Drivers of Environmental Responsibility in Family Firms: The Role of an Environmental Manager

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Abstract: Despite the significant role of family firms in economies throughout the world, their academic research is relatively young. Furthermore, previous empirical studies in the field have focused on general topics, rather than examining how family firms are similar or different from other types of organisations in the decision-making process. Little is known about what drives family firms to implement environmental concerns in their strategies. Based on the above-mentioned findings, the research aims to analyse what the main drivers of environmental responsibility are in family firms in Central and Eastern Europe (CEE) countries. The empirical study uses logistic regression that examines how selected important factors influence the adoption of strategic objectives that mention environmental or climate change issues. The study uses a data set from the World Bank Enterprise Survey 2019 and examines the attitudes of family businesses in four CEE countries (Czech Republic, Slovak Republic, Poland, and Estonia). The findings revealed a significant influence of the environmental manager, the customer's environmental requirements, and the energy performance standards on adopting strategic environmental objectives in family companies. We also consider the environmental manager as a key factor in terms of knowledge transfer and management of environmental responsibility in the firm. The results of this research provide a new perspective on the environmental responsibility of family businesses and explain which drivers should be considered when deciding to establish strategic objectives related to environmental issues. Managers should take these findings into account when deciding which tools to use to increase pro-environmental behaviour and implement environmental strategies.

Keywords: Environmental strategy, Family firms, Knowledge management, Drivers, Environmental manager

1. Introduction

The concept of sustainable development has been at the forefront of global discourse since 1987, when the World Commission on Environment and Development published its report "Our Common Future" (Brundtland, 1987). In recent years, this push for sustainability has put pressure on businesses to behave in a responsible and sustainable manner, which is often at odds with shareholder objectives (Barnea and Rubin, 2010).

Previous studies have found that family businesses with diverse values are more likely to innovate and adopt sustainable practices than businesses with homogeneous values (Giachetti and Marchi, 2015). Additionally, research has shown that family businesses are more concerned with environmental responsibility issues than other types of firms (Ludeke-Freund and Dembek, 2017). Ultimately, family firms have the potential to contribute to the Sustainable Development Goals (SDGs) given their commitment to long-term sustainability and their focus on stakeholder relations (Cheng and Krumwiede, 2012). Although research in this area is still lacking, evidence suggests that family firms can be at the forefront of sustainable development efforts.

The existing literature on the factors that lead family businesses to introduce environmental aspects into their strategies has been significantly influenced by developments in Western countries (USA, Canada, Western European countries). A gap in existing research can be seen in the lack of published studies on family businesses in the transition economies of Central and Eastern Europe (CEE) countries (Duh, Tominc and Rebernik, 2009).

The contribution of this paper is the identification of factors that influence environmental responsibility and can serve for the successful implementation of environmental strategies in family firms in CEE countries. The empirical study is framed under the umbrella of knowledge management, since knowledge management has a long-term orientation, it fits well with sustainability and sustainable management (Chow and Chen, 2012).

This paper has been divided into the following parts: the second chapter provides theoretical background, chapter 3 presents the data and methodology, and chapter 4 shows the empirical results and describes the discussion of results. The last chapter considers conclusions and limitations.

2. Theoretical Background

2.1 Environmental Responsibility of Family Firms

Family businesses are an increasingly common form of entrepreneurship around the world. According to a survey conducted by PricewaterhouseCoopers (PwC), family businesses account for 85% of all businesses worldwide and generate more than 70% of gross domestic product (GDP) (PwC, 2018). With the growing number of family businesses, it is important to research and address these issues so that family businesses can maintain their competitive advantages and survive in the marketplace.

One of the key advantages of family businesses is strong family ties and loyalty, which translates into long-term strategy and greater stability of the business (Hussain et al., 2017). Another advantage can be seen in flexibility and quick adaptation to market changes (Jaskiewicz et al., 2017). On the other hand, these family ties can lead to conflicts and unprofessional behaviour, especially when a new generation joins the leadership of the firm (Dawson et al., 2017; Berrone et al., 2012). It is important to ensure adequate preparation and training of potential successors so that they are able to take over the leadership of the firm without major problems (Miller and Le Breton-Miller, 2017).

