

Corporate Social Responsibility of Family-controlled Firms in Taiwan

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ABSTRACT

This study considers the multidimensional concept of Corporate Social Responsibility (CSR) and investigates how family-controlled firms behave in terms of various CSR measures. In addition to the broad CSR measure, this study takes into account the environmental, social, and governance pillars as well as category scores under the three pillars. Based on 810 observations of publicly listed firms in Taiwan during 2010 and 2019, the findings show that, supporting the expropriation view, family firms underperform non-family firms in terms of CSR. This negative effect of family control on CSR also holds for the environmental, social, and governance performance scores. In relation to the category scores, this study finds that family control negatively affects the firm's initiatives related to resource use, emission, workforce, human rights, community, product responsibility, management, shareholders, and CSR strategy.

Keywords: Family firm; Corporate social responsibility; Environment; Social; Governance.

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1 INTRODUCTION

The prevalence of family firms has been documented around the world (Zachary, 2011).¹ Not only in the developed western market economies, International Family Enterprise Research Academy (2003) points out that family businesses also represent the majority of businesses in Asia. Family firm research has also been growing over the last decade; however, it remains an emerging field of research. Among the research areas covered in the literature on family firms are succession planning, governance, interpersonal family dynamics, as well as strategic management and organizational change (Benavides-Velasco *et al.*, 2013). Few studies have also investigated the strategic decision-making of family firms, such as how family and non-family firms are involved in their corporate social responsibility (CSR) activities (Berrone *et al.*, 2010; El Ghoul *et al.*, 2016; Biswas *et al.*, 2018; Kuttner, Feldbauer-Durstmüller and Mitter, 2020).

¹ “Family firm”, “family business”, and “family-controlled firm/business” are interchangeably used throughout this article.

As expectations of stakeholders regarding the growing awareness of environmental, social and governance (hereafter, ESG) issues continue to intensify, CSR is becoming an increasingly crucial component of modern business. Although CSR initiatives often require firms to make significant investments (Brammer and Millington, 2008; Wang and Bansal, 2012; Hou, 2018), firms are expected to focus not only on improving their performance and profitability but also on taking on other responsibilities, such as those towards the society and the environment.

Prior studies contend that family firms possess distinctive characteristics and behavior. That is, family firms have greater concerns regarding their reputation, prestige and positive family image. Thus, to preserve their socioemotional wealth (SEW), family firms are more likely to show greater commitment concerning CSR activities and towards the satisfaction of the needs of stakeholders compared to their non-family counterparts (Zellweger *et al.*, 2013; López-González, Martínez-Ferrero and García-Meca, 2019). Berrone *et al.* (2010) analyze family firms' environmental performance using a sample of 194 U.S. firms from 1998 to 2002 and find that based on socioemotional wealth perspective, family firms have a better environmental performance than their non-family peers. Focusing on the social performance of S&P 500 firms, Bingham *et al.* (2011) argue that in terms of social initiatives, family and non-family firms vary. Namely, family firms display more positive social initiatives than their non-family counterparts.

The agency theory contends that the agency problem between shareholders and managers is reduced for family-controlled firms; nevertheless, the agency problem between minority shareholders and controlling shareholders may arise as controlling shareholders pursue personal gains and expropriate minority shareholders. In contrast to the SEW view, the expropriation view suggests that controlling families can utilize their voting rights to divert resources from CSR activities for other projects or other personal interests (El Ghouli *et al.*, 2016). Hence, prior studies on the relationship between family control and CSR draw inconsistent findings. To shed light on the issue, this study extends the line of research and investigates the effect of family control on various measures and categories of CSR.

While the number of studies on the relationship between family control and CSR has increased, research that covers the multidimensional concept of CSR is still limited. CSR is a complex concept consisting of various dimensions and categories, ranging from ecological to employee relations and governance issues. Many prior studies focus only on the aggregate measure of CSR or on a single dimension of CSR, such as environmental management or philanthropy (e.g., Berrone *et al.*, 2010; Sharma and Sharma, 2011; Campopiano, De Massis and Chirico, 2014; Labelle *et al.*, 2018). Accordingly, this study is distinct from the existing literature as it fills this gap by investigating the differing effects of family firms on various categories of CSR in addition to the broad measure. This study firstly employs a broad measure of CSR using data from Refinitiv database, reflecting firm's overall CSR performance, commitment and effectiveness. Second, this study analyzes whether family control affects the 3 (three) pillars of the broad measure, namely Environmental, Social and Governance indices. Third, this study examines the effect of family control on 10 (ten) specific categories under the three pillars.

This study also varies from the previous studies in that it focuses on firms listed on the Taiwan Stock Exchange (TWSE), specifically from 2010 to 2019, whereas most studies have been conducted on firms in the United States or Western Europe. Taiwan is an ideal

setting to investigate the issue for several reasons. Firstly, while most of the economies of Asian countries can be characterized as developing, Taiwan has recently given up its 'developing economy' status in the World Trade Organization. Consequently, this leads to an increase in audience in the evaluation of local firms' reputations from the viewpoint of global standards and expectations. Secondly, family businesses play a key role and represent the cornerstones of development in the country as many of Taiwan's large enterprises are composed of family businesses (Yeh, Lee and Woidtke, 2001; The Economist, 2018). Thirdly, Taiwanese governments and regulators continue to promote and drive up the social responsibility of Taiwanese firms. The Taiwanese governments and regulators play a key role by making it mandatory for the TWSE and Taipei Exchange (TPEX)-listed companies with common stock of more than NT\$10 billion in addition to listed companies in the food, financial and chemical sectors to produce CSR reports. The threshold was then revised in 2015 to require companies with paid-in capital reaching NT\$5 billion to compile CSR reports starting in 2017 (Taiwan Stock Exchange, 2015; CSRone, 2019). Different standards and norms concerning CSR, accordingly, are constantly emerging.

The persistent effort has yielded considerable results. The number of companies providing CSR reports in Taiwan rose significantly. As of 2018, approximately 29% out of the total of 1651 TWSE/TPEX-listed companies have published sustainability reports (CSRone, 2019). CSRone (2019) also reveals that 42.7% of Taiwanese companies have disclosed their negative issues and plans for improvements. Various organizations have also recognized Taiwan's persistent effort to improve its non-financial information disclosure and ESG performance. According to CSRone (2019), Taiwanese companies ranked first in energy conservation and carbon reduction across Asia's largest companies. Moreover, Taiwan is ranked 20th globally and third in Asia for its sustainable development performance in the year 2018 (Taiwan Stock Exchange, 2019).

Using 810 firm-year observations between 2010 and 2019, this study examines whether family-controlled firms have better CSR performance than their peers and finds that family firms exhibit lower overall CSR performance. In the same way, family firms have lower environmental, social and governance pillar scores, supporting the expropriation view. In relation to the detailed categories of CSR, family control has a negative impact on resource use, emission, workforce, human rights, community, product responsibility, management, shareholders and CSR strategy.

The contribution of this paper is threefold. First, this study extends previous research and attempts to provide insights into the relationship between the control type of a firm and its CSR performance. Particularly, this study investigates how family firms behave toward CSR. Second, while prior studies on family firms and social responsibility focus primarily on observations in Western Europe and North America where institutional environments are more developed and regulations are better enforced (Berrone *et al.*, 2010; Block and Wagner, 2014; Kuttner, Feldbauer-Durstmüller and Mitter, 2020), it is unclear whether the results hold outside of these regions where institutions are less strong and incentives for expropriation are stronger. Accordingly, this study focuses on Taiwan where family firms are prevalent and have played a key role in the economic development of the nation (Yeh, Lee and Woidtke, 2001; The Economist, 2018). This study contends that, in contrast to prior findings in countries with stronger institutions such as the U.S., the evidence for a positive relationship between family control and CSR may not hold in

countries with relatively weak investor protection and strong incentives for expropriation. Third, to better understand and obtain a holistic picture of the relationship, this study uses a comprehensive measure of CSR. Specifically, this study examines the pillars of CSR and their detailed categories in addition to the broad measure.

