



# Intra-family succession motivating eco-innovation: A study of family firms in the German and Italian wine sector

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## ABSTRACT

Despite the increasing relevance of environmentally friendly practices in the wine industry, which are mainly shaped by family firms, research has yet to examine in detail the internal drivers of eco-innovation in such firms. Intra-family succession as a driver of eco-innovation is an intriguing topic of study, as prior studies indicate that it may create new opportunities. Accordingly, a field study of 28 family firms was conducted to examine the internal drivers of eco-innovation in depth, with a specific focus on family firms and intra-family succession. The results revealed that intra-family succession encourages family firms to engage in eco-innovation, to different extents, in three ways: (i) becoming a facilitator in the community; (ii) fostering environmental consciousness; and (iii) developing environmental passion. Overall, this study widens the examination of internal factors influencing eco-innovation, improves the understanding of eco-innovation among family firms, and provides evidence of how to support next-generation members to develop their future orientation and consciousness about the importance of protecting natural resources and their responsibility towards stakeholders and the community.

## 1. Introduction

By 2050 environmental challenges are expected to become even more critical and intense (European Environmental Agency, 2020), and firms are required to develop solutions either to address the negative impacts of consumption and production processes or generate positive spill overs (UNGC, 2023). Studies have shown that business activity is responsible for a major share of environmental deterioration through, for example, the depletion of resources, the generation of waste and emissions, and the use of artificial or chemical components, although impacts may vary among different industries (Faure, 2020; Rosen and Sellers, 1999). For instance, the not-for-profit charity CDP estimates that 100 companies are responsible for 71% of global emissions (CDP, 2017); the sixth edition of the Global Environmental Outlook by the UN states that '[t]he production of internationally traded goods accounts for about 30 percent of all CO<sub>2</sub> emissions' (p. 22); and the same document reports that '[a] business-as-usual scenario produces an average sea level rise of 0.7–1.2 m by the end of the 21st century (Horbach and Jacob, 2018)' (p. 87). In addition, the UN Environment Programme highlights that 'resource use more than tripled from 27 billion tons in 1970 to 92 billion tons in 2017' (United Nations Environmental Programme, 2019, p. 9). In

particular, the food and agriculture industry has significant impacts: the Food and Agriculture Organisation of the UN estimated that in 2018, global emissions from agriculture were 9.3 billion tonnes of CO<sub>2</sub> equivalent, although this figure is less than it was in 2000 (FAO, 2020); World Wildlife has identified agriculture as the leading source of pollution (World Wildlife, 2023); and, according to the World Bank, 'agriculture currently accounts (on average) for 70 percent of all freshwater withdrawals globally' (World The World Bank, 2022).

Within the agriculture sector, the EU wine industry has steadily gained importance both economically and socio-environmentally. According to the EU wine market observatory, the EU wine industry accounted for 45% of the global wine-growing areas in 2020 (and 64% of production and 48% of consumption) and is the largest EU agri-food sector in terms of its contribution to export (7.6% in 2020). Due to its growth, the industry has an important role in preserving the ecosystem but faces several environmental concerns (Castillo-Valero et al., 2021; Maesano et al., 2022). Although correct and sustainable wine production activities can contribute to soil fertility and preservation (Brunori et al., 2016; Payen et al., 2021), a large amount of water, fertilisers, and herbicides is required in the product life cycle, making the industry responsible for a significant share of the carbon emissions from the

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agriculture sector (Christ and Burritt, 2013; Ene et al., 2013; Jradi et al., 2018; Ponstein et al., 2019). However, the industry also suffers from the consequences of climate change and related phenomena, such as drought, heavy rains, and soil erosion, further challenging the wine-growers. Evidently, a harmonious relationship between the wine industry and the environment is important for the survival of both. Therefore, sustainability has become central to the development of the industry and its supply chain. This link is further supported by the strong territorial and socio-cultural connotation of the wine product (Schäufele and Hamm, 2017) and the impact on the ecological landscape of grape cultivation (Letelier et al., 2021). Besides these considerations in wine production, consumers' awareness of its sustainable features is slowly increasing, and pressures on the industry to create more sustainable products are intensifying (Forbes et al., 2009; Galati et al., 2019; Navarro et al., 2017; Pomarici and Vecchio, 2014). In this context, existing studies have revealed that sustainability is often associated with wine quality and the credibility of product and production attributes (Schäufele and Hamm, 2017).

In response to the above challenges, wine companies have begun adopting new practices and technologies to integrate environmental (and, to a lesser extent, social) considerations into their activities (Annunziata et al., 2018; Dogru and Peyrefitte, 2022; Pougnet et al., 2022). Eco-innovation thus plays a prominent role in determining the dynamics of the industry in the next decade (Rabadán and Bernabéu, 2021); however, the ability to preserve tradition will remain a key factor, thereby creating tensions for wine producers, especially small-scale ones (Letelier et al., 2021). In broader terms, 'eco-innovation is a complex process that involves product, process, organisational and marketing dimensions, each with its own determinants, characteristics and contributions to environmental business performance' (García-Granero et al., 2020, p 1; Gilinsky et al., 2016).

This study focuses on the conditions under which eco-innovations are adopted in the wine industry, building on existing studies that explore the internal and external drivers of eco-innovation (Ben Amara and Chen, 2022; Frigon et al., 2020). The European wine industry (especially in Italy, France, Spain, and Germany) is highly populated by small and medium enterprises (SMEs) and long-standing family wineries (Broccardo and Zicari, 2020; Kariyapperuma and Collins, 2021). Therefore, this study analyses 28 family-owned SMEs in the wine industry in Italy (12) and Germany (16).

