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Environmental Performance Focus in Private Family Firms: The Role of Social Embeddedness

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Abstract We investigate if private family firms have a greater environmental performance focus than nonfamily firms, and if this relationship is moderated by the strength of the firms' social embeddedness. We empirically test these issues using a representative sample of 1452 private Australian small and medium-sized enterprises. Contrary to prevailing assumptions and previous indicative findings in the public firm context, our results show that family firms have a lower environmental performance focus than nonfamily firms. However, in cases where the firm is highly embedded in the social community, we find that family firms have a higher environmental performance focus. We explain our unexpected results by considering the role of financial risk in publicly held family firms. Accordingly, we posit that prior findings in the public firm context may be evidence of families expropriating wealth from nonfamily shareholders rather than altruistic pro-environmental behavior.

Keywords Family firm · Environmental performance focus · Socioemotional wealth · Social embeddedness

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Introduction

Environmental awareness has, literally and figuratively speaking, become a 'hot' topic over the past two decades. Organizations are becoming more attentive to their societal duty to see to the preservation of the natural environment (McGee 1998; Starik and Rands 1995). It is therefore no surprise that the academic community has devoted an increasing amount of research and journal space to environmentally related issues (e.g., Ahuja and Hart 1996; Aragón-Correa and Sharma 2003; Christmann 2000; Cordano et al. 2010; Dawkins and Fraas 2011; Roxas and Coetzer 2012). One of these issues is the question of what drives environmental awareness and concern amongst firms. Despite the fact that scholars have scrutinized multiple discriminating variables such as industry settings, firm size, and public versus private entities, the family involvement attribute has been largely neglected (Sharma and Sharma 2011). Recent research of Berrone et al. (2010) has contributed novel insights to this currently underresearched domain. Their results indicate that family controlled public firms in the US have better environmental performance compared to nonfamily firms. However, these public firms make up a small minority of all family firms, and have a different governance and incentive structure than the majority of family firms, who are private. Nonetheless, their results point to a research opportunity to further scrutinize the environmental issue by applying a family firm lens.

The unique distinction that differentiates the family firm from the nonfamily firm is the personalized control—as to the institutionalized control in nonfamily firms—and the aim to pursue the controlling family's vision for the firm (Chrisman et al. 2005). The family's intention regarding certain corporate, social, or family issues will shape

business behavior and, as a result, affect business outcome. As such, rather than scrutinizing the environmental performance outcome of family firms (Berrone et al. 2010), we argue that the effect of family involvement is more profound when assessing the family business's focus on environmental performance. We define environmental performance focus as the importance they place upon environmental measures when evaluating their overall business performance. This reasoning is in line with the recent conceptual work of Sharma and Sharma (2011) who argue, based on the theory of planned behavior (Ajzen 1991), that in firms with higher levels of family involvement, the dominant coalitions are more likely to have stronger intentions to pursue proactive environmental strategy. With a similar mindset, Uhlaner et al. (2012) recently explored whether certain organizational context aspects (i.e., tangibility of sector, size, family influence, and innovation orientation) are associated with more active engagement in environmental management practices amongst small and medium-sized enterprises (SMEs). As such, past research in environmental behavior is noticeably shifting from environmental outcomes (e.g., Berrone et al. 2010; Stanwick and Stanwick 1998) toward more environmental intentions and/or strategies that may in fact explain the final outcomes (e.g., Craig and Dibrell 2006; Delgado-Ceballos et al. 2012; Roxas and Coetzer 2012; Sharma and Sharma 2011; Uhlaner et al. 2012).

In this paper, we add to the growing literature on environmental performance intention or focus of private family firms. The reasoning underpinning the willingness to endure high economic risks and increased uncertainty related to environmental investments is framed in light of the socioemotional wealth perspective. This model implies that the family firm can have higher preferences for nonfinancial objectives or "affective endowments" that meet the family's affective needs (Berrone et al. 2012). Thus, the emphasis on preserving the family firm's socioemotional wealth becomes critical. Business problems are then framed in light of how the actions will affect socioemotional endowment and will lead to decisions that are not always driven by an economic logic. Because this increased risk related to environmental investments does not necessarily result in higher financial returns or, in worst case, might even be at the expense of financial gains, it is argued that there are other objectives at play than pure financial ones (Gómez-Mejía et al. 2007). As a result, family firms are willing to accept greater firm performance hazard so as to prevent the loss of the family's socioemotional wealth (Gedajlovic et al. 2012; Gómez-Mejía et al. 2007). Possible socioemotional gains for the family associated with high environmental focus can be a better family reputation, the community's perception of being a responsible corporate citizen, and overall social legitimacy (Berrone et al. 2010). Thus, we argue that environmental performance focus will be higher in family firms than in their nonfamily counterparts.

Contrary to the public firm setting of Berrone et al. (2010), we will focus on the privately held family firms. Due to the higher levels of family ownership and power in these private firms, the environmental concern may increase as preserving socioemotional wealth can become more apparent. On the other hand, limited access to financial markets may force private firms to use relatively primitive and contaminating equipment that may emit higher levels of pollution as compared to modern equipment, leading to lower levels of environmental focus. Thus, a lack of financial resources necessary to make the environmental management investments is one of the main internal barriers (Delgado-Ceballos et al. 2012). In addition, we explore the possible moderating effect that the social embeddedness of the family firm in the direct community can have on their environmental performance focus. From a socioemotional wealth perspective, having a respectable family reputation and being well perceived by the community are considered as socioemotional gains for the family. The stronger a family business is embedded in their local community, the more apparent these gains will become, thus leading to increased pro-community strategies that are not necessarily linked to economic gains (Roxas and Coetzer 2012). In this respect, being highly embedded in the social community might increase the firm's environmental focus, especially when it is a family firm (Berrone et al. 2010). Increased social monitoring of family owners by the direct community, lack of anonymity, and the participation of the family in the local social network can cause socioemotional stakes for the family to rise, making environmental transgressions even more undesirable.

As such, a key contribution of this study is empirically scrutinizing the family business focus on environmental performance instead of the environmental performance outcome. We differentiate between focus and outcome in the sense that the family impacts on the intention to have a high environmental performance, whereas the realized environmental performance is an assessment of the family's ability to perform well. While there will be a correlation between these two measures, they capture different constructs. As the controlling family has a notable influence on business behavior, especially in the privately held firm context, family values will shape the firm's resource allocation decisions (Ward 1987), which in turn affects business outcome. Thus, family involvement will shape the level of environmental performance focus, which in turn may lead to a certain environmental performance outcome. Furthermore, our findings allow us to assert that the submissive power of social expectations in a firm's community

can play a key role in the way family firms behave. An additional contribution of this paper is the extrapolation of prior research to the context of private firms, which is often depicted as a challenge due to limited access to sufficient data (Berrone et al. 2010). Further, based on our findings, we are able to derive the notion that family firm's desire to protect socioemotional wealth can be contingent on business circumstances, which would imply that preserving socioemotional wealth is not an unconditional family business objective. These insights will contribute to further theory building in light of the socioemotional wealth concept. Finally, we provide our evidence using a unique government supplied dataset that is representative of Australian private SMEs (200 employees or less). As such, we are able to test theory using a broad base of family enterprises across multiple industries. A limited number of firms, namely 194 U.S. public firms, were highlighted as one of the limitations in the work of Berrone et al. (2010).

This paper proceeds as follows. In the next section, we provide a brief overview of the Australian and family firm research context, after which we review prior relevant literature which is used as basis for developing our hypotheses. In the empirical section of the paper, we describe our sample and variables, followed by the applied research method and results. Next, the discussion section outlines our key findings and literature contributions. We conclude this paper by highlighting our research limitations and formulating some relevant avenues for future research.