The rest of the paper is organized as follows. Related literature and hypotheses are presented in Section 2. Data and methodology are discussed in Section 3. Section 4 presents the results and discussion, while Section 5 concludes the paper.

2 RELATED LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 Corporate Social Responsibility

The concept of CSR began to take hold in the 1970s. Carroll (1979) defines CSR as society's economic, legal, ethical as well as discretionary expectations of an entity. In 1991, Carroll then developed a graphic model of CSR in the form of a pyramid to make CSR less vague. According to Carroll (1991), economic responsibility is the foundation of the pyramid. Therefore, to support the expectations of shareholders and other stakeholders and continue to exist, firm has to be able to maximize its profits. Also, firm has to comply with laws and regulations while making a profit. The third component, ethical responsibility comprises standards, norms, or practices that are expected of a firm although not codified into law. Finally, the discretionary or the philanthropic responsibility. This refers to the actions taken by a firm to make a contribution to society in order to improve the quality of life. Hence, CSR is concerned with the building of a strong relationship between firms and their stakeholders.

CSR, according to McWilliams and Siegel (2001), is described as "actions that appear to further some social good, beyond the interests of the firm and that which is required by law." Accordingly, prior studies point out that firms that expend resources and effort on social responsibility are more trustworthy (e.g., Kim, Park and Wier, 2012; Gao, Lisic and Zhang, 2014; Lins, Servaes and Tamayo, 2017). Prior, Surroca and Tribó (2008) contend that the positive image built through corporate social responsibility initiatives may help firms gain support from various stakeholder groups. On the other hand, as CSR activities often require large investments and may reduce profits (Walley and Whitehead, 1994; Friedman, 2007; Wang and Bansal, 2012), the traditional economic trade-off view holds that the costs that a firm incur are significant and may exceed the financial benefits gained from the initiatives. Whereas the main responsibility of a firm is toward its shareholders, to conduct business, increase profits and maximize financial return for shareholders (Friedman, 2007).

2.2 CSR in Taiwan

As CSR becomes a growing global trend, Taiwan has strived to stay in line with international practices and has taken measures to respond to the challenge. In 2010, Corporate Social Responsibility Best Practice Principles, as well as the Ethical Corporate Management Best Practice Principles for TWSE/TPEX-listed firms, were launched. The initiatives were taken not only to make listed firms more aware of the sustainability issues but also to guide the listed firms to put CSR into practice and implement integrity management measures (Taiwan Stock Exchange, 2018). For TWSE and TPEX-listed firms with common stock of over NT\$10 billion, CSR reporting is mandatory. CSR

reporting is also mandatory for listed firms in the chemical, financial and food sectors, also firms whose food and beverage sales account for more than 50% of their overall revenue.

Taiwan and its regulators continue to promote CSR and have been taking proactive actions to improve its reporting standards as CSR is increasingly becoming a crucial component of a business. The NT\$10 billion threshold for mandatory CSR reporting was later revised to include listed firms with common stock worth at least NT\$5 billion to prepare and file CSR reports (Taiwan Stock Exchange, 2015; CSRone, 2019). The approach is expected to accelerate the pace at which Taiwanese firms adopt CSR initiatives. As of 2018, approximately 29% of TWSE/TPEX-listed companies have published sustainability reports (CSRone, 2019). Moreover, one of the most influential Taiwanese magazines, Global Views Monthly (GVM) established the CSR award to commend local firms for their great achievement in promoting social responsibility. GVM thoroughly assesses firm's CSR performance environmental performance, social performance, corporate governance, CSR strategy, stakeholder engagement and information transparency aspects. The winners of the award may then set new standards for integrating environmental, human rights, consumer, ethical and other CSR-related aspects into their business operations and strategies.

2.3 Family firm

Family firm is a unique form of organization as a result of the involvement and interaction between the members of the family and the business. Involvement and interaction can take various forms, such as through ownership, governance and management. For this reason, family firms may behave and perform differently compared to non-family firms (Chrisman, Chua and Steier, 2005). Due to their prevalence, family firms have attracted interest from scholars exploring how these businesses can differ from their non-family counterparts on several dimensions, such as succession planning, governance, strategic management, innovation and internationalization (Benavides-Velasco, Quintana-García and Guzmán-Parra, 2013).

Family firm involves management, control, or ownership-related issues. A family firm is generally characterized as a firm in which the founder or members of the founding family hold top managerial positions, serve on the board, or own a large proportion of the company's share (Anderson and Reeb, 2003; Ali, Chen and Radhakrishnan, 2007; Chen, Chen and Cheng, 2008; López-González, Martínez-Ferrero and García-Meca, 2019). In the presence of controlling shareholders and active involvement, the agency problem that arises from the separation of ownership and management (Type I) is less severe. The Type II agency problem, on the other hand, could emerge. That is, between the controlling and non-controlling shareholders. In this regard, large and controlling shareholders may pursue interests that may not be aligned with the interests of other shareholders.

Prior studies have recognized the existence and relevance of family firms around the world (Berrone *et al.*, 2010; Benavides-Velasco, Quintana-García and Guzmán-Parra, 2013; Kuttner, Feldbauer-Durstmüller and Mitter, 2020). This also holds for Taiwan. Family firms are a prevalent business structure in Taiwan, moreover have played an important role in the economic development of the country (Yeh, Lee and Woidtke, 2001; The Economist, 2018). According to the publication by The Economist (2018), family firms account for 70% of all publicly listed firms in the country, compared to 33% for

China and 40% for Hong Kong. However, Taiwan has relatively less-developed legal and regulatory institutions as compared to Western European and North American countries (Berrone *et al.*, 2010; Block and Wagner, 2014; Dinh and Calabrò, 2019; Kuttner, Feldbauer-Durstmüller and Mitter, 2020). Hence, studying family firms in Taiwan can enable a better understanding of CSR issues in Asia.

2.4 CSR in family firms

2.4.1 The socioemotional wealth view

Prior studies have shown that non-family firms and family firms vary not only in their general behaviors but also in their CSR involvement (Block and Wagner, 2014). When a manager acts as an agent and runs a firm on behalf of the principal, he is responsible for spending the firm's resources that maximize shareholder value. However, in the case of family firms, non-economic benefits may be recognized as an important goal. Berrone *et al.* (2010) argue that family-controlled firms are more likely to respond to the demand of their stakeholders to preserve their socioemotional wealth (SEW). Gómez-Mejía *et al.* (2007) refer to SEW as the non-financial aspects that satisfy family owners' affective needs. That is identity, ability to exercise influence and preservation of the family dynasty. In other words, family firms are more likely to be risk-averse when it comes to risks to their socioemotional wealth, although this poses a risk of poor performance.

Members of the family firms generally view the business as an extension of themselves. As a result, they are more likely to prevent circumstances that could result in unfavorable views of their organization as it may affect their family name, personal wealth and well-being (O'Boyle, Rutherford and Pollack, 2010). Thus, family firms tend to respond to institutional pressure and have better social responsibility practices to preserve a positive image in the public domain (Berrone *et al.*, 2010; Bingham *et al.*, 2011). Although there is no clear economic benefit in the activities undertaken, family firms value the socioemotional reward that it implies. This has led to prior studies suggesting that family and non-family firms behave differently in terms of CSR and that family-controlled firms are more likely to engage in CSR than non-family firms (Berrone *et al.*, 2010; López-González, Martínez-Ferrero and García-Meca, 2019).

