wealth redistribution from minorities to the main shareholders in the case of French civil law and ESG score might not be significantly associated to firm value. We also added a proxy for contestability as a measure of corporate governance; the greater it is, the more important the family firm is, as it helps to reduce agency costs arising from the relationship between family owners and minority shareholders. The results in Table 4 show that the results of the ESG variables have not changed, and none of the new variables added in the analysis are statistically significant (All the results reported in the rest of the tables of this research do not change when we include these additional control variables. The results are available upon the request from the authors).

**Table 4.** Firm Value and ESG performance (Robustness).

| **Variables** | **(1)** | **(2)** | **(3)** | **(4)** |
|---|---|---|---|---|
| ESG | 0.416 *** | | | |
| | (0.084) | | | |
| ESG-E | | 0.230 *** | | |
| | | (0.080) | | |
| ESG-S | | | 0.284 *** | |
| | | | (0.068) | |
| ESG-G | | | | 0.075 |
| | | | | (0.090) |
| Size | −0.182 *** | −0.088* | −0.156 *** | −0.151 ** |
| | (0.057) | (0.052) | (0.054) | (0.060) |
| Leverage | −0.154 | −0.247 | −0.311 | −0.187 |
| | (0.350) | (0.358) | (0.354) | (0.372) |
| Tang | −1.101 *** | −0.922 *** | −1.184 *** | −1.148 *** |
| | (0.269) | (0.268) | (0.273) | (0.320) |
| ROA | 0.112 *** | 0.113 *** | 0.104 *** | 0.107 *** |
| | (0.011) | (0.012) | (0.011) | (0.013) |
| OWN | −0.954 ** | −1.019 *** | −0.957 ** | −1.725 *** |
| | (0.401) | (0.392) | (0.431) | (0.502) |
| Constant | 0.060 | 0.051 | 0.063 | 0.104 |
| | (0.184) | (0.173) | (0.179) | (0.159) |
| Civil | 0.158 | 0.133 | 0.170 | 0.125 |
| | (0.187) | (0.174) | (0.180) | (0.155) |
| Common | 0.159 | 0.096 | 0.165 | 0.098 |
| | (0.249) | (0.248) | (0.236) | (0.224) |
| Scandinavian | 0.237 | 0.188 | 0.246 | 0.172 |
| | (0.207) | (0.191) | (0.203) | (0.187) |
| Contestability | −0.036 | −0.020 | −0.062 | −0.191 |
| | (0.112) | (0.118) | (0.119) | (0.125) |
| Constant | 2.096 * | 1.320 | 2.446 ** | 3.652 *** |
| | (1.068) | (1.186) | (1.011) | (1.168) |
| Observations | 786 | 744 | 789 | 788 |
| Number of ct | 247 | 240 | 247 | 247 |
| Year FE | YES | YES | YES | YES |

**Table 4.** *Cont.*

| Variables | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| F-Test | 2339 | 1924 | 39,891 | 150.6 |
| Auto (2) | 0.540 | 0.147 | 0.516 | 0.627 |
| Hansen-Test | 45.64 | 46.79 | 45.56 | 52.57 |
| Hansen *p*-value | 0.445 | 0.399 | 0.449 | 0.204 |

Note: This table reports the estimation results for Equation (1) using the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). We control for unobservable firm-invariant and time-invariant fixed effects. Hansen-Test and Hansen *p*-Value are the Hansen J statistic and *p*-Value, respectively. Auto (2) is the test of second-order autocorrelation (*p*-Value reported). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Next, we investigated if our findings are influenced by the family firms' level of ESG performance. To do this, we split the sample by high and low ESG score. Table 5 reports the results for the different estimates of Equation (1) by classifying the level of ESG overall score and each one of its three components (*Environmental*, *Social*, and *Governance*) in two groups (high and low) of each family firm. In Table 5, Columns (1), (3), (5) and (7) report the regression results for the subsample called high (greater than the sample median) in terms of the variable *ESG*, *Environment*, *Social* and *Governance*. Similarly, Columns (2), (4), (6) and (8) report the regression results for the subsample, where the variable *ESG*, *Environment*, *Social* and *Governance* is lower than the sample median.