Research Context

The significance of family businesses has been well established in academic research over the last decades (Sharma et al. 2012). There has been a key interest in ascertaining whether family businesses outperform their nonfamily counterparts on multiple areas (Mazzi 2011). Yet, the majority of this focus is directed toward publicly listed firms, thereby leaving certain issues indefinite in the private firm context (Sharma et al. 2012). Across the world, family businesses are largely concentrated in the size group of SMEs, in which listed companies represent only a small portion. The focus of this study is on privately held SMEs in which we distinguish between family firms and nonfamily firms. The Australian market provides an ideal context, as private firms play a vital role here due to the small size of the Australian economy and its stock market (Graves and Shan 2013). Australia is a high-income country with a population of 22 million (Federal Reserve Economic Data 2014). Over 90 % of Australian family businesses are SMEs, i.e., they employ up to 200 employees (Smyrnios and Dana 2006). These family businesses have a significant contribution to the wealth of the Australian economy. Recent numbers suggest a combined wealth of over $4.3 trillion (Family Business Australia 2013). With respect to the entire market, family businesses represent 76 % of the overall businesses (Smyrnios and Dana 2006). This proportion is very similar to most European countries and falls a bit below the average in the United States (95 %) (IFERA 2003). Family businesses also remain the largest employer group with over 50 % of the private sector workforce and account for approximately 40 % of Australia's private sector output (Smyrnios and Dana 2006), which again has large proximity to the European context (IFERA 2003).

We further acknowledge the importance of the time period during which the study is conducted as contextual factor. The data collection between 2007 and 2009 coincides with the Global Financial Crisis (GFC). The Australian Government acted quickly in the second half of 2008 to lessen the impact of the GFC on the Australian economy. As such, the effect of the crisis on Australia has been considerably less than in many other countries as Australian financial institutions had minimal exposure to U.S. mortgage-based securities (Davis 2011). The Reserve Bank of Australia indicates that the Australian economy noted markedly better growth outcomes than most other developed economies, signifying that the Australian financial system was considerably more resilient. The Australian banks continued to be profitable, without requiring any capital injections from the Government (Australian Bureau of Statistics 2010).

Finally, as having possible contextual impact on our results, we assessed the environmental regulations in Australia. Since our intent is to scrutinize the firm's true environmental concern, i.e., their desire to improve environmental performance, we need to have notion of the regulatory conditions under which they operate. Environmental regulation encompasses not only a broad range of issues, such as use of natural resources (e.g., water) and the possible unintended outcomes associated with their use, but also the appropriate disposal of waste. The primary responsibility for environmental regulation in Australia rests with the states and territories, and requires succeeding monitoring of environmental outcomes and enforcing state legislation by local governments (Australian Government Productivity Commission 2012). The commission's survey of small and medium-sized businesses indicated the impact of environmental regulatory activity by local government on business as being small. An exception was noted for the agricultural sector as they might be more impacted by environmental regulatory activity. Consequently, business sector will be included in this study as a control variable in the assessment of environmental performance focus. Overall, SMEs do not appear to be heavily subjected to high legal standards regarding environmental compliance.

Rather, multiple guidelines have been developed to advise business and industry about good environmental practice. We therefore do not expect private business's environmental activities to be largely driven by government regulation.

Prior Research and Hypotheses Development

While the environmental strategy and performance of firms is becoming a growing concern of both practitioners and researchers, the vast research that exists in this domain does not consider ownership structure as a potential explanatory variable. Recent findings indicate that in a small business setting, a positive attitude of the owner–manager toward natural environment issues and concerns leads to positive and proactive orientation of their firm toward environmental sustainability (Roxas and Coetzer 2012). Similarly, Sharma and Sharma (2011) noted that it is the top management that formulates the environmental strategies of firms, consequently it becomes important to consider the motivations and intentions of managers and owners for pursuing pro-environmental strategies. This reasoning is consistent with prior research stating that managerial characteristics such as beliefs, values, and attitudes influence the strategic choices and thus the behavior of the firm (Hambrick 2007). In the conceptual paper of Sharma and Sharma (2011), the authors argue that the dominant coalitions in firms with higher levels of family involvement in business are more likely to have stronger intentions to pursue pro-environmental strategies. Compared to nonfamily top management teams, those in family firms harbor positive attitude toward environmental preservation; believe that subjective norms favor pro-environmental activities in their firm; and perceive higher levels of behavioral control to pursue such activities. Using the theory of planned behavior (Ajzen 1991), the authors argue that these three factors will influence the intentions to pursue pro-environmental strategies. The level of relationship conflict in the family is then added to the theoretical framework, moderating the ability to translate these intentions into actions (Sharma and Sharma 2011).

Recent work of Berrone et al. (2010) empirically demonstrated that family controlled firms have better environmental performance than their nonfamily counterparts and that this difference becomes even more prominent when the family firm is operating in a local area and therefore has strong local roots. These researchers focused their attention on public firms—considering a firm as a family firm if the family has at least 5 % of the company's stocks. In contrast, Craig and Dibrell (2006) found that in the private setting, family firms have weaker pro-environmental attitudes as compared to nonfamily firms. However, Craig and Dibrell (2006) used non-parametric testing and did not control for potential drivers of these attitudes, they also limited their analysis to firms in the food processing industries. Further adding to the debate, Uhlaner et al. (2012) explored if family firms have better environmental management practices amongst Dutch SMEs. They reason that firm's directors will conform to pro-environmental management practices through social pressure exerted by the family. As such, greater family influence would lead to improved environmental management practices. However, their results are not able to fully support their reasoning. Only after differentiating in the number of owners, they found partial support in the sense that family influence has a positive effect on engagement in environmental management practices. This effect is however limited to larger business-owning families (3 or more owners). Consequently, due to conflicting findings and limitations in prior work, we attempt to contribute to the debate on family firms and environmental issues by empirically exploring it in a private firm context and assessing the family effect across industries, in excess of other drivers of environmental performance focus.

The environmental debate—given a business context—has been largely fueled by the intriguing question whether a firm can do well while doing good (Guenster et al. 2011). This has lead prior research on environmental issues to primarily investigate the effect it has on financial performance. Yet, so far these studies appear to find mixed results (Bansal and Roth 2000; Guenster et al. 2011; Kim and Statman 2012; Margolis and Walsh 2003; Meng et al. 2013; Sarkis and Cordeiro 1997). Most sceptics claim that environmental management requires heavy business investment that will be at the expense of shareholder wealth. Those that argue for a positive relationship, link proactive environmental management to superior stock performance (Guenster et al. 2011; Klassen and McLaughlin 1996). It is then inferred that firm value is increased due to the recognition of environmental performance, which in turn has a positive reputation effect. In the context of public firms, this can have a considerable impact on investors' impressions of a firm and thus affect their stock performance (Ahuja and Hart 1996). These days the market assigns more value-relevance to firm's environmental performance as it is a potential source of information for investors to help them generate superior excess returns (Guenster et al. 2011).