Brundtland (1987) emphasizes the principles of sustainability and environmental protection in economic development. Shareholders prioritize profit maximization and increasing shareholder value, while corporations face pressure to be responsible and sustainable (Barnea and Rubin, 2010). Family firms may have higher levels of environmental responsibility than non-family businesses due to their long-term focus and nurturing of customer and community relationships (Cheng and Krumwiede, 2012). Many authors agree that family firms are more concerned with environmental responsibility issues than other types of firms (Ludeke-Freund and Dembek, 2017; Giachetti and Marchi, 2015). Craig and Dibrell (2015) observed that environmental sustainability and a positive attitude towards innovation positively affect firm performance.

However, the impact of family involvement on environmental responsibility can vary depending on cultural and institutional factors (De Massis et al., 2018). Bianchi et al. (2018) noted that family involvement in the role of CEO or chairman is significantly related to environmental responsibility. Family businesses can play a significant role in addressing environmental issues and promoting sustainable development, but research in this area is still lacking (Rondi and Tognoni, 2018). Díaz-Garcia and González-Márquez (2019) found that family influence, organisational culture, stakeholder pressure, and resource availability can affect innovation in sustainability of family firms. Patuelli et al. (2022) suggest that family companies have the potential to contribute to achieving SDGs, considering their commitment to long-term sustainability and their focus on stakeholder relationships.

2.2 Role of Different Stakeholders in the Implementation of Knowledge Management in Environmental Responsibility

It is known that strategic commitment and integration of sustainable aspects into the existing business system and corporate strategy is necessary to enhance the environmental benefits of a company's operations (Evangelista and Durst, 2015). Sandberg and Aman (2010) also argue that organisational learning is a key element for achieving competitive advantage based on environmental responsibility. Knowledge management can be seen as crucial to achieving sustainability goals (Gloet, 2006; Robinson et al., 2006) and to developing environmentally sustainable strategies (Evangelista and Durst, 2015).

The issue of environmental responsibility cannot be dealt with by just one body. This means that companies must seek to involve other stakeholders to increase the success of any environmental activities. As knowledge management should not only have an internal focus, companies should also consider how best to involve different stakeholders in the knowledge management approach to improve the effective use of existing and future knowledge (Evangelista and Durst, 2015). Given the interconnectivity of the economic, environmental, and social issues that form the pillars of sustainability, organisations must adapt to even greater involvement of different stakeholders (Van Kleef and Roome, 2007). Stakeholders can be viewed not only as internal or external, but also as primary and secondary (Sarkis et al., 2010). Primary stakeholders (shareholders and investors, employees, customers) are essential to the survival of the business (Helmig et al., 2016); secondary stakeholders (central government, local government, and pressure groups) have influence on the implementation of environmental responsibility through regulation and other sanctions to create and maintain a safe environment (D'Souza et al., 2022). Implementing environmentally sustainable practises can help organisations improve stakeholder relations (Singh and Mittal, 2019). Korsakienė and Raišienė (2022) state that the influence of stakeholder groups differs between firms, sectors, and countries, and future research could focus on understanding different stakeholders and their impact on environmental responsibility.

On the basis of the above-mentioned, a research question was determined: What are the main determinants of environmental responsibility in family businesses in CEE countries?

3. Data and Methodology

This study uses data from the World Bank Enterprise Survey (WBES) 2019, which provides firm-level cross-sectional data from a representative sample of companies in the private manufacturing and service sector. The survey covers a wide range of topics related to the business environment, including access to finance, environmental issues, corruption, infrastructure, competition, research and development, knowledge, performance measures, and others.

The research is based on a multi-industry sample of 1,176 family firms in the transforming economies of CEE, Czech Republic, Slovakia, Poland, and Estonia. These countries have gone through similar developments since the 1990s, and some studies suggest that family businesses are becoming the main driving force behind economies in former socialist, or transition, countries (Dana and Ramadani, 2015; Duh et al., 2009; Duh and Tominc 2005; Galetic 2002).

The family business field has traditionally employed several definitions of family firms (Miroshnychenko et al., 2022; Duh et al., 2009; Chua et al., 1999; De Massis et al., 2012), and there is no generally accepted definition of a family business in either developed economies or transition countries. For the purpose of our research, we rely on definitions (European Commission, 2009) that simultaneously capture family ownership and the presence of family members in firm management positions. Thus, we consider a family-owned firm to be one where more than 50% of the firm is owned by a single family, and at the same time more than 10% of key managerial positions are occupied by family members.