A key moment in family-owned and managed SMEs' evolution is intra-family succession, which is central to the firms' future direction and success (Calabrò et al., 2019). Prior studies have suggested that such succession can bring new opportunities for firm evolution (Carney et al., 2019; Cucculelli et al., 2016) and innovation strategy renewal (Hauck and Prügl, 2015). However, the relationship between intra-family succession and innovation is not fully understood, and prior research has not addressed the former as an opportunity for innovation (Hauck and Prügl, 2015; Rondi et al., 2019; Zyburá et al., 2021). Furthermore, intra-family succession's relationship with eco-innovation remains an under-explored but relevant direction of research (Xavier et al., 2017). Few studies have shown that family firms' engagement in eco-innovation models and practices tends to occur when intra-family succession occurs, confirming that this relationship is a significant stream of investigation (Annunziata et al., 2018; Ferrer et al., 2022; Kariyapperuma and Collins, 2021).

Consequently, this study investigates the internal motivations for eco-innovation in family firms, with a specific focus on the moment that intra-family succession occurs. The analysis is conducted at the individual and family level. Specifically, the study answers the following question: How does intra-family succession drive eco-innovation in family firms?

Overall, this study collates findings from extant literature and contributes to the research in four ways. First, this study extends the investigation of internal factors relevant to eco-innovation (Aksu and Akman, 2023; Ben Amara and Chen, 2022; Bossle et al., 2016; Calvo

et al., 2022; Chaparro-Banegas et al., 2023; Rhaïem and Doloreux, 2022; Tamayo-Orbegozo et al., 2017). Second, this study contributes to the understanding of eco-innovation in family firms, considering intra-family succession specifically as an internal factor, and focuses on the specificities of family firms rather than building on their comparison with non-family firms (Block et al., 2023; Wright, 2017). Third, the study also responds to the call for more investigation about when and how families determine innovation in their firms (Block et al., 2023; Chrisman et al., 2015) by considering the idiosyncratic moment of intra-family succession. Finally, in contrast to prior literature, this study considers eco-innovation as a nuanced phenomenon with varying intensities rather than as a fixed type of innovation (Liao and Tsai, 2019).

The remainder of this paper is structured as follows: Chapter 2 outlines the literature background of the study, detailing the state of research on innovation and eco-innovation in family firms and intra-family succession. Chapter 3 describes the research methods, including the study sample, data collection methods, and data analysis methods. Chapter 4 presents the findings of the study, and Chapter 5 discusses these findings to identify and elaborate on the factors that drive eco-innovation when a new generation inherits a winery. Finally, Chapter 6 contains the conclusions of the study.

## 2. Literature background

### 2.1. Intra-family succession and innovation

A long-running stream of research on family firms concerns the succession phase (Barach and Ganitsky, 1995; Dyck et al., 2002; Hidayati et al., 2021; Le Breton-Miller et al., 2004; Nordqvist et al., 2013), wherein the predecessors exit the company and the successors take over the family firm and aim to seize new business opportunities (De Tienne, 2010; Habbershon and Pistrui, 2002; Hidayati et al., 2021; Nordqvist et al., 2013). This process has been described as a period during which 'collaboration between the senior and junior generation involves the transfer of managerial control in which power is gradually shifted from one generation to the other' (Hauck and Prügl, 2015, p. 106).

Extant literature has predominantly discussed the challenges that family businesses face during intra-family succession processes, considering these processes as a generator of conflicts and a threat to business survival rather than as an opportunity (Calabrò et al., 2019; Hauck and Prügl, 2015). However, scholars have recently started to examine intra-family succession as an opportunity for business renewal and long-term success (Hidayati et al., 2021). Subsequently, innovation has gained increasing attention in this stream of literature (Calabrò et al., 2019; Hauck and Prügl, 2015; Wright, 2017). However, while it is generally accepted that family ownership, management, and governance affect innovation (Calabrò et al., 2019; Carnes and Ireland, 2013; Chrisman et al., 2015), the understanding of the role of the incoming generations remains incomplete and inconsistent.

Mainstream literature on innovation has shown that a change in top management positions tends to facilitate innovation processes by changing the enduring organisational and strategic behaviours and bringing new knowledge, culture, and capabilities within a firm (Sydow et al., 2009). Similarly, literature on family firms suggests that intra-family succession is a privileged moment to unlock the innovation potential of the business and its output (Duran et al., 2020; Erdogan et al., 2020; Rondi et al., 2019; Zyburá et al., 2021). This positive relationship between intra-family succession and innovation has been explained by reference to several factors. For example, Rondi et al. (2019) postulate that succession may contribute to solving the willingness-ability paradox, which states that family firms innovate less than they can (Chrisman et al., 2015; De Massis et al., 2014) due to various factors (e.g., limited resources, family values, low collaboration propensity). Rondi et al. (2019) suggest that intra-family succession could facilitate a better equilibrium between the levels of risk-taking

propensity and tradition attachments. Similarly, Hauck and Prügl (2015) found that the succession phase has positive effects on innovation when family adaptability and family members' closeness to the firm prevail; however, when intergenerational authority and the history of family bonds are more prominent, the relationship between intra-family succession and innovation is more likely to be negative. Moreover, the capacity to internally transfer family firm-specific knowledge and family values and beliefs has been identified as a relevant factor in developing innovativeness (Cabrera-Suárez et al., 2001; Petruzzelli and Albino, 2014; Sirmon and Hitt, 2003). Considering the literature focused on the wine industry, Woodfield and Husted (2022) investigated the impact of intra-family succession on innovation in family winegrowing businesses and found that the new generation positively affects innovation through knowledge sharing. However, a limited number of scholars have postulated that succession reduces the innovation propensity of a family firm. Among these, the negative influence of successive generations over family firm innovation has been referred to as the higher risk propensity, lower emotional attachment, and preference for financial outcomes over firm well-being (Carney et al., 2019; Decker and Günther, 2017).