Yet, this reasoning does not hold for private firms. Still, private firms might have an increased focus on environmental issues that go beyond general compliance with regulations, even without a direct and obvious financial value or link. Within the environmental management literature, institutional theory is often used as a way to explain this environmental performance focus as it can also

be instigated by nonfinancial objects, i.e., a firm's search for institutional legitimacy, social and/or economic aptness, and political power (DiMaggio and Powell 1983). When firms are operating in a societal setting that has an increasing environmental awareness as is the case in most developed countries, pressure for social compliance and conformity can increase (Delmas and Toffel 2004). Small business owners are likely to have close ties with the local communities where they do business, causing a high degree of local embeddedness (Roxas and Coetzer 2012). This strengthens the impact of social values on the owner's attitudes and behavior by way of social expectations (Scott 2001). As such, if environmental concern is part of the set of norms and values held by the local community, firm owners are likely to gain support and legitimacy if they comply with these norms (Roxas and Coetzer 2012). In the context of family firms, firm owners tend to place even greater value on such social legitimacy, even despite financial considerations, as they are more vulnerable to negative assessments by outsiders and attach considerable importance to the opinion of others about their firm (Arregle et al. 2007). As argued by Dyer and Whetten (2006), since the family firm generally represents the family's main source of income, they cannot engage in social irresponsible actions as this would jeopardize their future welfare. Further, as family members within the firm have a strong identification with the family name, family firms are said to exhibits higher levels of corporate social and community citizenship behaviors (Craig and Dibrell 2006; Dyer and Whetten 2006). Family firms are distinct from nonfamily firms as they introduce a dynamic of personalized control, which affects the firm's strategic orientation and processes (Miller and LeBreton-Miller 2005; Sharma and Sharma 2011). Objectives of the controlling owner, i.e., the family, then become eminent within the firm. Thus, if social compliance and conformity related to the increasing environmental awareness is ranked high by family firm owners, firm's behavior is expected to follow accordingly. In line with the aforementioned, Berrone et al. (2010) imply that family firms will be more likely to voluntarily adapt their firm to higher levels of environmental demands and will therefore have a better environmental performance compared to their nonfamily counterparts.

The environmental investments can be related to relatively high economic risks for the family firm which are not always justified by possible greater financial returns or which might even be at the expense of financial gains (Craig and Dibrell 2006). This seemingly irrational behavior can be explained through a socioemotional wealth perspective, which implies that the family firm has higher preferences for non-financial objectives that meet the family's affective needs (Neubaum et al. 2012). Image and reputation building, the ability to exercise family influence, distinct family image in the community, accumulation of social capital, and the perpetuation of the family dynasty can be considered as such noneconomic utilities (Gómez-Mejía et al. 2007). Consequentially, family firm owners may have a divergent set of goals compared to the standard investor seeking high returns (Miller and Le Breton-Miller 2006). Based on the high importance family owners put on socioemotional wealth, they are more inclined to pursue environmental strategies as a way to avoid a bad reputation and being labeled as an irresponsible corporate citizen (Berrone et al. 2010). Given the fact that the family name is often personally linked to the firm and the family is almost completely intertwined with the firm activities, makes them more conscious of their place in the community. To undergo public criticism would be extremely devastating for the family firm as this would affect the identity of family members (Kets de Vries 1993).

Consequently, we argue that when in a privately held firm context family interests are predominant, the environmental performance focus of the firm will be higher even though this is related with possible increase in costs and uncertainty for the firm. Yet, the firm is willing to bear these costs, as they are convinced that the increased risk will be counterbalanced by noneconomic utilities, i.e., an increased socioemotional wealth for the family (Gómez-Mejía et al. 2007).

Hypothesis 1 (H1) Family firms have a higher environmental performance focus than nonfamily firms.

We further argue that the environmental performance focus of a family firm will be strengthened when the firm has strong social embeddedness (Berrone et al. 2010; Roxas and Coetzer 2012; Zellweger et al. 2011). Prior research has confirmed that firms whose main stakeholders are embedded in the community have a tendency to adopt pro-community strategies, even when possible economic gains are uncertain (Kassinis and Vafeas 2006). When there is high social embeddedness, the owner's attitudes and behavior are highly influenced by social values and norms prevailing in the community (Scott 2001). Business owners may find it socially rewarding to conform to the social codes of conduct observed in the local community, especially if a violation of these norms could result in social protestation and/or isolation (Roxas and Coetzer 2012). Our reasoning is further based on the fact that family firms are more sensitive to and place greater value on the evaluation of others around them about their firm (Miller and LeBreton-Miller 2005). This social status of a firm is interpreted as their reputation. It manifests itself in organizational dealings with those outside the organizational social network, such as name recognition, norm conformity, and respect and overall goodwill in the

community (Fombrun and Shanley 1990). Having a good reputation in the local community is not only of vital importance to the firm but also for the family members themselves. Through the socioemotional perspective, Gómez-Mejía et al. (2007) posit how family member's self-concept is strongly tied to the family firm's identity. Thus, a good reputation and a positive image of the firm as result of good environmental performance reflects on the family as well and will thus directly affect the family's socioemotional wealth (Berrone et al. 2010). If the family and their firm are strongly embedded in the local community, they will have more incentive to manage their reputation and will therefore have a higher environmental performance focus.

Further, the incentive to maintain a positive image through social responsibility can also be driven by the fact that a positive reputation in the minds of the central stakeholders can serve as some kind of social insurance, which in turn can protect the firm's—and therefore the family's—assets during times of crisis (Godfrey 2005). There are three reasons why the effect of social embeddedness on environmental performance focus will be stronger when the firm is family owned. Firstly, there is an increased social monitoring of family owners as there is less distinction between family, firm, and society at the local level (Lester and Cannella 2006). Secondly, as family owners are usually well known in their direct surroundings, they lose their anonymity and become more vulnerable for public opinions regarding their firm actions (Aronoff and Ward 1995). Furthermore, families are usually part of the social network at the local level, making it more difficult for them to deflect community pressures. So in line with these arguments, we believe that the risk of losing socioemotional wealth due to environmental transgressions is higher for family firms that operate in their immediate area compared to those companies operating outside the state or overseas. Having strong social embeddedness will thus positively moderate the relationship between family firms and the firm's environmental performance focus. We can find a parallel reasoning in recent work of Uhlaner et al. (2012), yet, the authors use the notion of embeddedness to underpin the difference between family and nonfamily firms. Based on their conviction, all family firms are by default more socially embedded in the community than nonfamily firms, making them more likely to engage in environmental management practices. However, the authors do not empirically test this notion. Building on these insights, we do not consider social embeddedness as a fixed variable in the family firm context, rather we will consider the moderating role it has. In other words, we investigate whether family firms that are highly social embedded in their community also have a greater environmental performance focus.

Hypothesis 2 (H2) The environmental performance focus of a family firm will be higher if the firm has strong social embeddedness.

Method

Sample

We use a representative sample of Australian SMEs (200 employees or less) for our empirical testing. Our data are derived from the Business Longitudinal Database (BLD) that was developed by the Australian Bureau of Statistics (ABS). The BLD comprises a longitudinal dataset that contains firm characteristics and limited financial information. The BLD is designed for longitudinal purposes and contains five periods of reference data (2004–2005, 2005–2006, 2006–2007, 2007–2008, and 2008–2009). The sample of 2732 firms is stratified by industry and firm size of the in-scope business population as at 30 June 2005 (1,563,857 firms in total), consequently the sample is representative of the underlying population. Firms that are selected by the ABS have a legal obligation to respond and provide accurate information. Thus, the data representativeness and reliability make it a unique dataset that has the potential to inform scholars on a wide range of issues, including environmental performance focus in family firms.[1] While the original sample contains 2732 firms, we limit our analyses to firms that have complete information for the variables that are employed in this study, which results in a final sample to 1452 individual firms.[2] In the following section, we describe the variables that we use in our analyses.