As the explained variables are dichotomous (binary; 1: yes, 0: no) for the estimated model, we used a binary logistic regression, that examines how selected important factors influence the adoption of strategic objectives that mention environmental or climate change issues.

For the dependent variable, a question was chosen from the Green Economy Module of the WBES, which determines whether the company had strategic objectives that mention environmental or climate change issues. Successful integration of environmental concerns into corporate strategy cannot be achieved without clear leadership, resource allocation and active support from top management (Fugate et al., 2012). The absence of strategic objectives for environmental and climate change issues and related strategies is likely to have a dual impact on the enterprise, i.e. externally and internally. It may lead to difficulties in terms of informing employees about the environmental stance of the business, as well as managing and structuring environmental work within and across the business (Evangelista and Durst, 2015).

The independent variables are divided into two groups, primary and secondary stakeholder pressure. Primary stakeholders include employees, customers, suppliers, and shareholders in the research, and secondary stakeholders mainly include government, local government, and pressure groups (D'Souza et al., 2022; Hillman and Keim, 2001; Maon et al., 2009).

Table 1: Description of Variables

Variable name	Notation	Variable Definition
Dependent variable	DV	
Strategic objectives for environmental and climate change issues.	Strat_obj	
Independent variable	IV	
Primary stakeholder pressure		
Environmental Manager	Env_manager	Existence of a manager responsible for environmental and climate change issues.
Meetings with the top manager	Engag	How often does the top manager meet with employees involved in production activities in a typical working week?
Female owner	Fem_own	There is a woman among the owners of the firm.
Female top manager	Fem_manager	There is a female top manager in the firm.
Market pressure	Mark_pres	A request from any of the customers for environmental certification or compliance with

Variable name	Notation	Variable Definition
		certain environmental standards as a condition for doing business with this business.
Secondary stakeholder pressure		
Energy standard	Ener_stand	The establishment was subject to an energy performance standard in its operations.
Energy tax	Ener_tax	This establishment was subject to an energy tax or levy.
Control variable	CV	
Country	Country	CZE – Czech Republic EST – Estonia POL – Poland SVK - Slovakia

4. Results and Discussion

The results in Table 2 show that it is possible to identify drivers that impact environmental responsibility in family businesses. The greatest influence is the existence of a manager responsible for environmental and climate change issues. His presence increases the chance of environmental responsibility 15 times. This corresponds to Greenwood et al., 2012 who says that environmental managers play an important role in an organisation's pursuit of environmental sustainability. Similarly, Daily and Huang (2001) state that environmental managers must provide adequate training to all employees in terms of reducing negative environmental impacts, since this requires active and knowledgeable participation from all employees at an organisation. In connection with this, Šperková and Skýpalová (2020) state that employees, especially the Y generation (born in the 1980-90s), have begun to require more employer activity in the field of corporate social responsibility. This result is also consistent with the findings of Jang et al. (2017) who report that environmental managers prioritise environmental issues when developing strategies and operational procedures and incorporate environmental stakeholder demands into corporate strategies.

Table 2: Results

Variable	Level	Coeff.	OR	P-value	Sign. Code
(Intercept)		-2.4401		< 2e-16	***
Env_manager	1	2.7085	15.006705	< 2e-16	***
Mark_pres	1	0.8194	2.269029	0.0009466	***
Ener_stand	1	0.7913	2.206328	0.012871	*
Fem_own	1	0.4360	1.546448	0.0185444	*
Country(ref:CZE)	EST	-0.4073	0.665446	0.190277	
	POL	-0.4609	0.630719	0.070936	
	SVK	0.8451	2.328161	0.000517	***