**Table 5.** Firm Value and ESG Performance (High and Low ESG).

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|---|---|---|---|---|---|---|---|---|
| Variable | High | Low | High | Low | High | Low | High | Low |
| ESG | 1.283 *** | 0.425 *** | | | | | | |
| | (0.233) | (0.095) | | | | | | |
| ESG-E | | | 0.800 *** | −0.007 | | | | |
| | | | (0.160) | (0.037) | | | | |
| ESG-S | | | | | 1.371 *** | 0.154 ** | | |
| | | | | | (0.184) | (0.063) | | |
| ESG-G | | | | | | | 0.666 *** | 0.042 |
| | | | | | | | (0.237) | (0.085) |
| Size | −0.121 *** | 0.013 | −0.084 * | −0.125 *** | −0.151 *** | −0.060 * | −0.158 *** | −0.040 |
| | (0.039) | (0.045) | (0.048) | (0.032) | (0.032) | (0.030) | (0.045) | (0.060) |
| Leverage | 0.104 | 0.107 | −0.208 | 0.172 | −0.755 ** | −0.059 | −0.129 | −0.803 *** |
| | (0.194) | (0.210) | (0.351) | (0.183) | (0.306) | (0.119) | (0.317) | (0.272) |
| Tang | −1.134 *** | −0.440 ** | −1.097 *** | −0.191 | −1.125 *** | −0.475 ** | −1.721 *** | −0.183 |
| | (0.249) | (0.169) | (0.251) | (0.228) | (0.261) | (0.190) | (0.386) | (0.208) |
| ROA | 0.109 *** | 0.104 *** | 0.105 *** | 0.074 *** | 0.094 *** | 0.088 *** | 0.102 *** | 0.059 *** |
| | (0.012) | (0.009) | (0.011) | (0.009) | (0.012) | (0.006) | (0.010) | (0.009) |
| OWN | −1.712 *** | −0.406 *** | −1.606 *** | −0.408 *** | −1.605 *** | −0.382 ** | −0.844 *** | −0.963 *** |
| | (0.197) | (0.132) | (0.162) | (0.138) | (0.174) | (0.153) | (0.275) | (0.130) |
| Constant | −2.707 ** | −0.860 | −0.742 | 2.840 *** | −1.540 | 1.483 ** | 1.436 | 1.528 |
| | (1.212) | (0.937) | (0.784) | (0.585) | (1.007) | (0.593) | (1.040) | (1.066) |
| Observations | 497 | 289 | 501 | 243 | 500 | 289 | 476 | 312 |
| Number of ct | 177 | 111 | 178 | 98 | 181 | 115 | 189 | 126 |
| Year FE | YES | YES | YES | YES | YES | YES | YES | YES |
| F-Test | 624.5 | 394.8 | 489.2 | 792.9 | 2685 | 739.2 | 239.5 | 1101 |
| Auto (2) | 0.00581 | 0.641 | 0.116 | 0.833 | 0.915 | 0.0651 | 0.471 | 0.990 |
| Hansen-Test | 45.07 | 39.57 | 45.99 | 39.27 | 47.46 | 33.09 | 47.27 | 46.13 |
| Hansen *p*-value | 0.594 | 0.444 | 0.635 | 0.325 | 0.536 | 0.696 | 0.503 | 0.508 |

Notes: Table 5 reports the results for the different estimates of Equation (1) by classifying the level of ESG overall score and each one of its three components (environmental, social, and governance) in two groups (high and low) for each family firm. Equation (1) is estimated using the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). We control for unobservable firm-invariant and time-invariant fixed effects. Hansen-Test and Hansen *p*-Value are the Hansen J statistic and *p*-Value, respectively. Auto (2) is the test of second-order autocorrelation (*p*-Value reported). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