In line with the above discussion and the predominant research stream, which generally assumes that intra-family succession positively affects innovation in family firms, recommendations from extant literature were gathered that call for more research on how and under which conditions family ownership, management, and control lead to superior or inferior innovation capabilities and outcomes. The above literature also contextualises this study by establishing that intra-family succession may represent an opportunity for firms to better their business (Block et al., 2022; Chrisman et al., 2015; Hauck and Prügl, 2015; Rondi et al., 2019).

## 2.2. Family firms and eco-innovation

Despite being a relatively new topic in the literature, eco-innovation has been investigated by several scholars (Aksu and Akman, 2023; Bossle et al., 2016; Calvo et al., 2022; Chen et al., 2022; Ch'ng et al., 2021; García-Granero et al., 2020; Tamayo-Orbegozo et al., 2017; Widiyati and Murwaningsari, 2021). However, although common features have been highlighted, a generally accepted definition of the term is still lacking (Carrillo-Hermosilla et al., 2010; Díaz-García et al., 2015; García-Granero et al., 2020; Tamayo-Orbegozo et al., 2017). Some scholars have defined eco-innovation as innovation centred on environmental sustainability (Bossle et al., 2016; Cai and Li, 2018; Carrillo-Hermosilla et al., 2010; Hojnik et al., 2018; Kiefer et al., 2019) and/or on a reduced environmental impact (Ch'ng et al., 2021; Severo et al., 2017). Some have defined it as a prerequisite for long-term industrial growth (Jänicke, 2012; Tamayo-Orbegozo et al., 2017). Others have highlighted it as a complex phenomenon that includes different levels of innovation, namely product, process, organisational, design, and business model innovations (e.g., Chen et al., 2022; Ch'ng et al., 2021; Carrillo-Hermosilla et al., 2010; OECD, 2009). In general, while innovation mainly focuses on the content, eco-innovation is primarily defined based on the environmental goals it pursues (OECD, 2009). Considering all the above, in this study, eco-innovation is defined as the introduction of solutions for products and production processes within a firm that aim to reduce negative environmental impacts or increase environmental positive spill overs.

The following subchapters discuss the theoretical background behind eco-innovation in family firms, with specific regard to the central topic of the present work. Specifically, the following discusses a) the determinants of eco-innovation and b) eco-innovation within the specific setting of family SMEs and proposes a new perspective related to intra-family succession.

### 2.2.1. Determinants of eco-innovation

Many studies have investigated the determinants that may support or impede eco-innovation (de Jesus Pacheco et al., 2017). Specifically, the

research has considered the external and internal drivers of eco-innovation (Aksu and Akman, 2023). External factors include governmental support or incentives, regulatory frameworks, technological development, cooperation with external stakeholders, and the business context (Ben Amara and Chen, 2022; Bossle et al., 2016; de Jesus Pacheco et al., 2017; Paraschiv et al., 2012; Rhaïem and Doloreux, 2022). Internal factors, which are more relevant to the present study, comprise organisational and individual factors. The former mainly refers to firm characteristics (Becheikh et al., 2006; Coad et al., 2016), organisational capabilities (Frigon et al., 2020), availability of resources (Kabongo and Boiral, 2017; Kiefer et al., 2019), environmental awareness and management systems (Cai and Zhou, 2014; Cuerva et al., 2014), CSR orientation (Kesidou and Demirel, 2012), and board diversity (Galia et al., 2015; Liao et al., 2019). The latter includes personal characteristics of employees (Horbach and Jacob, 2018; Schmidt-Keilich et al., 2023), gender issues (He and Jiang, 2019; Liao et al., 2019), motivations and attitude of management (Del Río et al., 2016; Horbach et al., 2012), environmental leadership (Bossle et al., 2016; de Jesus Pacheco et al., 2017; Rhaïem and Doloreux, 2022), leadership style (Chen and Chang, 2013), and entrepreneurial vision (Arnold and Hockerts, 2011) and background (Ben Amara et al., 2020).

Although prior literature demonstrates the existence of a relationship between such factors and eco-innovation, there is limited knowledge on how these factors contribute to eco-innovation (Ben Amara et al., 2020; Schmidt-Keilich et al., 2023). Furthermore, Tamayo-Orbegozo et al. (2017) assert that there is a shortage of studies exploring how internal (and external) factors may foster or hinder eco-innovation in different firms and sectors and a need for further efforts. Similarly, and more recently, Passaro et al. (2023) call for research aimed at investigating new drivers of eco-innovation in SMEs.

### 2.2.2. Intra-family succession and eco-innovation

Intra-family succession is a prominent phase in family firm innovation. However, literature which focuses on the role of intra-family succession in innovation and eco-innovation is scant. Although sometimes inconsistent with each other, previous studies have found that a relationship exists between the role of family and innovation, but it is still uncertain whether such a relationship is positive or negative (Calabrò et al., 2019; Hauck and Prügl, 2015). Some scholars refer to this uncertainty as oversimplification, whereby the family role has been explored without differentiated perspectives on the 'family variables' (Hauck and Prügl, 2015; Zyburá et al., 2021).