Signif. codes: '***' 0.001; '**' 0.01; '*' 0.05; '.' 0.1

Then, a request from any of the customers for environmental certification or compliance with certain environmental standards as a condition for doing business with this business increases the probability by about 2.27 times. This is confirmed by Johnstone and Labonne (2009), who state that customers, if they do not have enough information about suppliers, may choose to purchase goods from firms that have Environmental Management System certification. In the area of customer satisfaction measurement, companies do not focus only on past performance, but seek a comprehensive understanding of their customers' needs and attitudes (Striteska and Jelinkova, 2015). In the context of growing concerns about the quality of the environment, customers have started to put pressure on companies to address the environmental impact of their activities (e.g. Henriques and Sadorsky, 1996; Buysse and Verbeke, 2003; Horbach, 2008; Delmas and Montiel, 2009; Guoyou et al., 2013). As part of their research by Canadian companies, Henriques and Sadorsky (1996) confirmed that the adoption of an environmental plan is positively influenced by customer pressure. Buysse and Verbeke (2003) and Guoyou et al. (2013) observed that pressures from customers motivate environmental proactivity. Khanna and Anton (2002) found that firms that are more exposed to consumer pressures to their environmental performance are more likely to adopt a comprehensive environmental management system. Researchers (Rueda-Manzanares et al., 2008; Carballo Penela and Castromán-Diz, 2015; del Mar Miras-Rodriguez, 2018) point out that general awareness and interest in the environment are growing among customers, who are increasingly taking environmental factors into account in their purchasing decisions. Although the authors of empirical studies do not always show identical results, most of them have agreed on the importance of customer pressure on environmental responsibility (Carballo-Penela and Castromán-Diz, 2015), which is in line with our results.

Similar results to the influence of customers are achieved by the influence of the energy performance standard, which increases the chance of environmental responsibility in family firms by 2.2 times. This result agrees with D'Souza et al. (2022), who report that governments are influential in implementing environmental responsibility using energy performance standards and other regulations to create and preserve a safe environment.

Similarly, the variable of the female owner also appeared to be significant, increasing the probability by more than 1.5 times. Similar results were obtained in empirical evidence that suggests (Nadeem et al., 2020) that women on boards are associated with better corporate social responsibility ratings (Bear et al., 2010; Nadeem et al., 2017; Post et al., 2011) and that female representation on corporate boards is considered a significant determinant of corporate policymaking (Levi et al., 2014; Mohan, 2014). Nadeem et al. (2020) also found that female representation on boards is positively associated with the creation of environmental values in family firms, but it has no impact on the creation of economic and social values.

Regarding our control variables, we show that the differences between the examined CEE countries are also significant. Our model shows that the countries that are the least likely to adopt strategic environmental and climate change goals are Estonia and Poland, which are basically the same. This is followed by the Czech Republic, where there is about 1.5 times more chance than Estonia (and Poland), which is not significant. In Slovakia, there is almost 3.5 times greater chance than Estonia (and Poland). In Slovakia, there is a significantly higher chance than in the Czech Republic, about 2.3 times.

Other variables (Female top manager, Meetings with the top manager, Energy tax) are no longer significant (at level α=0.05) in this model.

5. Conclusion

This paper reveals the relationships between the variables examined that may serve to successfully implement environmental strategies through knowledge transfer and provides new insights into environmental behaviour through the lens of family business. Using the logistic regression method, we identified the determinants that influence environmental responsibility in family firms in selected CEE countries. We found that the presence of a manager responsible for environmental issues increases the chance of environmental responsibility 15 times. We also found that customer demands for environmental compliance increase the likelihood by 2.27 times, and the influence of energy performance standards increases the chance of environmental responsibility in family firms by 2.2 times. The presence of a female owner still emerged as a statistically significant variable, increasing the odds by more than 1.5 times. The other variables examined do not have a statistically significant effect on the dependent variable.

The benefits of this research are that the results provide a new perspective on the environmental responsibility of family businesses and explain which factors should be considered when deciding to set strategic goals related to environmental issues. The findings of this study have several applications for family business owners, managers, and policy makers in other transition countries. Managers should take these findings into account when deciding what tools to use to increase pro-environmental behaviour and implement environmental strategies. The presence of an environmental manager has been found to increase the likelihood of adoption of environmental sustainability programmes. From this perspective, employee education and training plays a vital role in the creation and development of environmental knowledge both inside and outside of the company. Therefore, it is important for managers to focus on training and education programmes that anchor environmental sustainability thinking in the minds of employees. The expected benefits that knowledge management can bring to the field of environmental responsibility open up the potential for researchers from different disciplines.

This study has its own limitations as well, which in turn provide an opportunity for future research. First, our study is based on a sample of firms from selected CEE countries, whose historical development after 1990 is similar. A further study could be extended to other post-communist countries. Second, the study does not consider the effect of company size. Further research could focus on the determinants of environmental responsibility in small and medium-sized enterprises and large enterprises. Third, it would be interesting to carry out research to compare the behaviour of family and non-family firms in terms of environmental responsibility issues. To conclude, more input variables can be added, and a different analysis method can be used in the future.

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