Variables

Environmental Performance Focus

To measure environmental performance focus, we utilize the following question from the BLD: "To what extent did this business focus on the following when assessing overall business performance: environmental measures?" The choices available for participants were: (0) Not at all; (1) A small extent; (2) A moderate extent; (3) A major extent. The variable is labeled as *EnvFocus* in our analyses. This operationalization for environmental concern is more in

[1] Further information about the BLD is available in the technical manual that is published by the Australian Bureau of Statistics (Australian Bureau of Statistics 2011).

[2] The environmental focus of firm was assessed in 2007–2008 and 2008–2009. Consequently, our analysis is restricted to the last two observation periods, with the exception of a lagged profitability variable.

line with recent studies regarding the *intention* of family firms with respect to environmental issues (e.g., Sharma and Sharma 2011; Uhlaner et al. 2012) rather than scrutinizing environmental outcomes (e.g., Berrone et al. 2010; Klassen and McLaughlin 1996). We believe a limitation of utilizing actual environmental performance as measurement is that such a measure would introduce noise to the proxy variable. As an analogy, while most firms want to be profitable, the desire by itself does not guarantee profitability. In line with the work of Sharma and Sharma (2011), we posit that family firms will have a greater desire for improved environmental performance, but it is a completely separate issue if this greater desire translates to improved environmental performance.

Family Firm Status

To assess the family firm status, we utilize the following question from the BLD: "Was this a family business as at 30 June?" The participants were able to reply (0) No or (1) Yes. This question is used to form the dummy variable *Family* that takes the value of 1 if the firm identifies itself as a family business. While we did not have a multidimensional measure of family status and involvement, we believe that the advantage of large and representative sample outweighs the drawback of not having more detail with respect to the family involvement. Furthermore, this self-reported family firm classification has been employed in recent studies by Eberhard and Craig (2013) and Barbera and Hasso (2013).

Social Embeddedness

To measure the social embeddedness of a firm, we utilize the following questions from the BLD: "How would you describe all markets in which this business operated during the year ended 30 June (Tick all that apply)." The participants were able to tick "Local (immediate area, town, or city)"; "Outside of the local area but within the state/territory"; "Outside of state/territory but within Australia"; "Overseas." We form a dummy variable that we name *SocialEmb*, which takes the value of 1 if the firm only operates in their immediate area, town, or city and 0 if they operate in other markets as well. We believe that this proxy captures the strength of a firm's social embeddedness as we posit that firms' ties to the local community weakens as they expand to other markets. Thus, if a firm only operates in their immediate area, town, or city, then they will be strongly embedded within this particular community. In the study of Berrone et al. (2010), they used a measure of geographic distance of subsidiaries to headquarters as a proxy for local roots. While the authors do not refer to it as social embeddedness, their description of local roots shares the underlying meaning of social embeddedness. Consequently, geographic dispersion of operations has previously been used in related work.

Control Variables

We also consider a number of control variables based on the studies of Berrone et al. (2010), Craig and Dibrell (2006), Grant et al. (2002), and King and Lenox (2002). Specifically, we control for *profitability*, *size*, *age*, and *industry*.

As profitable firms may have a greater ability to focus on environmental issues, we believe it is important to control for this factor (Berrone et al. 2010; Dawkins and Fraas 2011). We operationalize our control for profitability it using the following question from the BLD: "Compared to the previous year, did any of the following decrease, stay the same or increase: Profitability." We create a dummy variable *ProfitUp* that takes the value 1 if the firm's profitability increased in the previous year, and *ProfitDown* that takes the value 1 if the firm's profitability decreased in the previous year. Consequently, our baseline in the analyses is that profitability stayed the same. While we acknowledge that an objective measure would have been optimal, we are limited to using this measure and believe that it captures the essence of our concern.

Furthermore, as the firm grows in size its ability to allocate resources to start considering its environmental impact increases (Grant et al. 2002). Consequently, in line with prior work, we control for size and operationalize it using the natural logarithm of a firm's sales that are reported for the financial year (Grant et al. 2002; King and Lenox 2002; Sarkis and Cordeiro 2001). We exclude any firms that do not report sales or do not have any sales for the year.

Similar to the issue of size, the age of the firm may also affect the importance it places upon environmental performance measures. We control for the age of the firm using the following question from the BLD: "As at 30 June, how many years had this business been in operation regardless of changes in ownership?" The participants were able to choose "Less than 5 years," "5 year to less than 10 years," "10 years to less than 20 year," or "20 years or more." We form four dummy variables based on these responses, *AgeNew* takes the value 1 if the firm is less than 5 years old. *AgeYoung* takes the value 1 if the firm is 5 years to less than 10 years old. *AgeMature* takes the value 1 if the firm is 10 years to less than 20 years old. *AgeOld* takes the value of 1 if the firm has been in operation for 20 or more years.

Finally, we also control for the firm's industry, using its ANZSIC93 industry classification. Consequently, we form twelve dummy variables to control for the following industries: (1) Agriculture, Forestry, and Fishing; (2) Mining; (3) Manufacturing; (4) Construction; (5) Wholesale Trade; (6) Retail Trade; (7) Accommodation, Cafes, and Restaurants; (8) Transport and Storage; (9) Communication Services; (10) Property and Business Services; (11) Cultural and Recreational Services; (12) Personal and Other Services.

Analyses

We use an ordered logit model to test our hypotheses. The ordered logit model can be described as an extension to the traditional logit model by allowing for ordinal outcomes, in contrast to purely dichotomous outcomes that are possible under the traditional logit model. First, we specify our control model that only contains the control variables:

$$\begin{aligned} EnvFocus_{i,t} = {} & \beta_1 ProfitUp_{i,t-1} + \beta_2 ProfitDown_{i,t-1} \\ & + \beta_3 Size_{i,t} + \beta_4 AgeYoung_{i,t} \\ & + \beta_5 AgeMature_{i,t} + \beta_6 AgeOld_{i,t} \\ & + \beta_7 Agriculture_{i,t} + \beta_8 Mining_{i,t} \\ & + \beta_9 Manufacturing_{i,t} + \beta_{10} Construction_{i,t} \\ & + \beta_{11} Wholesale_{i,t} + \beta_{12} Retail_{i,t} \\ & + \beta_{13} Hospitality_{i,t} + \beta_{14} Transport_{i,t} \\ & + \beta_{15} Communication_{i,t} + \beta_{16} Property_{i,t} \\ & + \beta_{17} Cultural_{i,t} + \beta_{18} Year09 + e_{i,t}, \end{aligned} \tag{1}$$

where *EnvFocus* is an ordinal variable that ranges from 0 to 3 representing the firm's focus on environmental measures when assessing overall performance, specifically: (0) Not at all; (1) A Small extent; (2) A moderate extent; (3) A major extent. *ProfitUp* is a dummy variable equating to 1 if firm *i* experienced an increase in profit in the previous year. *ProfitDown* is a dummy variable equating to 1 if firm *i* experienced a decrease in profit in the previous year. *Size* is a continuous variable that is measured by the log of total sales for firm *i* in time *t*. *AgeYoung, AgeMature,* and *AgeOld* are all dummy variables equating to 1 if firm *i* has been operating for, respectively, 5 years to less than 10 years; 10 years to less than 20 year; or 20 years or more. *Agriculture, Mining, Manufacturing, Construction*, *Wholesale*, *Retail, Hospitality, Transport, Communication, Property, Cultural* are all dummy variables equating to 1 if firm *i* belongs to that specific industry. *Year09* is a dummy variable equating to 1 if firm *i* observation is for the 2008/2009 financial year.