On the grounds of the SEW view, scholars contend that family firms are more proactive in acting as good stewards. More specifically, family firms are more socially responsible as they tend to exhibit higher levels of CSR (Berrone *et al.*, 2010; Cordeiro *et al.*, 2018; López-González, Martínez-Ferrero and García-Meca, 2019). Cordeiro *et al.* (2018) suggest that the preservation of the SEW influences family firms' strategic decisions, such as CSR investments. As the family members invest heavily in the firm and that firms are often emotionally linked to the family owners, they have an incentive to engage in CSR activities that would improve firm's reputation and social capital. Adopting an international approach, López-González, Martínez-Ferrero and García-Meca (2019) find that in line with the SEW view, family firms have better CSR performance. They further suggest that family firms carry out their activities in a socially responsible manner and show greater commitment to external and internal stakeholders in order to preserve their SEW and the firm's viability.

Using a sample of 194 U.S. firms, Berrone *et al.* (2010) investigate the environmental performance of publicly listed family and non-family firms and find that the conformity to environmental demands is higher for family-controlled firms than for non-family

counterparts. Although there is no evidence that substantive compliance serves their economic interests, family-controlled firms are more likely to respond to environmental pressures due to the socioemotional reward. Thus, family firms display better environmental performance. Similarly, based on the study of U.S. firms, Block and Wagner (2014) find that family ownership is positively associated with environment-related aspects of CSR. By examining firms listed in the S&P 500, it was also found that family firms are positively related to social performance (Bingham *et al.*, 2011) as family firms value personal and family values such as credibility, honesty, industriousness, law-abiding and quality, more than merely good economic results (Koiranen, 2002). As a result, studies find that diversity-, employee-, product- and community-related initiatives are higher for family firms than those of non-family counterparts (Bingham *et al.*, 2011; Block and Wagner, 2014; López-González, Martínez-Ferrero and García-Meca, 2019). The findings support the SEW view that family firms take into account employees and the local community when making decisions. The following hypothesis is proposed based on the above arguments:

Socioemotional wealth hypothesis: Family firms are more likely to engage in CSR activities.

2.4.2 The expropriation view

Since large ownership interests by controlling families suggest stronger management and monitoring, fewer agency conflicts between principal and agent are expected for family-controlled firms (Jensen and Meckling, 1976; Anderson and Reeb, 2003). Nevertheless, it gives rise to Type II agency problem, which is the principal-principal agency conflict that involves the minority shareholders and the controlling families. With regard to CSR, the expropriation view suggests that controlling families may use their voting rights to divert resources away from CSR programs for other projects or other personal interests.

Grow, Hamm and Lee (2005) and Linthicum, Reitenga and Sanchez (2010) further argue that social responsibility requires substantial investment and is expensive. Accordingly, it is not consistent with the firm's goal to maximize returns. As opposed to the SEW view, if the family firm is more concerned with its financial return due to undiversified shares in the firm, it is expected that the family firm will spend less on social activities that do not increase personal benefits. Prior studies consequently have shown that family firms have lower CSR performance than non-family firms. Among others, Barnea and Rubin (2010) find that for U.S. corporations, the relationship between insider ownership and firm's CSR rating is negative. Based on a study of European multinational firms, Dam and Scholtens (2013) find a negative association between ownership concentration and CSR and conclude that concentrated ownership is in line with worse CSR policies. Supporting the expropriation hypothesis, El Ghouli *et al.* (2016), Kim and Lee (2018) and Labelle *et al.* (2018) find that family firms have lower CSR performance than non-family firms.

Turning to specific CSR categories, El Ghouli *et al.* (2016) suggest that family firms have worse environmental performance and social performance. Cruz *et al.* (2014) show that family firm and employee dimension of CSR have a negative association. In comparison to studies that have shown that family firms appear to demonstrate a strong sense of personal responsibility toward employees, Cruz *et al.* (2014) argue that family firms tend to deter social actions related to internal stakeholders (i.e., employees). While Hirigoyen

and Poulain-Rehm (2014) find no significant difference between family and their non-family counterparts in their environment, community engagement, human resources, human rights and business behavior, family control and corporate governance have a negative relationship. Similarly, Kim and Lee (2018) find that family firms performed lower on corporate governance. The discussion above leads to the following second alternative hypothesis:

Expropriation view hypothesis: Family firms are less likely to engage in CSR activities.

3 RESEARCH METHOD

3.1 Data and sample

Data for the present study were collected from two databases, namely Taiwan Economics Journal (TEJ) and Refinitiv (previously Thomson Reuters Financial and Risk Business). The present study considered information for all non-financial firms listed on the Taiwan Stock Exchange (TWSE) from 2010 to 2019. Of 9,296 firm-year observations available on TEJ database, this study excludes observations with missing information. A full sample of 810 firm-year observations is available for the empirical analysis.

To measure the dependent variable, *CSR*, the present study uses data provided by Refinitiv. Refinitiv provides information for more than 10,000 firms worldwide. It is intended to measure firm's relative ESG commitment, effectiveness and performance using publicly reported data which are then audited and standardized (Refinitiv, 2020). The present study obtained firm control type and other relevant financial data from TEJ database.

3.2 Measurement of variables

3.2.1 CSR

Refinitiv offers a transparent and objective measure of a firm's CSR performance based on reported data. The database combines 10 categories that make up three ESG pillars and formulates the final CSR score (*CSR*). The value of *CSR* varies between 0 and 100. In addition to minimizing the use of material, energy and water as well as strengthening supply chain management, the environmental pillar reflects a firm's commitment and performance to reduce emission in manufacturing and operational processes as well as environmental costs and burdens for its customers. The social pillar measures a firm's effectiveness and commitment toward its workforce, customers and society. Namely, by offering a healthy and safe working environment as well as development opportunities, preserving diversity, delivering quality goods and services for its customers and by its commitment to becoming a good citizen. Lastly, the governance pillar measures firm's effectiveness in following the best practice corporate governance principles including fair treatment of shareholders and how the firm communicates the incorporation of the economic, social and environmental aspects into everyday decision-making processes.

In addition to the overall *CSR* score, this study also investigates the three pillars of ESG (*Env*, *Soc*, *Gov*) and the various categories which make up the three pillars. The environmental pillar covers resource use, emissions and innovation (*Env_RU*, *Env_E*, *Env_I*). The social pillar includes workforce, human rights, community and product

responsibility (*Soc_W*, *Soc_HR*, *Soc_C*, *Soc_PR*). The governance pillar includes management, shareholders and CSR strategy (*Gov_M*, *Gov_S*, *Gov_CSRS*).

3.2.2 Family firm

The classification of control type is based on data provided by TEJ database. Generally, TEJ classifies firms into four control types: government-controlled, family-controlled, management-controlled and widely-held. *Family* takes the value of 1 when a firm is family-controlled and 0 otherwise. TEJ classifies a firm as family-controlled if one of the following conditions is met, namely (1) chairman and CEO roles are held by family members; (2) family accounts for more than 50% of board seating rights while just 33% are reserved for outside directors; (3) at least 3 (three) directors or managers come from the ultimate controlling family and the family holds at least 33% of board seats; (4) the family shareholding ratio exceeds the required controlling shareholder ratio.

3.2.3 Control variables

Following prior studies (Fernández-Kranz and Santaló, 2010; Arora and Dharwadkar, 2011; Dam and Scholtens, 2013; Hirigoyen and Poulain-Rehm, 2014; Rees and Rodionova, 2015; El Ghouli *et al.*, 2016; Biswas *et al.*, 2018; Kim and Lee, 2018; López-González, Martínez-Ferrero and García-Meca, 2019), several control variables are included in the model as they may affect firm's CSR performance. Namely, firm age, leverage, return on assets, firm size, capital intensity, research and development intensity and market concentration.