The results in Column (1) and (2) of Table 5 show a positive and statistically significant effect of the overall ESG score on Tobin's Q high and low levels, but this effect is more pronounced when firms exhibit a higher ESG performance. Specifically, the coefficient estimate is higher in both magnitude and statistical significance. For instance, the results suggest that one standard deviation change in high levels of *ESG* leads to a change in Tobin's Q of 128.3 percentage points (Column 1), while a similar change in low levels of *ESG* leads to a change of 42.5 percentage points (Column 2). Similarly, Column (3) of Table 5 shows a positive and statistically significant effect of environmental performance on Tobin's Q, and for the lower levels of environmental performance (Column 4), the results do not show any significant relationship. Column (5) and (6) exhibit a positive and statistically significant effect of social activities on Tobin's Q, which is again higher when firms have higher social performance. Finally, Column (7) and (8) present a positive effect of governance practices on firm value, but this effect is only statically significant when firms exhibit a higher ESG governance score. It can be concluded that at high levels of ESG performance (general and specific scores) there is a positive and significant relationship between them and Tobin's Q. In general, the results are asymmetric in terms of the impact of high and low ESG on firm value, clearly showing a greater impact on the higher level of ESG (overall performance and particular performance). This might be explained by market expectations regarding the ESG score. If investors anticipate that a company's ESG score will be below the median with a high degree of probability, then it should have a significant impact on firm value when the ESG score is reported. On the other hand, if the market responds favorably to the stock market by announcing a higher ESG score than what investors were anticipating for some corporations, the firm value will rise as a result.

### *4.3. ESG Peformance and Value of Family Firms under Agency Costs and Financial Constraints*

We wanted to capture two characteristics in which family firms may differ due to their heterogeneity. The authors of [5] state that "Family firm heterogeneity is the range of categorical and/or variational difference(s) between or among family firms at a given time or across time". The literature has considered different characteristics regarding heterogeneity, such as succession, SEW, family ownership and management, family-based capital, firm size and growth, board of directors, internationalization, entrepreneurial behavior and employee relations. Financial restrictions and agency costs are two problems that are not specifically linked to SEW and family management practices (free cash flow). Clearly, both have a relevant impact on family decisions. First, free cash flow might be present in family firms where it is more important to satisfy restricted SEW (only obtaining benefits for family shareholders), but if they are looking at an extended SEW approach then we will observe a benefit for stakeholders, most probably making decisions to mitigate agency costs.

Regarding financial constraints, it is conceivable for the company to use a little of its budget to fund ESG investment projects. As a result, the firm's value cannot be maximized to the point where ESG may have no effect on firm value. In this line, we wanted to examine whether the effects of ESG practices on firm value are conditional upon family firms' financial characteristics, such as the level of agency costs and financial constraints. In terms of agency costs we considered a measure for free cash flow [77]. This measure was based on the estimation of optimal cash holdings proposed by [93]. Then, if a firm has a median of cash holdings above the cash holdings estimated through the methodology of [93], then it will be classified as a firm with free cash flow problems [94]. Recent studies suggest that the adoption and performance of ESG practices are related to firms' financial characteristics, such as financial constraints (e.g., [95]). Based on this empirical evidence, we hypothesize that the impact of ESG performance on firm value should be conditional on the level of agency costs and financial constraints. The KZ-Index established by [96] is the most widely used indicator of financial restriction in the literature to measure the degree of financial constraint faced by a firm. The higher the index, the more financially constrained the firm [94].

The findings for the various estimations of Equation (2), which uses Tobin's Q as a stand-in for firm value, are shown in Table 6. This first column of this Table reports a negative and statistically significant (at 5%) relationship between free cash flow (excess cash holdings) and firm value. In column 2 we report the results for the interactive variable called *ESG* × *Excess Cash Holdings*. Both coefficients are statistically significant at 5% level of confidence. The sum of the coefficients is 0.409 (−0.09 + 0.499), and firms without such free cash flow problems have a coefficient of 0.499, meaning that the impact of ESG on firm value is lower for firms that have agency problems. This result confirms H5.