We test hypothesis 1 by extending model 1 and including the variable, *Family*, that captures the family firm status. Specifically, the model is stated as follows:

$$\begin{aligned} EnvFocus_{i,t} = {} & \beta_1 Family_{i,t} + \beta_2 ProfitUp_{i,t-1} \\ & + \beta_3 ProfitDown_{i,t-1} + \beta_4 Size_{i,t} \\ & + \beta_5 AgeYoung_{i,t} + \beta_6 AgeMature_{i,t} \\ & + \beta_7 AgeOld_{i,t} + \beta_8 Agriculture_{i,t} \\ & + \beta_9 Mining_{i,t} + \beta_{10} Manufacturing_{i,t} \\ & + \beta_{11} Construction_{i,t} + \beta_{12} Wholesale_{i,t} \\ & + \beta_{13} Retail_{i,t} + \beta_{14} Hospitality_{i,t} \\ & + \beta_{15} Transport_{i,t} + \beta_{16} Communication_{i,t} \\ & + \beta_{17} Property_{i,t} + \beta_{18} Cultural_{i,t} \\ & + \beta_{19} Year09 + e_{i,t}, \end{aligned} \tag{2}$$

where the control variables are defined in the same manner as for model 1. *Family* is a dummy variable equating to 1 if firm *i* is a family business in time *t*.

We test hypothesis 2 by extending model 2 and including the variable, *SocialEmb*, that captures the social embeddedness of the firm, and an interaction between the *Family* and the *SocialEmb* variables. Specifically, the model is stated as follows:

$$\begin{aligned} EnvFocus_{i,t} = {} & \beta_1 Family_{i,t} + \beta_2 SocialEmb_{i,t} \\ & + \beta_3 Family * SocialEmb_{i,t} + \beta_4 ProfitUp_{i,t-1} \\ & + \beta_5 ProfitDown_{i,t-1} + \beta_6 Size_{i,t} \\ & + \beta_7 AgeYoung_{i,t} + \beta_8 AgeMature_{i,t} \\ & + \beta_9 AgeOld_{i,t} + \beta_{10} Agriculture_{i,t} \\ & + \beta_{11} Mining_{i,t} + \beta_{12} Manufacturing_{i,t} \\ & + \beta_{13} Construction_{i,t} + \beta_{14} Wholesale_{i,t} \\ & + \beta_{15} Retail_{i,t} + \beta_{16} Hospitality_{i,t} \\ & + \beta_{17} Transport_{i,t} + \beta_{18} Communication_{i,t} \\ & + \beta_{19} Property_{i,t} + \beta_{20} Cultural_{i,t} \\ & + \beta_{21} Year09 + e_{i,t}, \end{aligned} \tag{3}$$

where the variables are defined in the same manner as for model 1 and 2. *SocialEmb* is a dummy variable equating to 1 if firm *i* is conducting business only in its local area (immediate area, town, or city) at time *t*. *Family* * *SocialEmb* is an interaction term between the *Family* and *SocialEmb* variables.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics for the categorical variables used in our analysis. The variables are dummy coded, with exception of the environmental performance focus variable that has a range of 0–3. Interestingly, only 28 % of firms in our sample indicated that they do not

Table 1 Descriptive statistics for categorical variables

Variable	Value								Total *n*	Family versus nonfamily $\chi 2$
	0		1		2		3			
	n	%	*n*	%	*n*	%	*n*	%		
Environmental Performance Focus	789	28.0	404	14.3	783	27.8	841	29.9	2,817	2.83
Family (H1)	1,022	36.3	1,795	63.7					2,817	–
SocialEmb	1,710	60.7	1,107	39.3					2,817	6.85***
Family * SocialEmb (H2)	2,079	73.8	738	26.2					2,817	–
Firm characteristics										
Profit increased in $t-1$	2,030	72.1	787	27.9					2,817	13.76***
Profit decreased in $t-1$	1,644	58.4	1,173	41.6					2,817	0.04
Age										
Less than 5 years	2,088	74.1	729	25.9					2,817	59.93***
5 years to less than 10 years	2,202	78.2	615	21.8					2,817	11.58***
10 years to less than 20 years	2,056	73.0	761	27.0					2,817	5.72***
20 years or more	2,105	74.7	712	25.3					2,817	73.86***
Industry										
Agriculture, forestry, and fishing	2,143	76.1	674	23.9					2,817	145.94***
Mining	2,707	96.1	110	3.9					2,817	0.39
Manufacturing	2,369	84.1	448	15.9					2,817	2.75
Construction	2,665	94.6	152	5.4					2,817	1.41
Wholesale Trade	2,521	89.5	296	10.5					2,817	1.21
Retail Trade	2,630	93.4	187	6.6					2,817	1.94
Accommodation, Cafes, and Restaurants	2,637	93.6	180	6.4					2,817	8.04**
Transport and storage	2,654	94.2	163	5.8					2,817	1.43
Communication services	2,682	95.2	135	4.8					2,817	28.35***
Property and business services	2,663	94.5	154	5.5					2,817	25.21***
Cultural and recreational services	2,660	94.4	157	5.6					2,817	18.3***
Personal and other services	2,656	94.3	161	5.7					2,817	4.52*
Time										
2008/2009	1,452	51.5	1,365	48.5					2,817	0.21

Table 1 shows descriptive statistics of categorical variables. Right-hand column shows test statistic from Pearson's Chi-squared test comparing variable distributions between Family and Nonfamily firms

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

consider environmental measures at all when evaluating performance, while 29.9 % of firms report that they have a major focus on environmental measures. Furthermore, 63.7 % of the firms in our sample considered themselves to be a family business. This approximates the general proportion of family firms in the business population (IFERA 2003). We classified 39.3 % of firms as having strong social embeddedness according to our measure, as they only conduct business in their immediate city or town. When looking at the profitability, 41.6 % of firms experienced a decrease in profit in the previous year, while only 27.9 % experienced an increase in profitability. When exploring the age of the firms, we can see that there seems to be an even representation across the four age categories. Looking at the industry break-down we can see that the largest industry in the sample is the *"Agriculture, Forestry, and Fishing"* that represents 23.9 % of firms in the sample, followed by *"Manufacturing"* at 15.9 % and *"Wholesale Trade"* at 10.5 %. We can also observe that 48.5 % of observations were from the 2008/2009 financial year, meaning that the remaining 51.5 % were from the 2007/2008 financial year. In the right-hand column of Table 1, we test for differences between the distributions of family and nonfamily firms for each of the variables. We

use a Pearson's Chi-squared test and find that family firms are more likely to be socially embedded, they are less likely to have increasing profits in the prior period, and they are more likely to be older. Furthermore, we find differences in industry proportions between family and nonfamily firms. Family firms are more likely to be in the Agriculture, Forestry, and Fishing industry but are less likely to be in the following industries: Accommodation, Cafes, and Restaurants; Communication Services; Property and Business Services; Cultural and Recreational Services; and Personal and Other Services. The variable Size (log of total sales) is calculated at 13.38 with a standard deviation of 2.08, which equates to approximately $646,934 in total sales per year.