3.3 Regression model

The following equation is set up to investigate the effect of family firms on CSR.

$$CSR = \beta_0 + \beta_1 Family + \beta_2 Age + \beta_3 Leverage + \beta_4 ROA + \beta_5 Size + \beta_6 PPE + \beta_7 RND + \beta_8 MC + IndustryFixedEffects + YearFixedEffects + \varepsilon$$

where:

CSR = firm's CSR performance measured by the overall CSR performance, environmental performance, social performance, governance performance, and performance related to resource use, emission, innovation, workforce, human rights, community, product responsibility, management, shareholders and CSR strategy. The value of *CSR* ranges from 0 to 100.

Family = dummy variable which takes the value of 1 for family-controlled firm and 0 otherwise.

Age = number of years since listing.

Leverage = ratio of total debt to total assets.

ROA = net income scaled by total assets.

Size = natural logarithm of total assets.

PPE = value of total property, plant and equipment divided by total assets.

RND = ratio of research and development expenses to total assets.

MC = sum of the squared market shares of firms in an industry.

4 RESULTS AND DISCUSSION

4.1 Descriptive results

Table 1 and Table 2 report the descriptive statistics of the variables. Of the full sample as shown in Table 1, 57.28 percent are family firms. This implies that family firms dominate Taiwanese businesses. The average overall CSR performance of the full sample is 36.07. Among the three pillars, social has the lowest mean value (32.25) compared to environmental (40.14) and governance (44.56). With regard to the specific categories of the pillars, the CSR strategy and resource use scores of Taiwanese firms are highest (52.49 and 52.23, respectively). Moreover, on average, firm age (*Age*) is 21.37; leverage (*Leverage*) is 0.47; return on assets (*ROA*) is 0.07; firm size (*Size*) is 18.49; capital intensity (*PPE*) is 0.29; research and development intensity (*RND*) is 0.02; and market concentration (*MC*) is 0.12.

Table 2 is further decomposed into family and non-family firms. The mean value of *CSR* for family firms is 29.38, whereas non-family has a mean value of 45.04. This may suggest that non-family firms generally have better CSR performance. Similarly, non-family firms have higher environmental, social and governance pillar scores as well as detailed category scores. In comparison to non-family firms, family firms are generally older, have lower leverage, higher return on assets, smaller firm size, are less capital-intensive and invest less in research and development. In addition, the *MC* of family firms (0.14) is higher than that of non-family firms (0.09). This suggests that family firms generally operate in less competitive markets, whereas non-family firms generally compete in more competitive markets.

Table 3 shows the correlation among the variables. All reported correlations are statistically significant with a significance level of 5 percent or higher, except for the correlations shown in bold. Table 3 indicates that *Family* is negatively and significantly related to *CSR*, supporting the expropriation view hypothesis. Particularly to the overall *CSR* performance, the three pillars of *CSR* (*Env*, *Soc*, *Gov*), as well as the detailed categories (*Env_RU*, *Env_E*, *Soc_W*, *Soc_HR*, *Soc_C*, *Soc_PR*, *Gov_M*, *Gov_S*, *Gov_CSRS*) with the exception of *Env_I*.

Table 1. Descriptive statistics of Family Dummy

| Variable | Attribute | Frequency | Percentage |
|---------------|------------------|-----------|------------|
| <i>Family</i> | Family firms | 464 | 57.28 |
| | Non-family firms | 346 | 42.72 |
| | Total | 810 | 100.000 |

Table 2. Descriptive statistics

| | Full Sample (n = 810) | | | | Family (n = 464) | | | | Non-family (n = 346) | | | |
|-----------------|--------------------------|-------|-------|-------|---------------------|-------|-------|-------|-------------------------|-------|-------|-------|
| | Mean | SD | Min. | Max. | Mean | SD | Min. | Max. | Mean | SD | Min. | Max. |
| <i>CSR</i> | 36.07 | 24.52 | 1.12 | 92.59 | 29.38 | 22.10 | 1.12 | 84.93 | 45.04 | 24.76 | 4.18 | 92.59 |
| <i>Env</i> | 40.14 | 25.94 | 0.12 | 98.33 | 34.82 | 24.78 | 0.12 | 94.49 | 46.14 | 25.95 | 0.12 | 98.33 |
| <i>Soc</i> | 32.25 | 26.77 | 0.22 | 95.84 | 25.65 | 24.19 | 0.49 | 92.55 | 41.11 | 27.53 | 0.22 | 95.84 |
| <i>Gov</i> | 44.56 | 26.07 | 1.42 | 95.21 | 37.69 | 24.42 | 1.42 | 93.52 | 53.77 | 25.39 | 2.39 | 95.21 |
| <i>Env_RU</i> | 52.23 | 28.78 | 0.21 | 99.57 | 47.55 | 29.17 | 0.21 | 99.57 | 57.09 | 27.59 | 0.44 | 99.38 |
| <i>Env_E</i> | 48.39 | 29.21 | 0.27 | 99.81 | 43.09 | 28.56 | 0.31 | 98.98 | 53.84 | 28.90 | 0.27 | 99.81 |
| <i>Env_I</i> | 48.81 | 23.58 | 0.75 | 98.78 | 47.21 | 23.13 | 5.56 | 98.78 | 50.35 | 23.95 | 0.75 | 98.61 |
| <i>Soc_W</i> | 42.34 | 32.12 | 0.34 | 99.67 | 33.27 | 29.69 | 0.54 | 99.07 | 54.50 | 31.27 | 0.34 | 99.67 |
| <i>Soc_HR</i> | 49.32 | 29.69 | 0.55 | 99.01 | 43.41 | 29.98 | 1.32 | 97.37 | 54.66 | 28.45 | 0.55 | 99.01 |
| <i>Soc_C</i> | 30.70 | 28.92 | 0.36 | 99.86 | 25.72 | 26.99 | 0.37 | 99.86 | 37.33 | 30.10 | 0.36 | 99.67 |
| <i>Soc_PR</i> | 47.55 | 29.62 | 0.38 | 99.17 | 43.04 | 29.43 | 0.38 | 98.65 | 52.24 | 29.14 | 4.26 | 99.17 |
| <i>Gov_M</i> | 46.13 | 30.32 | 0.36 | 99.64 | 38.36 | 28.69 | 0.36 | 99.62 | 56.55 | 29.34 | 1.15 | 99.64 |
| <i>Gov_S</i> | 46.91 | 29.38 | 0.39 | 99.63 | 42.89 | 30.33 | 0.39 | 99.63 | 52.30 | 27.18 | 0.75 | 97.29 |
| <i>Gov_CSRS</i> | 52.49 | 29.51 | 0.76 | 99.29 | 47.35 | 30.24 | 0.76 | 99.24 | 57.08 | 28.12 | 0.90 | 99.29 |
| <i>Age</i> | 21.37 | 12.15 | 2.00 | 57.00 | 23.19 | 13.47 | 2.00 | 57.00 | 18.94 | 9.61 | 2.00 | 56.00 |
| <i>Leverage</i> | 0.47 | 0.18 | 0.08 | 0.98 | 0.45 | 0.17 | 0.08 | 0.98 | 0.49 | 0.19 | 0.08 | 0.91 |
| <i>ROA</i> | 0.07 | 0.09 | -0.33 | 0.96 | 0.08 | 0.10 | -0.33 | 0.96 | 0.06 | 0.08 | -0.33 | 0.47 |
| <i>Size</i> | 18.49 | 1.14 | 15.32 | 21.95 | 18.43 | 1.11 | 15.60 | 21.95 | 18.57 | 1.19 | 15.32 | 21.54 |
| <i>PPE</i> | 0.29 | 0.18 | 0.00 | 0.74 | 0.28 | 0.17 | 0.00 | 0.74 | 0.30 | 0.19 | 0.02 | 0.73 |
| <i>RND</i> | 0.02 | 0.03 | 0.00 | 0.22 | 0.02 | 0.02 | 0.00 | 0.16 | 0.03 | 0.04 | 0.00 | 0.22 |
| <i>MC</i> | 0.12 | 0.12 | 0.02 | 0.88 | 0.14 | 0.14 | 0.02 | 0.88 | 0.09 | 0.06 | 0.02 | 0.30 |