An even more limited number of studies specifically examine the relationship between the family and eco-innovation, and again, the results are conflicting (Chen et al., 2022). Some studies align with the idea that the non-economic orientation of families supports eco-innovation (Aiello et al., 2021; Bammens and Hünermund, 2020; Chen et al., 2022), whereas others oppose the view that family involvement may inhibit eco-innovation due to risk aversion and tradition (Tan et al., 2021). Within this debate, scholars have argued that further investigation is required to understand the factors that may clarify the eco-innovation orientation of family firms (Dangelico et al., 2019).

One factor related to eco-innovation within family firms concerns leadership succession. However, limited evidence exists regarding the influence of intra-family succession on a family firm's potential for innovation (Rondi et al., 2019) and its output (Duran et al., 2016). The succession phase can also serve as a unique opportunity to engage in innovation activities that benefit from the intake of novelties in the organisation (Hauck and Prügl, 2015). As indicated above, firms' innovation performance has been found to improve after a process of intra-family succession due to relatively little importance being placed on non-economic goals by the new generation in favour of a clearer orientation towards profitability (De Massis et al., 2014). Focusing on the wine industry, Woodfield and Husted (2022) investigated the impact that intra-generational succession has on innovation in family winegrowing businesses and found that the new generation impacts

innovation through knowledge sharing. However, no specific effort has been devoted to eco-innovation (Le Breton–Miller et al., 2004), which constitutes an area of research worthy of focus.

### 3. Research methods

For this research, a qualitative field study was conducted to explore the internal motivations in intra-family succession driving eco-innovation in family firms, considering the early stage of theoretical development (Gioia et al., 2013). In recent years, the wine industry has received increasing scholarly attention (Montalvo-Falcón et al., 2023). Facing significant environmental problems (Annunziata et al., 2018), this industry must deal with its environmental impact and footprints, resulting from both land use and productive processes (Maicas and Mateo, 2020). The industry uses extensive land for cultivation, consumes large amounts of natural resources, and uses chemicals in the production process. Consequently, the industry impacts the environment where it operates, although this depends on the environmental conditions (Bandinelli et al., 2020). Therefore, the wine industry faces new opportunities as well as challenges and requires new ways of working (Aivazidou and Tsolakis, 2020; Ferrer et al., 2022) and the adoption of more sustainable and environmentally friendly practises (De Bernardi and Pedrini, 2020; Frigon et al., 2020; Pougnet et al., 2022). Nevertheless, eco-innovation in the industry is yet to be fully understood by both academics and practitioners (Frigon et al., 2020; Navarro et al., 2017) and thus represents a key emergent stream of research (Xie et al., 2019). To answer the research question, the wine industry was chosen as an appropriate context (Fisher and Aguinis, 2017). Specifically, this study analyses 28 family SMEs from Italy and Germany, which have undergone intra-family succession and shifted towards eco-innovation in their product (i.e., cultivating organic or biodynamic wine) and processes (i.e., using electric vehicles and solar energy). Italy and Germany were selected as the geographical setting because both countries have shown strong leadership in the transition towards organic wine markets (German Wines, 2021) and have been previously used as a context to study transgenerational dynamics (Canovi et al., 2022; Jaskiewicz et al., 2015). Therefore, they are appropriate countries in relation to the phenomenon of the study.

#### 3.1. Sample and data collection

Regional wine associations provided an overview about the existing wineries owned and managed by a family.<sup>1</sup> Subsequently, the following characteristics served as the guiding criteria for including a family winery in the sample: a winery must (1) be a certified producer (EU certification and/or Demeter<sup>2</sup>), guaranteeing the eco-innovation transition of the firm; (2) be a family owned and managed SME; (3) be at least 30 years in business, ensuring the presence of succession; and (4) have recently transitioned to a new generation. Therefore, only those wineries that had been involved in eco-innovation were considered to ensure that the internal motivations<sup>3</sup> were observable and that new insights emerged clearly (Eisenhardt, 1989). The final sample, presented in Table 1, consists of 28 SMEs.

All the interviewees from the wineries – family owners – were at least the second generation of entrepreneurs and had been responsible for the introduction and implementation of sustainable production and resource processes. The data collection period spanned more than five years between 2017 and 2022. During this period, business articles were analysed to gain familiarity with the business model of each winery,

<sup>1</sup> In the study small family firms are defined as characterised by ownership and family involvement in the top management team (Zellweger, 2017).

<sup>2</sup> Demeter is a biodynamic certification to ensure that products are aligned to global standards in both production and processing.

<sup>3</sup> The sample was also identified by working with regional wine associations.

**Table 1**  
Profile of SMEs.

#	Country	Region	Size (hectares)	# of employees	Field visit
1	IT	Lazio	11	4	
2	IT	South-Tyrol	7	3	x
3	IT	Piedmont	15	2	x
4	IT	Abruzzo	35	4	x
5	IT	Puglia	50	14	
6	IT	South-Tyrol	50	12	x
7	IT	Piedmont	12	3	x
8	IT	Friuli Venezia Giulia	12	2	x
9	IT	Veneto	50	30	x
10	IT	Veneto	30	8	
11	IT	Lombardy	15	6	x
12	IT	Tuscany	14	6	x
13	GER	Bavaria	6	3	
14	GER	Rhineland-Palatinate	7	2	
15	GER	Rheinhessen	20	10	x
16	GER	Baden Württemberg	21	11	
17	GER	Rheinhessen	25	5	
18	GER	Rhineland-Palatinate	11	2	x
19	GER	Rheinhessen	8	1	
20	GER	Rheinhessen	11	3	x
21	GER	Rhineland-Palatinate	7	2	x
22	GER	Rhineland-Palatinate	12	1	x
23	GER	Baden Württemberg	12	2	x
24	GER	Rheinhessen	6	–	x
25	GER	Baden Württemberg	20	12	x
26	GER	Rheinhessen	30	4	x
27	GER	Rheinhessen	6	–	x
28	GER	Rheinhessen	12	3	