Hypotheses Testing

We begin our hypotheses testing by estimating Model 1 to assess the impact of our control variables. The results are presented in Table 2, which also includes the results for our estimations of Models 2 and 3. Focusing on the results of Model 1, we can observe that there are a number of the control variables that have significant associations with the environmental performance focus of the firm. The size of

Table 2 Ordinal logit on environmental performance focus

	Pooled			Subgroups	
	Model 1	Model 2	Model 3	Family	Nonfamily
Family (H1)		−0.11 (0.08)	−0.22* (0.10)		
SocialEmb			−0.58*** (0.13)	−0.20* (0.10)	−0.69*** (0.14)
Family * SocialEmb (H2)			0.35* (0.15)		
Firm characteristics					
Size (log of Sales)	0.17*** (0.02)	0.17*** (0.02)	0.15*** (0.02)	0.18*** (0.03)	0.12*** (0.03)
Profit increased in $t-1$	0.40*** (0.09)	0.40*** (0.09)	0.39*** (0.09)	0.35** (0.12)	0.51*** (0.16)
Profit decreased in $t-1$	0.07 (0.08)	0.07 (0.08)	0.05 (0.08)	0.01 (0.10)	0.16 (0.15)
Age					
5 years to less than 10 years	0.21* (0.10)	0.22* (0.10)	0.23* (0.10)	0.07 (0.14)	0.46** (0.15)
10 years to less than 20 years	0.29** (0.10)	0.31** (0.10)	0.32*** (0.10)	0.34** (0.13)	0.21 (0.16)
20 years or more	0.28** (0.10)	0.31** (0.10)	0.33*** (0.10)	0.27* (0.13)	0.47** (0.18)
Industry					
Agriculture, forestry, and fishing	0.61*** (0.20)	0.64*** (0.17)	0.46** (0.18)	0.70** (0.22)	0.25 (0.32)
Mining	0.30 (0.23)	0.31 (0.23)	0.14 (0.24)	0.31 (0.29)	0.03 (0.42)
Manufacturing	0.11 (0.17)	0.12 (0.17)	-0.06 (0.18)	0.16 (0.23)	-0.32 (0.28)
Construction	0.43* (0.20)	0.43* (0.20)	0.37 (0.20)	0.61* (0.27)	0.042 (0.31)
Wholesale trade	−0.17 (0.18)	−0.16 (0.18)	−0.32 (0.19)	−0.03 (0.24)	−0.72* (0.29)
Retail trade	0.29 (0.20)	0.30 (0.20)	0.24 (0.20)	0.44 (0.25)	0.03 (0.32)
Accommodation, cafes, and restaurants	0.30 (0.21)	0.30 (0.21)	0.32 (0.21)	0.48 (0.29)	0.12 (0.32)
Transport and storage	−0.12 (0.21)	−0.10 (0.21)	−0.23 (0.21)	0.01 (0.26)	−0.51 (0.38)
Communication services	−0.19 (0.23)	−0.20 (0.23)	−0.35 (0.23)	0.25 (0.36)	−0.91** (0.32)
Property and business services	−0.04 (0.20)	−0.05 (0.20)	−0.19 (0.21)	0.27 (0.30)	−0.66* (0.30)
Cultural and recreational services	0.12 (0.20)	0.11 (0.20)	−0.01 (0.20)	0.25 (0.28)	−0.37 (0.30)
Time					
2008/2009	−0.13 (0.07)	−0.13 (0.07)	−0.13 (0.07)	−0.10 (0.09)	−0.17 (0.12)
N Obs	2,817	2,817	2,817	1,795	1,022
Pseudo R^2	0.03	0.03	0.03	0.03	0.04
LL	−3,708.86	−3,707.86	−3,695.02	−2,362.02	−1,321.19
/cut1	1.80	1.70	1.13	1.87	0.41
/cut2	3.14	3.04	2.48	3.22	1.79
/cut3	4.67	4.58	4.02	4.69	3.45

Coefficients are unstandardised and robust standard errors are in parentheses

* $p < 0.05$

** $p < 0.01$

*** $p < 0.001$

the firm is positively related to environmental performance focus, meaning that larger firms tend to focus more on environmental measures when evaluating their performance. Profitability is also related to environmental performance focus, as we find a significant and positive effect for firms that experienced an increase in profit in the prior year. Similarly, the age of the firm is also significant in explaining environmental performance focus. As the baseline for our analysis is that the firm is less than 5 years old, it appears that older firms have a greater environmental performance focus. This magnitude of the coefficients across our three age groups also indicates that this focus has a positive relationship with age, as firms that are 10 years or older have the greatest environmental performance focus. Further, we find that certain industries appear to have higher environmental performance focus than others do. Specifically, we find a significant and positive relationship between a firm being in either the *"Agriculture, Forestry and Fishing"* or *"Construction"* industry and its environmental performance focus.

We continue our analysis by shifting the focus to the results of Models 2 and 3. In Model 2, we assess whether being a family firm has a significant effect on the environmental performance focus of the business. Related to our first hypothesis (H1), the regression output indicates that the variable *Family* is not significant in this model; thus, we cannot statistically observe a difference in environmental performance focus between family and nonfamily firms. We then consider our two hypotheses in conjunction in Model 3, by including an interaction between family firm status and its social embeddedness. In Model 3, results indicate that the main effect of *Family* on our dependent variable is significant and negative ($\beta = -0.22$, $p < 0.05$). This means that family firms have a lower environmental performance focus, and the results consequently do not support hypothesis 1. Similarly, we find a significant and negative effect for *SocialEmb* ($\beta = -0.58$, $p < 0.001$), indicating that strong social embeddedness is associated with lower environmental performance focus. However, when observing the interaction between *Family* and *SocialEmb,* we find a significant and positive effect ($\beta = 0.35$, $p < 0.05$), providing support for hypothesis 2. The regression output thus indicates that if the family firm has strong social embeddedness, it will have greater environmental performance focus than nonfamily firms with strong social embeddedness. Furthermore, the magnitude of the interaction term is greater than the main effect for *Family*, indicating that there is a net positive effect for family firms with strong social embeddedness. As this positive effect is conditional on having strong social embeddedness, family firms with weak social embeddedness still have a lower environmental focus as compared to nonfamily firms with weak social embeddedness.

Thus far, we estimated a pooled model where the *Family* effect is captured using a dummy variable and through its interaction with the *SocialEmb* variable. However, this assumes that the *Family* effect is fixed, and that other independent variables are not related to *Family*. As we have found that the *Family* effect is significant, we decide to investigate the *Family* effect in more detail by estimating Model 3 for family firms and nonfamily firms separately. This allows us to observe any systematic differences amongst family and nonfamily firms across all independent variables. The results of this analysis are presented in Table 2. The results show some notable differences between the two groups, primarily with respect to the effect of industry. The output presented in Table 2 indicates that amongst family firms, there are several industry dummies that have significant and positive effects. In other words, if a family firm is operating in the *"Agriculture, Forestry and Fishing"* or *"Construction"* industries, then it will have a greater environmental focus than other family firms. Whereas for nonfamily firms, we find significant and negative effects for firms in the *"Wholesale Trade," "Communication Services,"* and *"Property and Business Services"* industries.

Using the results of the subgroup analysis in Table 2, specifically the coefficients and cut-off values for the family firm subgroup, we calculate the predicted probabilities of family firms having a specific environmental performance focus, which is presented in Table 3. This offers a more meaningful way to interpret the results reported in Table 2 and allows the reader to compare and contrast the effects of individual variables. The probabilities should be considered in isolation for each variable. This implies that if a family firm had an increase in their profit in their previous year, then there is a 22.9 % probability that they would not consider environmental measures at all when assessing their overall business performance, whereas if they had a decrease in profit in the previous year then that probability increases to 30 %.