Table 3. Correlation Matrix

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |
|--------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|-------|-------|
| 1. CSR | | | | | | | | | | | | | | | | | | | | | |
| 2. Env | 0.90 | | | | | | | | | | | | | | | | | | | | |
| 3. Soc | 0.94 | 0.78 | | | | | | | | | | | | | | | | | | | |
| 4. Gov | 0.80 | 0.60 | 0.63 | | | | | | | | | | | | | | | | | | |
| 5. Env_RU | 0.81 | 0.81 | 0.77 | 0.49 | | | | | | | | | | | | | | | | | |
| 6. Env_E | 0.82 | 0.84 | 0.78 | 0.44 | 0.74 | | | | | | | | | | | | | | | | |
| 7. Env_I | 0.40 | 0.63 | 0.27 | 0.22 | 0.17 | 0.19 | | | | | | | | | | | | | | | |
| 8. Soc_W | 0.87 | 0.73 | 0.89 | 0.62 | 0.76 | 0.77 | 0.14 | | | | | | | | | | | | | | |
| 9. Soc_HR | 0.66 | 0.42 | 0.78 | 0.32 | 0.37 | 0.42 | 0.33 | 0.43 | | | | | | | | | | | | | |
| 10. Soc_C | 0.76 | 0.58 | 0.82 | 0.54 | 0.57 | 0.57 | 0.17 | 0.68 | 0.44 | | | | | | | | | | | | |
| 11. Soc_PR | 0.63 | 0.54 | 0.67 | 0.34 | 0.46 | 0.49 | 0.31 | 0.51 | 0.21 | 0.39 | | | | | | | | | | | |
| 12. Gov_M | 0.73 | 0.53 | 0.55 | 0.95 | 0.41 | 0.35 | 0.22 | 0.52 | 0.33 | 0.47 | 0.29 | | | | | | | | | | |
| 13. Gov_S | 0.51 | 0.33 | 0.37 | 0.66 | 0.22 | 0.25 | 0.09 | 0.37 | 0.12 | 0.33 | 0.11 | 0.51 | | | | | | | | | |
| 14. Gov_CSRS | 0.67 | 0.54 | 0.66 | 0.41 | 0.55 | 0.55 | 0.15 | 0.65 | 0.34 | 0.44 | 0.43 | 0.30 | 0.09 | | | | | | | | |
| 15. Family | -0.32 | -0.22 | -0.29 | -0.31 | -0.17 | -0.18 | -0.07 | -0.33 | -0.19 | -0.20 | -0.16 | -0.30 | -0.16 | -0.17 | | | | | | | |
| 16. Age | 0.03 | 0.09 | 0.00 | -0.01 | -0.04 | 0.12 | 0.14 | -0.07 | 0.00 | 0.07 | 0.08 | 0.01 | -0.01 | -0.03 | 0.17 | | | | | | |
| 17. Leverage | 0.19 | 0.17 | 0.17 | 0.18 | 0.14 | 0.19 | 0.09 | 0.16 | 0.08 | 0.16 | 0.09 | 0.17 | 0.09 | 0.13 | -0.10 | 0.02 | | | | | |
| 18. ROA | -0.09 | -0.08 | -0.07 | -0.06 | -0.09 | -0.11 | 0.01 | -0.07 | -0.10 | -0.08 | 0.01 | -0.04 | -0.10 | -0.04 | 0.13 | -0.09 | -0.24 | | | | |
| 19. Size | 0.48 | 0.44 | 0.46 | 0.38 | 0.39 | 0.40 | 0.27 | 0.41 | 0.38 | 0.42 | 0.26 | 0.32 | 0.26 | 0.36 | -0.06 | 0.24 | 0.30 | -0.04 | | | |
| 20. PPE | 0.15 | 0.18 | 0.14 | 0.02 | 0.17 | 0.24 | 0.15 | 0.18 | 0.24 | 0.11 | 0.10 | 0.01 | 0.04 | 0.05 | -0.04 | 0.04 | -0.20 | -0.12 | -0.04 | | |
| 21. RND | 0.10 | 0.00 | 0.05 | 0.17 | -0.04 | -0.10 | -0.04 | 0.10 | -0.07 | -0.01 | -0.07 | 0.20 | 0.02 | -0.09 | -0.26 | -0.22 | -0.07 | 0.07 | -0.06 | -0.16 | |
| 22. MC | -0.14 | -0.06 | -0.15 | -0.17 | -0.08 | -0.05 | -0.02 | -0.18 | -0.15 | -0.09 | 0.04 | -0.17 | -0.04 | -0.13 | 0.19 | 0.54 | -0.05 | 0.02 | 0.13 | 0.10 | -0.30 |

All reported correlations are statistically significant with significance level of 5 percent or higher, except for the correlations shown in bold.

4.2 Multivariate results

This study performs regression analysis to investigate the extent to which family firms are involved in CSR. CSR performance is not only measured based on overall CSR performance but also by environmental performance, social performance and governance performance, and the detailed categories separately. Several control variables, as well as year and industry dummies, are included in the analysis to account for the year and industry effects. The results of the regression analysis are presented in Table 4 and Table 5.

Table 4 reveals that the estimated coefficient on *Family* is negative and significant. This result is in contrast to that of López-González, Martínez-Ferrero and García-Meca (2019) who find that on the grounds of SEW theory, family control and CSR performance have a positive relationship. Contrarily, the finding of this study supports the expropriation view hypothesis and prior studies (Kim and Lee, 2018; Labelle *et al.*, 2018) which show that family firms tend to have lower CSR performance. Thereby, family firms are more likely to underperform non-family firms in terms of CSR. With regard to the control variables, Column 1 of Table 4 shows that firm age (*Age*) has a positive effect on a firm's overall CSR performance, in line with El Ghouli *et al.* (2016) and Biswas *et al.* (2018). Moreover, larger (*Size*) and more capital-intensive firms (*PPE*) tend to have higher CSR performance (Arora and Dharwadkar, 2011). Column 1 of Table 4 also shows that *MC* has a negative relationship with overall CSR performance. In line with Fernández-Kranz and Santaló (2010), the result suggests that firms that operate in more competitive markets have superior CSR performance.

In Columns 2-4 of Table 4, the effect of family control on aggregated environmental, social and governance pillar scores is examined. The estimated coefficient on *Family* is negative and statistically significant in Column 2. This denotes that family firms have significantly lower environmental performance (at the 1 percent level). This finding is in contrast to that of Berrone *et al.* (2010) and Block and Wagner (2014) which contend that family-controlled firms have better environmental performance, based on SEW perspective. Family owners often have less diversified wealth, however, a large proportion of their wealth is concentrated in the family firm. As such, family firms tend to be more sensitive to uncertainty and are more likely to prefer investments that are stable and less risky (Bianco *et al.*, 2013). Therefore, family firms may be more hesitant to commit to environmental initiatives as returns from environmental investments tend to be unclear and uncertain (Dal Maso *et al.*, 2020).