interviews were held with the successors and previous generations as well as clients and regional associations, and direct observations were collected during field visits. Twenty-eight interviews were first conducted with the new generation of wine producers in 2017 to gain insights into their internal motivations, which highlighted some conflicts with the previous generation. Subsequently, nine interviews were held with the previous generation in 2022<sup>4</sup> to discuss some of the topics that emerged in the first round of interviews. Additionally, 19 field visits were performed, each lasting between five and 20 h. The direct observations gathered from these field visits supported the insights obtained from the interviews regarding the wineries' connection to the local community and territory and relation to the previous generation. Moreover, 15 interviews were run during trade fairs with clients of the family businesses, 13 with the firms' employees, and eight with the managers of the regional wine associations. These interviews verified the prior findings and interpretation regarding the subject wineries' relation with employees, stakeholders, and local institutions. Thus, triangulation has reinforced the insights (Cloutier and Ravasi, 2021). Table 2 summarises the collected data and how they were used in the analysis.

All interviewees were fully informed about the academic nature of this research, and we assured them that their personal information would be anonymized to promote open information sharing. The interview protocol started with exploratory questions such as, 'Why have you decided to produce sustainable wine?' Subsequently, a comparison between the emerging evidence and the literature was necessary (Miles et al., 2014), and the questions were transformed into

<sup>4</sup> Cases were selected in which the conflict was most emphasised.



**Table 2**  
Data use and sources.

Data source	Type of data	Use in the analysis
<b>Business articles</b>	Business articles in the media (2017–2022) 745 pages of articles regarding product offers, family traditions, and social impact.	Becoming familiar with the nature of enterprises. Understanding the company's business model and mission.
<b>Interviews</b>	First round of interviews* (2017) 28 interviews with new successors of 16 family businesses in Germany and 12 family businesses in Italy. Second round of interviews* (2022) 9 interviews with the previous generation of owners (3 in Italy; 6 in Germany). * Interviews lasted from 42 min to 87 min, with an average of 56 min.	Gaining insights regarding the drivers of innovation by analysing characteristics related to family identity and the type of innovation.  Reinforcing insights regarding conflicts between the generations.
<b>Meetings at trade fairs</b>	Confirmatory meetings at trade fairs (2017, 2018, & 2022) 15 interviews with clients, 13 with employees, and 8 with regional associations.	Confirming final data interpretation and theorisation.  Fortifying the potential for analytic generalisability and transferability of the findings.
<b>Direct observations</b>	Field visits (2017–2022) 19 company visits to analyse businesses' connections with the local community, territory, and relation to previous generation.	Confirming data interpretation from the interviews. Reinforcing insights regarding the businesses' connections with nature and society.

semi-structured ones to understand why and how the firms engaged in eco-innovation practises. For instance, participants were asked questions like, 'How do you produce your wine?' and 'What were the main obstacles, and how did they change over time?' Considering the reliance on the retrospective interviews, the risk of recall bias was minimised by triangulating evidence from other data sources, as mentioned above.

Thus, first-hand exposure to the processes being studied was gained instead of relying solely on the interviewees' accounts (Danneels, 2002, p. 1098).

### 3.2. Data analysis

The data analysis was based on the analytical procedures developed by Gioia et al. (2013) which consist of the following three key steps to ensure that empirical observations can be linked to existing theoretical concepts and thus develop new insights. Fig. 1 illustrates the final coding structure for this study.

*Step 1: Open Coding.* Each interview round was followed by an 'open coding' process (Strauss and Corbin, 1998) to carefully analyse the transcripts and create a dataset of codes. This was done using short descriptions to summarise the meanings of various elements of the data. For example, the code 'vision of equilibrium with nature' was used to synthesise the following passage: 'My family, which is noble, and I have had this land for a long time. We have grown steadily but also slowly, as we are always keen on maintaining the balance of nature' (Int. #14).

*Step 2: Axial Coding.* The codes were informed by the existing constructs in the literature, and the emerging themes were linked to concepts that could help explain the phenomena being observed. Consequently, the analysis iteratively went back and forth between data and existing theory (Gioia et al., 2013). Primarily, the first-order categories were grouped following previous research regarding the leadership succession of family firms (e.g., 'wishing to pass the same quality of territory to children') and their eco-innovation (e.g., 'becoming a self-sustaining business'). Subsequently, the conceptually overlapping first-order categories were clustered into second-order themes (Gioia et al., 2013). Two authors worked closely to compare and discuss the emerging coding structures based on the empirical evidence available.