Robustness

Size Effect

Based on the results thus far, we find that the main effects for *Family* and *SocialEmb* are both significant and negative. This does not follow our prediction in the hypotheses development, as we expected a positive directionality for the *Family* variable. However, if our current proxy for size, the natural log of total sales does not capture the size effect then it may lead to biased results for measures that are related to firm size. In other words, if family firms and

Table 3 Predicted probabilities of family firms environmental performance focus

	Not at all (%)	A small extent (%)	A moderate extent (%)	A major extent (%)
Socially embedded	30.1	32.3	25.5	12.1
Not socially embedded	26.1	31.6	28.0	14.3
Firm characteristics				
Profit increased in $t-1$	22.9	30.5	30.0	16.6
Profit stayed the same in $t-1$	29.6	32.2	25.9	12.3
Profit decreased in $t-1$	30.0	32.3	25.6	12.1
Age				
Less than 5 years	31.7	32.5	24.5	11.3
5 years to less than 10 years	30.3	32.3	25.4	11.9
10 years to less than 20 years	24.8	31.2	28.8	15.2
20 years or more	26.2	31.6	27.9	14.3
Industry				
Agriculture, forestry, and fishing	21.6	29.9	30.8	17.7
Mining	28.8	32.1	26.3	12.7
Manufacturing	32.1	32.5	24.3	11.1
Construction	23.2	30.6	29.8	16.4
Wholesale trade	36.3	32.4	21.9	9.4
Retail trade	26.3	31.6	27.9	14.2
Accommodation, cafes, and restaurants	25.5	31.4	28.4	14.7
Transport and storage	35.4	32.5	22.4	9.7
Communication services	30.2	32.3	25.4	12.0
Property and business services	29.7	32.3	25.8	12.3
Cultural and recreational services	30.1	32.3	25.6	12.1
Personal and other services	35.7	32.5	22.2	9.6
Time				
2007/2008	26.7	31.7	27.6	13.9
2008/2009	28.8	32.1	26.3	12.7

socially embedded firms tend to be smaller, we have to be confident that we control for size correctly to isolate the *Family* and *SocialEmb* effects. To address this concern, we form alternative proxies for size. First, we use the natural log of total salary expenditure in the year as our first alternative size proxy. Second, we use a categorical question from the BLD that indicates the number of employees as our second alternative size proxy by forming a number of dummy variables for the levels of employees in the firm (Non-employer, 1 to less than 5, 5 to less than 20, 20 to less than 200). We re-estimate our models using these two alternative size proxies individually and find that the *Family* and *SocialEmb* variables maintain their significance and negative direction.

Social Embeddedness

In our hypotheses testing, we measured social embeddedness by considering if a firm operates only in their immediate area, town, or city or if they operate in other markets as well. While geographic dispersion of operations was considered as a proxy for local roots by Berrone et al. (2010), there exists little other empirical work that has established a way to proxy for social embeddedness on a firm level. To scrutinize if our results are driven by our particular operationalization, we form an alternative proxy for social embeddedness. This alternative social embeddedness proxy is based on the main source of income of the firm. We posit that firms whose main source of income is from overseas sales will be less embedded in the social community as their economic dependence upon the local community is low. Using this alternative measure, we find similar results. Social embeddedness is negatively related to environmental performance focus; yet, the interaction between this alternative measure and family status is positive which is equivalent to our initial results.

Panel Structure

In this study, we use longitudinal data where we observe firms in two time-periods (2007/2008 and 2008/2009). While we have included a dummy variable to capture the

time component in our model, it assumes a homogeneous time effect across all firms. To ensure that our results are not sensitive to this assumption, we estimate a panel model. As the variables of interest, *Family* and *SocialEmb* are mostly time-invariant, we use a random effects model where we are able to capture any firm-specific time-variant random component. We find that our results still hold as both *Family* and *SocialEmb* remain significant and negative, while the interaction effect remains significant and positive.

Proportional Odds

One of the most fundamental assumptions of the ordered logit model is the proportional odds assumption. This means that the model assumes that the relationship between each of the outcome groups is the same. In our case, this means that the estimated coefficients can be used to describe the relationship between not having any environmental performance focus ($EnvFocus = 0$) and having a minor environmental performance focus ($EnvFocus = 1$), while at the same time also being able to describe the relationship between having a moderate ($EnvFocus = 2$) versus a major environmental performance focus ($EnvFocus = 3$). To test for the proportional odds assumption, we utilize the Brant test. The non-significant Brant test statistic ($probability > chi2 = 0.21$) indicates that our data does not violate the proportional odds assumption and that we can safely use the ordered logit model.

Discussion

In this study, we contribute to the growing debate on the determinants of environmental performance and proactive environmental strategies. We extend the existing literature by considering the role the family may play in affecting the importance of environmental concerns in a family firm and specifically within the context of privately held firms. Our results generate novel insights on the matter, as we find that family firms have a lower environmental performance focus than nonfamily firms. However, we also find that family firms with strong social embeddedness in their local community have greater environmental performance focus than their nonfamily counterparts. Below, we discuss these two results in detail and consider them in conjunction with prior evidence and this in the light of the socioemotional wealth perspective.

Our findings did not provide support for H1, which stated that private family firms will have a higher environmental performance focus than private nonfamily firms. The hypothesis was developed by analogy with similar prior testing that focused on publicly held firms. More so, our results showed the opposite of the initial hypothesis, namely a significant negative relationship between private family firms and environmental performance focus. As such, our findings are not in line with prior research of Berrone et al. (2010), who proved this relationship to be positive, given a public company setting. Our findings further contradict the conditional support found by Uhlaner et al. (2012) who utilized a similar setting by focusing on private SMEs. The authors only found a significant positive effect between family influence and environmental management practices if the firm had a larger owning family (three or more owners). Instead, our results are more in line with the findings of Craig and Dibrell (2006) who argue that private family firms have weaker pro-environmental values than private nonfamily firms. However, in excess of the work of Craig and Dibrell (2006), we focus on actual pro-environmental business practices. In addition, we consider the effects of profitability, size, age, and industry on the environmental performance focus of the business. Consequently, we provide incremental knowledge to the prior findings of Craig and Dibrell (2006).

In light of explaining our findings, Berrone et al. (2010) postulated that family firms are more willing to risk the uncertainty of economic outcomes in relation to undertaking environmental strategies that go beyond the obligatory level. However, while contrary to our initial hypothesis, it appears this reasoning may only hold in the context of public companies. Berrone et al. (2010) describe how these family firms are driven by the preservation of socioemotional wealth, which they believe outweigh the related economic risks. As a result, these family firms are more likely to engage in institutional compliance causing them to exhibit better environmental performance than their competitors. Yet, what the authors failed to acknowledge is that family firms, with their minimum of 5 % ownership in the public company context, have a shared financial risk of the environmental investments as a family, yet, have full gains of possible socioemotional wealth that is generated. Consequently, the family may be expropriating financial wealth from the firm for the purposes of increasing their socioemotional wealth (Kellermanns et al. 2012). Whereas in the private company context, families usually hold the absolute majority in ownership and in most cases even control 100 % of the stocks. We therefore argue that the economic risk and increased uncertainty associated with the increased environmental performance focus will be fully imposed on the family. Prior research has indicated short-term penalties for environmental proactiveness in a business (Ahuja and Hart 1996; Sarkis and Cordeiro 2001). Sarkis and Cordeiro (1997) find that environmental performance will lead to a decrease in financial performance in the first five years, although the authors argue that these short-term costs

might be offset by long-term gains. This short-term cost, certainty when connected to long-term uncertainty, might be perceived as too much of a risk for private family firms.

Also, the desirability of pursuing an environmental focus will also depend on the context in which the company is situated. Family firms that are in the early stages of business development might put less priority on environmental awareness and be more committed to sustaining business growth and development. The prevalence of a business development focus rather than an environmental focus might also be instigated by the community in which the family business is situated. Communities with, for example, high levels of unemployment or high competitive pressure might aspire to develop at all costs. As such, one must bear in mind that the desirability of an environmental focus will also be dependent on other contextual issues.