This study also finds that the effect of *Family* on social performance (*Soc*) is negative and statistically significant. Hence, family firms tend to have lower social performance. This result differs from the findings of Bingham *et al.* (2011) in their analysis of S&P 500 firms, which indicate that family firms are more likely than non-family firms to be involved in social initiatives. Contrarily, this study is in line with the view of Labelle *et al.* (2018) that family firms exhibit lower social performance and pay less attention to the claims of stakeholders than their peers.

Further, family control is negatively related to governance performance (*Gov*). In line with Hirigoyen and Poulain-Rehm (2014), this study finds that family firms are less well-governed than their peers. Similarly, the III Banca March-IE Report by Cruz and Galdeano (2015) on 1127 firms listed in France, Germany, Italy, the U.K., the U.S., Spain,

and Switzerland point out that family firms have lower corporate governance scores than non-family firms. As argued by Kellermanns, Eddleston and Zellweger (2012) and Jones, Makri and Gomez-Mejia (2008), rather than using governance structures to legitimize the business, the family owners may view governance structures as a mechanism to strengthen their influence and protect other family members, thus compel top executives to act in the family's best interests.

Consistent with the findings in Column 1, the effects of firm age and firm size are positive and highly significant on environmental performance, social performance and governance performance. Leverage has no significant impact on the environmental performance and social performance of firms, however, is shown to have a positive and marginally significant impact on governance performance. Capital intensity (*PPE*) affects environmental and social performance positively, while research and development intensity (*RND*) affects social performance negatively. Furthermore, market concentration (*MC*) affects environmental performance, social performance and governance performance negatively.

Table 4. Family Firms and CSR Performance

| Variable | CSR | Env | Soc | Gov |
|-----------------------|------------------------|------------------------|------------------------|-----------------------|
| <i>Family</i> | -10.16*** (-7.39) | -7.48*** (-4.24) | -10.33*** (-6.71) | -9.29*** (-5.66) |
| <i>Age</i> | 0.40*** (4.86) | 0.64*** (6.30) | 0.32*** (3.45) | 0.30*** (3.05) |
| <i>Leverage</i> | 7.75 (1.64) | 5.31 (0.87) | 6.34 (1.19) | 9.94* (1.76) |
| <i>ROA</i> | 0.19 (0.03) | 6.66 (0.62) | 2.55 (0.30) | -6.20 (-0.68) |
| <i>Size</i> | 9.96*** (14.05) | 8.64*** (9.80) | 10.45*** (13.15) | 9.12*** (10.77) |
| <i>PPE</i> | 25.82*** (5.11) | 41.47*** (6.57) | 32.22*** (5.69) | -3.98 (-0.66) |
| <i>RND</i> | -11.63 (-0.50) | 0.71 (0.03) | -49.71* (-1.92) | 0.16 (0.01) |
| <i>MC</i> | -12.20*** (-4.55) | -17.03*** (-4.82) | -12.73*** (-4.24) | -6.17* (-1.93) |
| Year FE | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes |
| Constant | -180.37*** (-14.89) | -182.75*** (-12.11) | -189.90*** (-13.98) | -131.91*** (-9.12) |
| <i>R</i> ² | 0.58 | 0.50 | 0.56 | 0.47 |
| <i>F</i> | 26.77 | 16.06 | 24.40 | 17.22 |
| Sig. (<i>F</i>) | 0.00 | 0.00 | 0.00 | 0.00 |

Significance levels: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4 reveals that family-controlled firms have lower overall CSR performance, environmental performance, social performance and governance performance. Moreover,

this study further investigates the effect of family control on the detailed categories under environmental (i.e., performance related to resource use, emissions, innovation), social (i.e., performance related to workforce, human rights, community, product responsibility) and governance (performance related to management, shareholders, and CSR strategy) pillars to have a holistic picture of the impact of family firm on CSR performance. The results are presented in Table 5.

Under the environmental pillar, except for innovation, the coefficients on *Family* show similar effects. The results show that *Family* affects resource use (*Env_RU*) and emission (*Env_E*) negatively. These results are statistically significant at the 1 percent level. Accordingly, family firms underperform on resource use- and emission-related initiatives compared to non-family firms. That is, in reducing the use of materials, water and/or energy and in seeking more eco-efficient alternatives, family firms exhibit lower performance. Moreover, family firms also underperform in their manufacturing and operating processes to minimize environmental emissions. Notwithstanding, the present study finds an insignificant relationship between *Family* and innovation (*Env_I*). This finding indicates that family firms are not significantly different from non-family firms in their environmental innovation. In addition, *Age* affects emission- and innovation-related performance positively and significantly. *Leverage* affects the emission category positively. The effect of *ROA* is negative on resource use, nevertheless positive on innovation. The effect of *Size* is similar to resource use-, emission- and innovation-related initiatives. That is, firm size affects resource use-, emission- and innovation-related environmental performance positively. Similarly, capital intensity (*PPE*) positively and significantly affects resource use-, emission- and innovation-related environmental performance. *RND* is positively associated with environmental innovation but negatively associated with resource use- and emission-related environmental performance. Lastly, *MC* is negatively related to resource use-, emission- and innovation-related performance.

In relation to firm's social performance, the findings of this study differ from those of Bingham *et al.* (2011) who contend that family firms display significantly higher employee and community-related social initiatives and Block and Wagner (2014) who find that family ownership is positively related to product-related aspects of CSR. Particularly, this study finds that family control negatively affects initiatives related to workforce, human rights, community, and product responsibility (*Soc_W*, *Soc_HR*, *Soc_C* and *Soc_PR*, respectively). These results are significant at the 1 percent level. This suggests that the effectiveness and commitment of family firms in managing their workforce, customers and society by offering a healthy and safe working environment, preserving diversity, upholding fundamental human rights conventions, delivering goods and services of quality and being a good citizen are lower than that of non-family firms. Additionally, the effect of *Age* is positive and significant on all social categories. *Leverage* has a positive and significant effect only on workforce-related initiatives. *ROA* affects community-related initiatives negatively. *Size* and *PPE* show positive and significant effects on all social-related initiatives. *RND* affects human rights- and community-related initiatives negatively. Lastly, *MC* affects workforce- and community-related initiatives negatively.

Concerning the governance pillar, Table 5 reveals that *Family* affects management (*Gov_M*), shareholders (*Gov_S*) and CSR strategy (*Gov_CSRS*) categories negatively and significantly. These results further support the expropriation view hypothesis and prior

studies (Kellermanns, Eddleston and Zellweger, 2012; Hirigoyen and Poulain-Rehm, 2014; Cruz and Galdeano, 2015) which argue that family firms are less likely to be well-governed as family control allows owners to reinforce their influence through the governance structure to protect and pursue their interests. Additionally, Table 5 shows that the effect of firm age (*Age*) on management-related governance performance is positive, whereas the effect of firm age on shareholders-related governance performance is negative. *Leverage* affects the management category of CSR positively. Suggesting that firms with higher leverage are more likely to pay attention to their management-related governance performance. *ROA* has a negative and significant effect on the shareholders category. The coefficients on *Size* are positive and significant for all specifications (i.e., management, shareholders and CSR strategy), indicating that an increase in firm size is likely to result in the increase in management-, shareholders-, and CSR strategy-related performance. Capital intensity (*PPE*) affects CSR strategy positively, while research and development intensity (*RND*) affects CSR strategy negatively. Meanwhile, *MC* has a negative and marginally significant effect on management-related governance performance.

Taken together, the empirical results of the present study provide support for the expropriation view hypothesis. Therefore, family firms are less likely to engage in CSR activities in terms of overall CSR score; environmental, social and governance pillar scores; and detailed category scores with the exception of environmental innovation.