*Step 3: Building a Grounded Model.* In Step 2, second-order themes were matched with theoretical predictions and insights from the literature to understand how the emerging theory challenged prior eco-innovation research with respect to family firms. In this step, the process was repeated until the second-order themes could be sorted

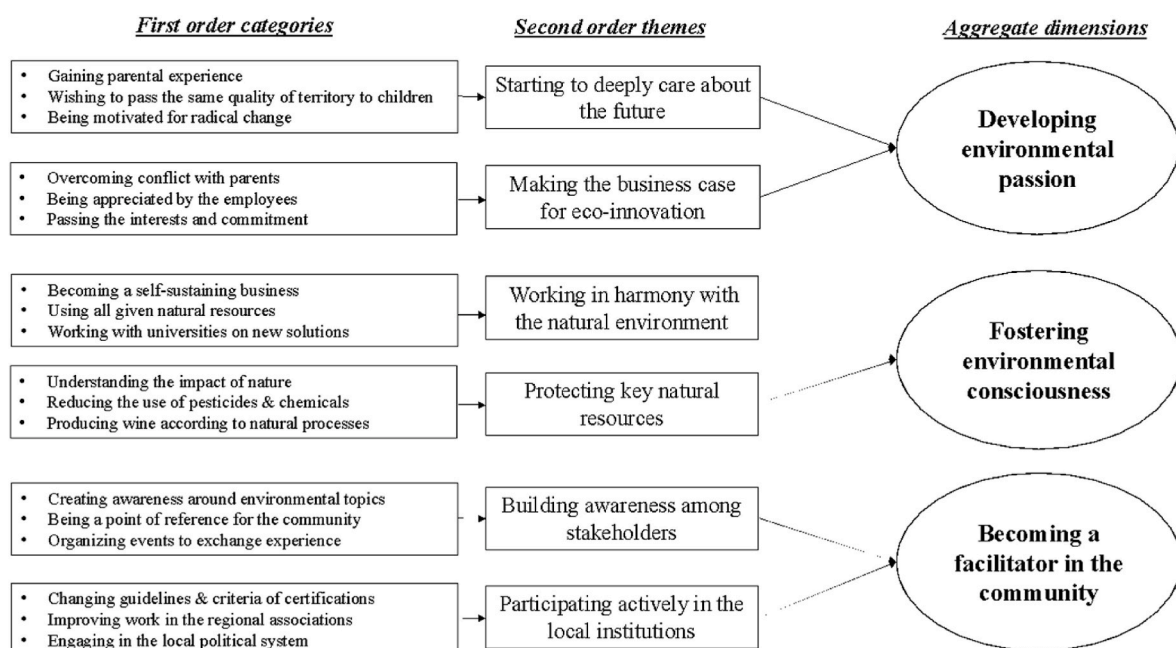


Fig. 1. Coding structure.

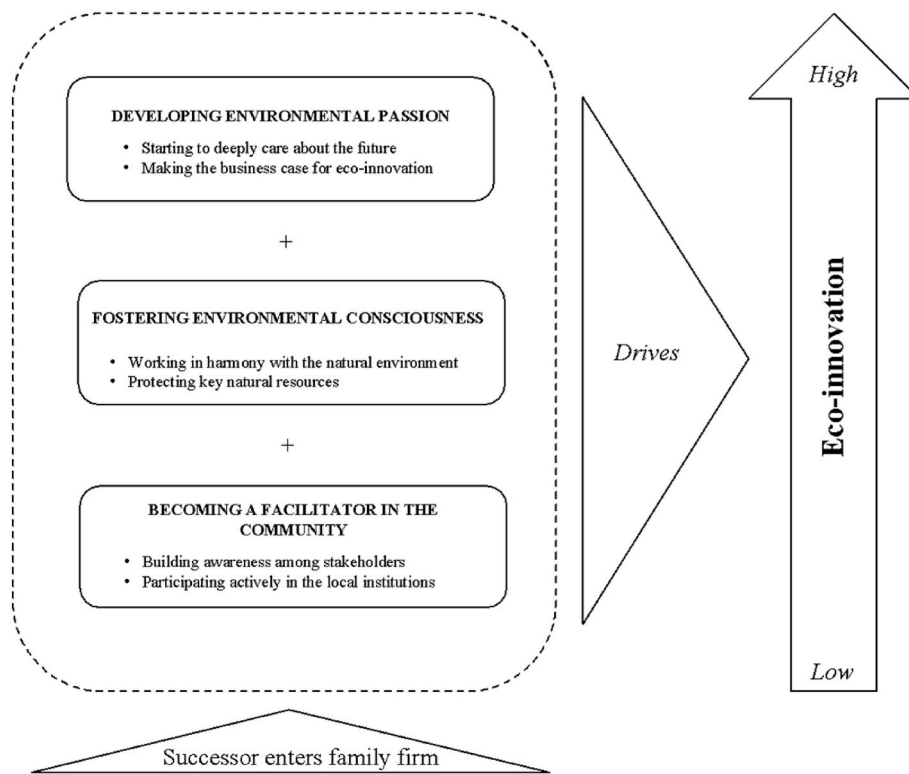


Fig. 2. Grounded model.

into stable aggregate dimensions to expose a higher level of abstraction. The final aggregate dimensions were ‘becoming a facilitator in the community’, ‘fostering environmental consciousness’, and ‘developing environmental passion’, which were then used to generate the grounded model (Fig. 2). Furthermore, ‘trustworthiness’ (Lincoln and Guba, 1985) was guaranteed since the interviewees checked the transcripts to confirm that their words matched the developed coding structure.

Extracts from the interviews that support our first-order codes and second-order themes (Tables 3–5) are provided below to facilitate a better understanding of the results.