**Table 6.** Firm Value and ESG performance: The role of Financial Constraints and Agency Problems.

| Variables | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Agency Problems (Excess Cash holdings) | −0.278 ** | | | |
| | −0.108 | | | |
| Agency Problems (Excess Cash holdings) ∗ ESG | | −0.090 ** | | |
| | | −0.037 | | |
| Financial Constraints (KZ -Index) | | | −0.629 *** | |
| | | | −0.114 | |
| Financial Constraints (KZ- Index) ∗ ESG | | | | −0.141 *** |
| | | | | −0.024 |
| ESG | 0.350 *** | 0.499 *** | 0.299 *** | 0.418 *** |
| | −0.09 | −0.112 | −0.094 | −0.099 |
| Size | −0.122 ** | −0.274 *** | −0.166 *** | −0.264 *** |
| | −0.05 | −0.056 | −0.054 | −0.057 |
| Tang | −1.543 *** | −1.888 *** | −0.750 ** | −1.159 *** |
| | −0.288 | −0.321 | −0.291 | −0.297 |
| ROA | 0.092 *** | 0.087 *** | 0.106 *** | 0.100 *** |
| | −0.01 | −0.012 | −0.01 | −0.009 |
| OWN | −1.194 *** | −1.324 *** | −1.298 *** | −1.136 *** |
| | −0.203 | −0.236 | −0.18 | −0.185 |
| Leverage | −0.356 | −0.587 * | 0.02 | −0.31 |
| | −0.29 | −0.343 | −0.35 | −0.286 |
| Kaplan-Zingales Index | | | | 0.000 |
| | | | | −0.001 |
| Excess Cash holdings | | 0.111 | | |
| | | −0.766 | | |
| Constant | 2.121 ** | 5.212 *** | 2.763 *** | 4.329 *** |
| | −0.989 | −0.954 | −0.982 | −0.863 |
| Observations | 786 | 485 | 786 | 522 |
| Number of ct | 247 | 193 | 247 | 209 |
| Year FE | YES | YES | YES | YES |
| F-Test | 274.3 | 172.9 | 314.5 | 455 |
| Auto (2) | 0.169 | 0.134 | 0.173 | 0.33 |
| Hansen-Test | 57.93 | 44.28 | 42.4 | 41.25 |
| Hansen *p*-value | 0.298 | 0.544 | 0.54 | 0.709 |

Note: This table shows the estimation results for Equation (2) using the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). We controlled for unobservable firm-invariant and time-invariant fixed effects. Hansen-Test and Hansen *p*-Value are the Hansen J statistic and *p*-Value, respectively. Auto (2) is the test of second-order autocorrelation (*p*-Value reported). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Regarding financial constraints, the sum of the coefficients of KZ-Index variable and the interactive variable (*ESG* × *KZ-Index*) is 0.277 (−0.141 + 0.418) and firms without such financial constraints have a coefficient of 0.418, meaning that the impact of ESG on firm value is lower for firms with higher financial constraints, corroborating H6.

### *4.4. Robustness Check*

Following [94] we checked the robustness of previous results using *Asset Turnover Ratio* [97,98] to proxy for free cash flow. In our case, firms with an Asset Turnover Ratio (ATR) above (below) median classified as low (high) agency cost. Then, to capture the firms with agency costs we created a dummy variable which takes the value of 1 if the ATR is below the median, and 0 otherwise. On the other hand, *Leverage* is employed as a proxy of financial constraints; the higher the leverage, the more intense the financial constraint. We proxied this problem by a dummy variable that takes the value equal to one if the *Leverage* is above the median, and 0 otherwise. As can be observed in Table 7 (Column 1), ATR shows a negative and statistically negative association with firm performance. Furthermore, if we include the interactive variable named *ATR* × *ESG* (Column 2) we find a negative and statistically significant (at 5%) relationship between this variable and the firm value. The impact of ESG performance in the firm value is still positive and statistically significant (at 1%) but lower (0.312–0.081) than other firms with lower agency costs (0.312).