Furthermore, the consideration of environmental performance within the business would also imply major changes in the decision-making and operation processes of the business, and additional investments in new organization resources (Sharma and Sharma 2011). Thus, as the proportion of risk for the family would increase without any change in the possible generation of socioemotional wealth, we believe that the trade-off between cost and gain has altered when the issue is framed in the private firm context. Private family firms might have a higher priority on keeping the business healthy and afloat, and providing business opportunities for future generations which is in compliance with their generally long-term focus, than that they are willing to put the family's assets at risk to invest in the natural environment. Perhaps, the socioemotional gain in this setting resides in the primary concern of looking after the family by providing them with a healthy business.

In addition to this explanation, we further argue that private firms might be less submissive to different stakeholder pressures than public firms are. Sharma and Sharma (2011) have mentioned stakeholder pressures to be one of the major drivers that influence firms to go beyond regulatory compliance in their environmental strategies (Sharma and Henriques 2005). The managerial perceptions regarding the importance of stakeholder pressures have also been proven to result in a more proactive attitude of the firm toward environmental commitment (Henriques and Sadorsky 1999). Thus, this driver is likely to diminish in intensity given a private firm context.

Our findings did however provide support for H2, which stated that the social embeddedness of the family firm moderates its relationship to environmental performance focus. Contrary to the reasoning of Uhlaner et al. (2012), we did not consider social embeddedness as a fixed variable in the family firm context. Rather, in line with the theoretical arguments of Berrone et al. (2010), we posited that social embeddedness may play an important moderating role in explaining the importance that a family firm places upon its environmental performance. When the family firm has strong social embeddedness, the social monitoring increases and in turn so do the potential socioemotional gains or losses related to environmental performance. Our results rendered strong support for this reasoning and thereby confirm the findings of Berrone et al. (2010) in a private firm setting. More importantly, the interaction effect between *Family* and *SocialEmb* is greater than the main effect that the *Family* has. Consequently, while family firms in general have lower environmental performance focus, the net result is the opposite when comparing family and nonfamily firms with strong social embeddedness. This interesting moderating effect indicates that socioemotional wealth and how the family may go about to attain it may be impacted by the context in which the firm operates. This novel insight is a key contribution that this study makes. Following this reasoning, creating harmony between economic success, family success, and social responsibility becomes more prominent or has higher gains for the family when the firm has strong social embeddedness, making the impact of this feature more paramount for family firms than nonfamily firms. Family firms are found to have a more long-term orientation in their decision making (Miller and LeBreton-Miller 2005) and have stronger community citizenship behavior particularly at a local level (Post 1993). Moreover, the family's identity often gets intertwined with that of the firm (Kets de Vries 1993). One could argue that the costs of being labeled as socially irresponsible—resulting in negative publicity—would be perceived higher by family firms, due to the overlap between the family and the business, when the business is strongly embedded in the local community. Thus, as an important implication for theory, we argue that the family firm's desire to protect socioemotional wealth might be contingent on business circumstances. This reasoning would infer that socioemotional wealth for family firms is *not* an unconditional family business objective, but that its possible achievement is always evaluated in comparison to something else, such as a possible loss, risk, or cost. We believe this novel insight can contribute significantly to our understanding of the socioemotional wealth construct and induce further theory building.

Limitations

Similarly as to all research, our study was not without limitations, which in turn might give rise to possible directions for future research. First, we were limited in our ability to classify family firms as we had to rely on a

dummy coding. In other words, we are not able to capture an effect that may be due to percentage of family ownership level, the effect a family versus nonfamily CEO may have, or the effect of the generation involved in the business. Consequently, our results are limited to considering family firms as a whole, even though family business literature has highlighted the heterogeneity within family firms (e.g., Dekker et al. 2013; Sciascia and Mazzola 2008). However, we were able to investigate differences within the family firms specifically using subgroup analysis. This allowed us to find inter-industry differences in the environmental performance focus of family firms, and these were specific to the family firm subgroup. Further, the *Age* variable could be used as a proxy for family generation, in which the firms of 20 years and older in our sample could be considered as possible second or later generation family firms.

A second limitation is the use of secondary data. As we utilized a large government database to operationalize the constructs established in the hypotheses development, we had to use proxies to estimate these constructs. For example, in our operationalization of social embeddedness, we used the geographic dispersion of operations. This measure, while similar in theory to the measure of Berrone et al. (2010), does not fully capture the richness of social embeddedness. We did however use an alternative measure based on the main sources of income, which provided us with qualitatively similar results. The use of secondary data also forced us to analyze the time period of 2007–2009 which coincided with the GFC; however, the Australian economy was not severely affected by the crisis as it maintained positive growth throughout. Furthermore, the majority of the variables used were categorical, and consequently we are limited in our ability to draw inferences with respect to the linearity of the relationships. Finally, there may also be an issue of endogeneity from a conceptual point of view, meaning that perhaps firms that have a higher environmental performance focus choose to become more socially embedded in the community. However, while primary data would have the advantage of more precision in measurement, it would not be possible to gather data that is as reliable and representative as the BLD. Consequently, we believe that the BLD's strengths outweigh its drawbacks.

A third limitation is that we test our hypotheses in the Australian context. As Australia is a highly developed economy with specific cultural values, the relationships we observed may not hold in some other contexts. Nevertheless, we believe that our findings have the ability to inform researchers in country contexts that have a similar economic landscape regarding family business characteristics and their economic importance, namely North America and Western Europe (IFERA 2003).

Future Research

We believe that our study and the unexpected findings present a number of potential avenues for future research. We drew on the socioemotional wealth perspective and hypothesized that private family firms have a greater environmental performance focus than their nonfamily counterparts. However, our results indicate that this is only the case for firms that have strong social embeddedness in the local community, whereas in situations where weak social embeddedness exist the nonfamily firms tend to have greater environmental performance focus. We believe that future research should attempt to further assess these unique findings by discriminating between different types of family firms more effectively. We expect that these findings could be further explained by, for example, ownership level, board composition, family management, or the family generation in charge of the firm. Moreover, the drivers of environmental performance focus in family firms should not only be explored amongst the descriptive and static features. As business behavior is largely shaped by the owning family's intention, it would be interesting to scrutinize certain intangible aspects that can influence family's intention. In this respect, we argue that the impact of the prevailing family values, specific customs, and rituals and the family's religious affiliation are interesting future research avenues. Insights in these matters will enable us to fully grasp the underlying reasons for environmental performance focus in family firms. Another interesting avenue of future research could focus on particular industries. In our study, we find that family firms make up a large portion of firms in the Agriculture, Forestry, and Fishing industry. Furthermore, this industry is also of interest as our results show that firms in this industry tend to have a greater environmental performance focus. This is true for both family and non-family firms. Future research could focus on this industry as it is interesting from a conceptual point of view, firms in this industry have a more direct contact with the environment and are most likely aware that their long-term health is based on sustainable business practices.

Furthermore, while we focused on private firms in this study, we believe that these novel results that contradict the findings in the publicly held firm context may indicate that there are additional issues to explore in publicly listed family firms. We conjectured that our results may be explained by the fact that in publicly listed family firms, the financial risk associated with increasing their environmental performance focus is directly tied to the ownership level of the family, while the potential socioemotional wealth gain is static. In other words, we believe that the family may be expropriating wealth from the public firm indirectly, by allocating resources for purposes that may

appear as altruistic. Effectively, the nonfamily shareholders bear part of the cost in developing the family socioemotional wealth. This curious form of wealth expropriation provides a highly interesting area for future research to explore.

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