#### 4. Findings

The findings of this study are organised according to the levels of internal motivations and related eco-innovation scope. The model (Fig. 2) shows three internal motivation factors that can drive eco-innovation during intra-family succession. First, ‘becoming a facilitator in the community’ suggests a very strong connection with eco-innovation and a positive impact on the local community, creating a perception of being an agent for institutional change. Second, ‘fostering environmental consciousness’ describes the willingness to transform the family firm into an eco-friendly business. Third, ‘developing environmental passion’ illustrates the transfer of environmental passion from the successor to the organisation. In addition, the model also suggests that the degree of eco-innovation of the successor depends upon their motivations. If the successor is only driven by the first factor, eco-innovation occurs, but at an initial stage. If they are motivated by the first and second factors, the level of eco-innovation is higher than in the previous case but not as strong as the highest level, where the individual is also driven by his or her environmental passion. Thus, by moving up the different dimensions, each individual implements different and additional eco-innovative practices, thereby increasing his or her level of eco-innovation. The following subchapters discuss the three identified

aggregate dimensions derived from the 6 s-order themes, which identify the internal determinants during leadership succession that support the accomplishment of eco-innovation objectives.

##### 4.1. *Becoming a facilitator in the community*

The family firms within the study sample had a strong connection with the local community, making them role models. Therefore, changes within a firm could lead to changes in society as members of the public attempt to imitate the family firm. This first motivation of the successors was very common, as it was expressed by all the interviewees from both generations. This factor drove an initial level of eco-innovation: switching towards organic and/or biodynamic wines (product innovation).

##### 4.1.1. *Building awareness among stakeholders*

During the field visits, the interviewees exhibited a strong desire to inform their stakeholders about the reasons for changes in the wineries and the owners’ lifestyles. One owner explained the challenges he had faced: ‘At the beginning, most of the people here in our village had no idea about the impact of pesticides’ (#4). Another stated, ‘Most of the people have never heard about biodynamic wines before’ (#16). Consequently, the interviewees claimed that one of their most important tasks was to raise awareness about the benefits of organic wines. For example, one interviewee stated, ‘Awareness is one of the most important things. I needed to understand the differences at the beginning’ (#2). Another German owner said, ‘Especially in Germany, most people are very sceptical about new things’ (#15) and continued that, ‘Surprisingly, in our situation, most of our customers were very interested in understanding how to produce biodynamic wine. Afterwards, they were very fascinated.’ During a trade fair, one of their clients confirmed this interest: ‘I remember the first time they told me about biodynamic wine. I had no idea what it was, but it sounded interesting. So, I wanted to know more about it.’ Another owner outlined his experience as follows: ‘It was very funny to see how people changed their opinion once we

**Table 3**  
More evidence on 'becoming a facilitator in the community'.

Second-order themes	Selected evidence on first-order codes
<b>Building awareness among stakeholders</b>	<p><i>Creating awareness around environmental topics:</i></p> <p>'Actually, I guess it is more my wife. When she goes into the village to buy some stuff, she always has a chat with some people. And so, I know she also started talking about all the changes we did so far in the vineyard' (#19).</p> <p>'Most people here do not really go to university, or you know go abroad to see what happens outside of Puglia. So, I try to push them a bit into some topics around sustainability, just try to get their curiosity' (#05).</p> <p><i>Being a point of reference for the community:</i></p> <p>'My family is very well-known here. And yeah, I guess we are also very appreciated because we are able to provide work and grow our business. So, they often see us as a role model' (#15).</p> <p>'We were one of the first ones here in our area to move to organic wine. And it was a great success, so you know people build trust and now they look at us and try to replicate what we do' (#01).</p> <p><i>Organizing events to exchange experiences:</i></p> <p>'The easiest way to share our story also in a more efficient way is, let's say to organize some events. At least you tell it only once, but directly to a broader audience' (#12).</p> <p>'I was very surprised because it was not me coming up with the idea, but a view neighbours asked me to organize a meeting in which we can learn from each other' (#20).</p> <p><i>Changing guidelines &amp; criteria of certifications:</i></p> <p>'In Italy, I know that we are very famous for not being very up to date and innovative. But honestly, if you look at our system of certifications it is just a chaos. So, yeah, I try to change them, to integrate a bit more our natural way' (#02).</p> <p>'Did you have a look at the criteria here in Germany? It is insane, really believe me. What we need are changes' (#19).</p> <p><i>Improving work in the regional associations:</i></p> <p>'You know, I am very grateful that we have this very strong regional power of associations that support us small wineries. But the people that are organizing everything, they need to open to more new topics' (#08).</p> <p>'We are very small, so in most of the cases all the certification they do not really make sense because they are too expensive. But I work biodynamic, so I really want to get certifications that support me. So, I try my best' (#24).</p> <p><i>Engaging in the local political system:</i></p> <p>'Even if I have never dreamed about it, in the end I decided to support the local politicians. I cannot only sit and wait for them to make better regulations. So, here we are (laugh)' (#11).</p> <p>'Me going into politics? Never (laugh), but you know things change. The local people here really do not understand my needs. So, that is why ...' (#23).</p>
<b>Participating actively in the local institutions</b>	

explained our ideas. They initially asked a lot of questions, and then they were very motivated to change their own lifestyle as well' (#9). His experience had made him feel they were parents: 'They know us as a family, and they want to behave like us because they know our values and our traditions'. In some cases, interest was so strong that the firm in question decided to organize events (i.e., Owner #17), as seen in the photos and comments in their business presentation. In summary, the evidence substantiates strong interest in the community and the need to educate stakeholders about the benefits of environmentally sustainable changes.