4.3 Robustness test

We also conduct additional analyses using random-effects model to test the robustness of the results. In line with the findings in Table 4, the results in Column 1 of Table 6 show that the effect of *Family* on the overall CSR performance is negative and highly significant. The finding suggests that family firms are less likely to prioritize and commit to CSR initiatives. Thus, supporting the expropriation view hypothesis. Furthermore, we also examine the effect of family control on the three pillars of the primary measure of CSR performance, namely, environmental performance (*Env*), social performance (*Soc*) and governance performance (*Gov*). The results remain negative and significant, consistent with the main findings.

Furthermore, we investigate the robustness of the results by replacing the environmental, social and governance pillar scores with their detailed categories. The results in Table 7 show that the negative relationship remains for initiatives related to emission (*Env_E*), workforce (*Soc_W*), human rights (*Soc_HR*), community (*Soc_C*), product responsibility (*Soc_PR*), and management (*Gov_M*). Meanwhile, the relationship between *Family* and environmental innovation (*Env_I*) remains insignificant. Table 7 further shows that the results in Table 5 do not hold for *Env_RU*, *Gov_S* and *Gov_CSRS*. Although family control is negatively related to resource use-, shareholders- and CSR strategy-performance, the coefficients are statistically insignificant.

Table 5. Family Firms and CSR Performance: Detailed Categories

| Variable | <i>Env_RU</i> | <i>Env_E</i> | <i>Env_I</i> | <i>Soc_W</i> | <i>Soc_HR</i> | <i>Soc_C</i> | <i>Soc_PR</i> | <i>Gov_M</i> | <i>Gov_S</i> | <i>Gov_CSRS</i> |
|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|------------------------|---------------------|-----------------------|----------------------|-----------------------|
| <i>Family</i> | -5.97*** (-2.63) | -7.87*** (-3.65) | -1.00 (-0.42) | -14.73*** (-7.48) | -12.59*** (-4.28) | -6.98*** (-3.58) | -9.74*** (-4.28) | -11.06*** (-5.81) | -4.42** (-2.05) | -9.86*** (-3.47) |
| <i>Age</i> | 0.13 (0.93) | 0.82*** (6.58) | 0.70*** (5.34) | 0.36*** (3.06) | 0.80*** (3.84) | 0.30*** (2.60) | 0.51*** (3.44) | 0.56*** (4.96) | -0.28** (-2.16) | 0.00 (0.02) |
| <i>Leverage</i> | 3.15 (0.41) | 19.67*** (2.69) | -4.74 (-0.62) | 15.43** (2.27) | -0.76 (-0.08) | 2.51 (0.38) | -2.38 (-0.30) | 12.98** (1.97) | 5.16 (0.69) | 12.95 (1.36) |
| <i>ROA</i> | -26.09* (-1.94) | -1.78 (-0.14) | 55.15*** (4.04) | 7.79 (0.72) | -4.80 (-0.25) | -20.56* (-1.85) | 5.65 (0.43) | -0.66 (-0.06) | -24.05** (-2.02) | -4.72 (-0.28) |
| <i>Size</i> | 11.29*** (9.79) | 7.72*** (7.11) | 4.83*** (4.52) | 10.09*** (9.93) | 11.32*** (7.90) | 10.14*** (9.88) | 3.71*** (3.09) | 8.96*** (9.12) | 7.64*** (6.85) | 8.32*** (5.95) |
| <i>PPE</i> | 14.74* (1.87) | 52.86*** (6.79) | 34.58*** (4.14) | 45.37*** (6.27) | 32.22*** (3.12) | 28.69*** (4.05) | 33.56*** (3.99) | -7.36 (-1.05) | -12.33 (-1.55) | 22.48** (2.11) |
| <i>RND</i> | -113.98*** (-3.09) | -97.06*** (-2.72) | 122.46*** (3.77) | 37.10 (-1.12) | -114.29** (-2.40) | -79.31** (-2.45) | -39.87 (-1.09) | 24.47 (0.77) | -56.54 (-1.56) | -138.41*** (-2.77) |
| <i>MC</i> | -19.02*** (-4.07) | -25.40*** (-5.75) | -8.74** (-2.16) | -22.79*** (-5.94) | 11.17 (1.61) | -14.17*** (-3.77) | 7.04 (1.34) | -6.37* (-1.72) | -2.05 (-0.49) | -2.11 (-0.35) |
| Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Constant | -193.08*** (-9.35) | -181.31*** (-9.42) | -106.67*** (-6.13) | -204.02*** (-11.75) | -146.17*** (-5.51) | -180.94*** (-10.43) | -11.55 (-0.53) | -133.59*** (-7.96) | -81.74*** (-4.29) | -109.92*** (-4.28) |
| <i>R</i> ² | 0.41 | 0.49 | 0.41 | 0.50 | 0.47 | 0.43 | 0.39 | 0.47 | 0.28 | 0.29 |
| <i>F</i> | 10.17 | 13.92 | 8.41 | 19.21 | 8.53 | 13.86 | 9.73 | 17.36 | 7.44 | 4.90 |
| Sig. (<i>F</i>) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 6. Family Firms and CSR Performance using random-effects

| Variable | CSR | Env | Soc | Gov |
|-----------------|----------------------|-----------------------|-----------------------|-----------------------|
| <i>Family</i> | -14.98*** (-3.26) | -12.15** (-2.32) | -15.17*** (-2.89) | -11.63*** (-2.82) |
| <i>Age</i> | 1.34*** (6.26) | 1.55*** (7.88) | 1.41*** (5.52) | 0.32 (1.59) |
| <i>Leverage</i> | -5.80 (-0.88) | -15.91 (-1.58) | -8.89 (-1.08) | -1.04 (-0.14) |
| <i>ROA</i> | -10.64* (-1.79) | -22.00** (-2.20) | -14.19** (-2.06) | -7.24 (-0.87) |
| <i>Size</i> | 7.58*** (4.17) | 8.87*** (3.62) | 8.52*** (3.91) | 7.59*** (4.75) |
| <i>PPE</i> | -3.19 (-0.37) | -21.73* (-1.89) | -6.68 (-0.65) | 9.35 (1.10) |
| <i>RND</i> | 120.90** (2.34) | 93.86* (1.74) | 108.41* (1.70) | 126.97** (2.01) |
| <i>MC</i> | -5.54** (-1.95) | -10.89*** (-3.47) | -6.06* (-1.76) | -1.88 (-0.70) |
| Constant | -135.35 (-4.22) | -167.14*** (-3.91) | -155.35*** (-4.05) | -105.80*** (-3.54) |
| Wald χ^2 | 123.51 | 121.85 | 97.70 | 64.03 |
| Prob > χ^2 | 0.00 | 0.00 | 0.00 | 0.00 |
| Overall R^2 | 0.16 | 0.10 | 0.11 | 0.22 |