**Table 7.** Firm Value and ESG performance: The role of Financial Constraints and Agency Problems (Robustness).

| Variables | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| Agency Problems (Asset Turnover Ratio) | −0.190 ** | | | |
| | −0.081 | | | |
| Agency Problems (Asset Turnover Ratio) ∗ ESG | | −0.081 ** | | |
| | | −0.034 | | |
| Financial Constraints (Leverage) | | | −0.322 *** | −0.991 *** |
| | | | −0.119 | −0.352 |
| Financial Constraints (Leverage) ∗ ESG | | | | 0.011 |
| | | | | −0.041 |
| ESG | 0.286 *** | 0.312 *** | 0.408 *** | 0.300 *** |
| | −0.092 | −0.102 | −0.088 | −0.093 |
| Size | −0.063 | −0.107 * | −0.123 ** | −0.131 *** |
| | −0.046 | −0.062 | −0.05 | −0.044 |
| Tang | −1.361 *** | −1.442 *** | −1.182 *** | −1.244 *** |
| | −0.241 | −0.305 | −0.282 | −0.236 |
| ROA | 0.095 *** | 0.096 *** | 0.094 *** | 0.078 *** |
| | −0.011 | −0.012 | −0.012 | −0.012 |
| OWN | −1.114 *** | −1.228 *** | −0.918 *** | −0.782 *** |
| | −0.162 | −0.219 | −0.187 | −0.168 |
| Leverage | −0.048 | −0.206 | | |
| | −0.33 | −0.4 | | |
| Asset Turnover Ratio | | −0.14 | | |
| | | −0.121 | | |
| Constant | 0.935 | 2.029 | 1.541 * | 2.282 *** |
| | −0.723 | −1.252 | −0.904 | −0.864 |
| Observations | 786 | 786 | 786 | 786 |
| Number of ct | 247 | 247 | 247 | 247 |
| Year FE | YES | YES | YES | YES |
| F-Test | 3409 | 333.3 | 358.4 | 930.8 |
| Auto (2) | 0.217 | 0.206 | 0.327 | 0.248 |
| Hansen-Test | 52.52 | 54.16 | 49.41 | 48.04 |
| Hansen *p*-value | 0.454 | 0.355 | 0.339 | 0.351 |

Notes: This table displays the estimation results for Equation (2) but using an alternative proxy variable for our indicators of financial constraints and agency problems, respectively, as it is reported in Table 6. We used the dynamic panel system Generalized Method of Moments estimator (GMM-Sys). Robust standard errors are in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Firms with higher leverage have lower performance (significant at 1%). Table 6 (Column 4) shows the results for the interactive variable called *ESG* × *Leverage*; we were not able to find a significant relationship between this variable and firm performance. As a result, we are unable to claim that companies with strong ESG performance are less valuable when they are under more financial pressure.

## 5. Conclusions

We report a positive relationship between ESG general score and firm value. Turning to the three ESG score components, we find that environmental and social performance have a positive and statistically significant impact on firm value. However, we find no evidence of the effect of governance performance on firm value. We also find that the impact of ESG performance on firm value is lower under the presence of agency costs and financial constraints. After doing a robustness check for these last results, we can conclude that agency costs show a robust result. However, financial constraints appear to have a weak impact on the relationship between ESG performance and firm value.

In terms of its implications for policy, this study adds to the discussion of whether mandatory ESG should be implemented globally. We demonstrate a positive relation between the value of a family business and its ESG score, which could act as a guide for large family businesses that must make mandatory ESG investments. We also infer the need to count with financial resources to invest in ESG. If some firms are not able to have sufficient resources, it will not be possible to have enough ESG to maximize firm value. There is an increasing need to measure the effectiveness of the activities related to ESG in firms. This could aid in establishing sensible policies.

This study is not free of limitations. First, it would have been interesting to compare the results with a similar sample of non-family firms to observe if the findings are different between both groups. Second, since the finding for ESG governance is not significant, it seems reasonable to find out why this happens. For example, someone may argue that corporate governance mechanisms are more visible to the market and therefore they are already included in stock prices, resulting in the ESG performance not adding much information to have an impact on firm value. Third, there are other sources of heterogeneity in family firms that can be studied.

From a practical standpoint, considering the findings of this study on agency problems, it seems reasonable to advise firms to develop more mechanisms to regulate agency problems in order to maximize the benefits of ESG activities and thus raise the firm value. Otherwise, we may be facing opportunistic behavior from the side of the main shareholders, who may extract wealth from minority shareholders.

Future study comparing family and non-family enterprises over a longer time horizon will be intriguing, due to the ongoing debate regarding their low correlation, in order to compare the results to those obtained using alternative ESG scores. In terms of heterogeneity of family firms, approaches such as restricted SEW and extended SEW may provide other constructs to examine the relationship between ESG performance and firm value. This analysis might examine financial decisions that affect corporate value. In terms of agency problems, it is important to determine why some businesses experience more agency issues than others.

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