Significance levels for two-tailed test: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7. Family Firms and CSR Performance: Detailed Categories using random-effects

| Variable | <i>Env_RU</i> | <i>Env_E</i> | <i>Env_I</i> | <i>Soc_W</i> | <i>Soc_HR</i> | <i>Soc_C</i> | <i>Soc_PR</i> | <i>Gov_M</i> | <i>Gov_S</i> | <i>Gov_CSRS</i> |
|-----------------|-----------------------|-----------------------|-------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|-------------------|-----------------------|
| <i>Family</i> | -7.35 (-1.24) | -10.29* (-1.76) | -7.45 (-1.40) | -17.09*** (-3.16) | -11.62** (-2.07) | -9.46* (-1.94) | -18.18*** (-3.27) | -14.48*** (-2.85) | -7.51 (-1.60) | -6.59 (-1.29) |
| <i>Age</i> | 1.29*** (5.13) | 1.75*** (6.90) | 0.62*** (3.03) | 1.01*** (3.88) | 0.55** (2.08) | 1.07*** (3.66) | 1.23*** (3.71) | 0.30 (1.26) | -0.03 (-0.13) | 0.19 (0.69) |
| <i>Leverage</i> | -28.44** (-2.40) | -7.02 (-0.54) | -9.90 (-0.65) | -0.23 (-0.02) | -9.31 (-0.95) | -12.63 (-1.11) | -23.11 (-1.24) | 3.25 (0.31) | 1.53 (0.10) | -10.74 (-0.77) |
| <i>ROA</i> | -36.17*** (-2.74) | -10.39 (-1.05) | -21.09 (-1.39) | 0.44 (0.05) | -41.25* (-1.87) | -23.32** (-2.25) | -12.64 (-1.10) | -0.64 (-0.06) | -9.06 (-0.91) | -26.54* (-1.86) |
| <i>Size</i> | 12.31*** (4.67) | 9.41*** (2.97) | 4.27* (1.88) | 9.47*** (3.99) | 9.27*** (3.71) | 9.43*** (3.95) | 6.36** (2.04) | 6.35*** (3.22) | 6.03*** (2.70) | 11.14*** (4.20) |
| <i>PPE</i> | -16.68 (-1.00) | -10.37 (-0.70) | -15.80 (-1.18) | -0.53 (-0.04) | 15.21 (0.99) | -0.33 (-0.03) | -14.94 (-0.99) | 18.08* (1.91) | 1.99 (0.16) | -0.41 (-0.03) |
| <i>RND</i> | 58.21 (0.86) | 121.07 (1.53) | 1.22 (0.02) | 112.51 (1.28) | 37.99 (0.42) | 65.29 (0.95) | 16.26 (0.21) | 160.28** (2.36) | 28.01 (0.35) | 35.70 (0.34) |
| <i>MC</i> | -14.34*** (-3.44) | -13.58*** (-3.45) | -2.44 (-0.60) | -11.10** (-2.43) | -5.26 (-1.19) | -6.73* (-1.77) | 0.72 (0.14) | -0.98 (-0.30) | 1.96 (0.61) | -7.26* (-1.69) |
| Constant | -220.36*** (-4.57) | -191.13*** (-3.47) | -39.25 (-0.91) | -172.51 (-3.96) | -146.88*** (-2.99) | -170.65*** (-4.16) | -71.21 (-1.27) | -84.01** (-2.32) | -57.17 (-1.47) | -173.03*** (-3.51) |
| Wald χ^2 | 85.96 | 120.84 | 17.43 | 67.74 | 32.16 | 57.01 | 47.07 | 41.71 | 18.14 | 35.89 |
| Prob > χ^2 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| Overall R^2 | 0.06 | 0.09 | 0.05 | 0.18 | 0.19 | 0.14 | 0.04 | 0.19 | 0.09 | 0.15 |

Significance levels for two-tailed test: * p < 0.1, ** p < 0.05, *** p < 0.0

5 CONCLUSION

This study contributes to the literature with regard to the CSR of family firms. In contrast to prior studies (e.g., Berrone *et al.*, 2010; Zellweger *et al.*, 2013; Labelle *et al.*, 2018), this study recognizes that CSR is multidimensional. Thus, to obtain a holistic picture, this study considers the multidimensional concept of CSR and examines the relationship between family control and CSR performance. Motivated by the lack of evidence of family-controlled firms' CSR activities outside of the United States and Western Europe as well as the importance of family firms in the economic development of the nation, this study focuses on firms listed in Taiwan, particularly on 810 firm-year observations of non-financial listed firms from 2010 to 2019.

Generally, there are two opposing views regarding the relationship between family control and CSR, i.e., the socioemotional wealth view contending that family firms are more likely to engage in CSR activities to preserve their socioemotional wealth and the expropriation view postulating that controlling families may choose to draw resources away from CSR initiatives using their voting rights for other projects or personal interests. To shed light on the issue, this study examines the effects of family control on the overall CSR score, environmental, social, governance pillar scores, and detailed category scores.

The present study finds support for the expropriation view. The findings suggest that the effect of family control is negative on the overall score of CSR as well as the environmental, social, and governance pillar scores. These results hold with the use of random-effects regression. The results also show that, except for innovation, family control negatively affects the firm's initiatives related to resource use, emission, workforce, human rights, community, product responsibility, management, shareholders, and CSR strategy. Moreover, the robustness test supports the negative effect of family control on initiatives related to emission, workforce, human rights, community, product responsibility and management. These results are in contrast to those of previous studies based on U.S. data (e.g., Berrone *et al.*, 2010; Bingham *et al.*, 2011) which suggest that, motivated by incentives to maintain their socioemotional wealth, family firms are more likely to display a greater commitment to CSR activities and to meet the needs of stakeholders.

Overall, this paper contributes to the literature on the relationship between family control and CSR. While most extant studies regarding family control and CSR have been conducted in more developed institutional environments such as the U.S. (Berrone *et al.*, 2010; Bingham *et al.*, 2011; Block and Wagner, 2014), this study focuses on firms listed in Taiwan. Although Taiwan has decided to drop its status as a developing economy, its legal and regulatory institutions are relatively less developed (Dinh and Calabrò, 2019). This study, therefore, offers insights into verifying in a non-Western context the relationship between family control and CSR. In light of the empirical findings, the present study contends that the evidence for a positive relationship between family control and CSR may not be generalizable outside the U.S., specially in nations where expropriation incentives are higher and institutions are generally less protective of minority shareholders. Also, while prior studies mainly focus on a single dimension of CSR or an aggregate measure, this study investigates the aggregated ESG pillar scores as well as category scores in addition to the broad measure (i.e., the overall CSR score).

The findings of this study also provide insights and implications. Governments, policymakers, and/or other stakeholders are concerned with CSR and making efforts to enhance firms' CSR performance as the threat posed by environmental degradation becomes more apparent, the social aspect of business activities becomes increasingly important, and the recent financial crisis is attributable to the failure of governance arrangements (Kirkpatrick, 2009; Rees and Rodionova, 2015; Takahashi *et al.*, 2020). In light of the findings, stakeholders are able to understand how family-controlled firms conform to CSR and their environmental, social, and governance demands. As the empirical findings show that family firms in Taiwan are less socially responsible than their non-family counterparts, particular attention to family firms' CSR performance is needed. In addition, to improve CSR performance, a more diversified share ownership structure can be promoted among family firms, and policymakers can implement systems or provide incentives for boosting family firms' CSR initiatives.

This study is subject to certain limitations. First, this study is limited to publicly listed firms in Taiwan. Privately held and publicly listed firms may behave differently due to their level of resources and pressure to meet various demands. Hence, an issue in need of further investigation is how privately held and publicly listed family firms vary in their CSR initiatives. Second, while this study explores the effect of family control on the overall CSR score, ESG pillar scores, and category scores, it does not consider the possible effects of family control on negative CSR (e.g., concern rating provided by the KLD database) due to the lack of data. Therefore, future studies may examine the effects of family control on both positive and negative CSR. In addition, this study finds that return on assets is insignificantly associated with the overall CSR performance, environmental performance, social performance, and governance performance, while prior studies (e.g., Brammer and Millington, 2008; Wang and Bansal, 2012; Hou, 2018) document a significant impact of CSR on firm performance (e.g., return on assets). Future studies may therefore investigate the reverse causality between CSR and firm performance. Lastly, while this study reviews various findings from prior studies in the U.S., future studies may further examine whether the relationship between family control and CSR is moderated by institutional factors across nations.

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