#### 4.1.2. Participating actively in the local institutions

Most of the wineries had certifications for their products, such as the organic-level certification from the EU. However, one Italian wine producer complained, 'The regulations are crazy. The best wine and the most sustainable one I have is our basic one. We do not need to follow any regulations because there is no certification. The wine for export we need to treat with pesticides to keep the same quality level, just to fulfil the conditions of the certification' (#20). Another interviewee criticised the EU's organic-level certification: 'We do not want to follow their guidelines because the organic certification is not sustainable for our soil' (#23). Owing to such dissatisfaction, these owners decided to actively contribute to changing the guidelines and regulations. Another owner outlined the extent to which this active participation was part of his initial motivation to get into organic wines: 'I want to lead this change and ensure that the regulations will support this transition' (#7). One wine producer from the south of Germany reported, 'Two years ago, I decided to participate in local politics. It was necessary for me because I needed to make sure that the regulations would change' (#24). Furthermore, an Italian producer from Friuli Venezia Giulia stated, 'I never wanted to join political parties, but our family firm has a responsibility to our consumers, partners, and neighbours. I want to become active in changing our regulations because they are too old-fashioned' (#8). Consequently, they worked on developing financial incentives for sustainable practises to encourage other firms to engage in sustainable development in the region.

#### 4.2. Fostering environmental consciousness

The second dimension highlights that eco-innovation is also triggered by a successor's willingness to foster environmental consciousness. When a successor strongly believes in their role in fostering environmental consciousness, apart from becoming a facilitator in the community, their eco-innovation is stronger, as they do not only implement it at the product level but also at the process level. Specifically, this dimension entails a search for a more natural productive process to achieve harmony with the environment and a consciousness of the importance of protecting natural resources that are key for the business.

##### 4.2.1. Working in harmony with the natural environment

This study observed a strong desire among the owners to use natural resources to produce wine. For instance, Interviewee #28 explained their vision of finding 'a way to live and work in equilibrium with nature. We want to integrate ourselves, as individuals and as a firm, as much as possible into the natural cycle.' This statement emphasises a desire to adopt the natural environment into the innovation of business processes. Owner #22 stated, 'Our whole supply chain is mainly based on regional partners, as we try to support each other. The idea of working in harmony with our natural environment as much as possible unifies us.' In this context, a common sustainable practice is the implementation of solar panels, as in the case of one German winery (#28): 'We want to be independent from external suppliers. All the energy we need, we want to generate on our own.' Interviewee #28 showed enthusiasm and passion for understanding how to fully integrate into the natural cycle. They mentioned, 'I put all my energy into this change. I am super motivated to try new ideas.' Meanwhile, the owner of a winery in South Tyrol (#2) entirely changed the architecture to use geothermal cooling in the cellar. This winery's representative stated, 'Three years ago we modernised our cellar. We wanted to use purely natural power to produce our wines.'<sup>5</sup> Some wineries had even started to rethink their cars and machinery and had begun using electric motors, as Owner #2 proudly stated: 'We changed our vehicles. Now we just use

<sup>5</sup> During the field visit, it was possible to visit the modernised cellar and notice a strong appreciation from visitors and customers for the effort.

**Table 4**  
More evidence on ‘fostering environmental consciousness’.

Second-order themes	Selected evidence on first-order codes
<b>Working in harmony with the natural environment</b>	<p><i>Becoming a self-sustaining business:</i> ‘No, the idea is actually to be able to provide all of our energy consumption on our own. I mean we really want to be independent, not only when it comes to the topic of energy’ (#28). ‘I don’t want to call myself an introvert, but you get the idea. I love other people, but you know for our business I try to be as independent as possible. We are like our own world’ (#22). <i>Using all given natural resources:</i> ‘I know that we are also very lucky because we are in a super beautiful environment. And this nature here is pretty rich, so we want to take advantage out of it’ (#03). In our case it is not only about using the sunshine for our energy. But you know, we want to use wind too and other natural sources. I mean they are for free (laugh)’ (#07). <i>Working with universities on new solutions:</i> ‘Even if I am getting older, I still remember the great time in university and all the amazing projects. So, you know, I am a big fan of working with young talent to explore new ways’ (#11). ‘We definitely cannot find all alone great solutions. So, we thought why not asking some universities for help. They should do some research (laugh)’ (#25). <i>Understanding the impact of nature:</i> ‘We are talking about wine. For us every change in the nature, climate, soil has a big impact on our quality and our work’ (#13). ‘We cannot close our eyes, because we can see every single day how important the nature is around us. I am already a bit scared about, you know, climate change’ (#21). <i>Reducing the use of pesticides &amp; chemicals:</i> ‘One of the first steps, very straightforward is to get rid of any chemicals in your procedure. I guess for this idea I do not even need to study (laugh)’ (#14). ‘In the end we want to sell a very simple and natural product. So, we cannot put chemicals on it during our work, that just feels so wrong’ (#27). <i>Producing wine according to natural processes:</i> ‘I think it was during my university time that I heard about biodynamic and natural wine, for the first time. They gave us all the instructions and I am so glad to implement them now’ (#21). ‘It feels like a time machine, because in the end we are going back to the ancient way of making wine. Very few steps but not that easy to get a high quality’ (#10).</p>
<b>Protecting key natural resources</b>	

electric cars to reduce our emissions.’ In addition, some wineries had started working with local universities to create sustainable solutions for the winemaking process. One producer (#21) stated, ‘Unfortunately, there are topics that are just too big for us as a small winery. There are so many brilliant and smart people outside with the right skills that can do this job for us.’ Another producer presented us with the first results of a research project and stated, ‘Look, this machinery has been developed in our recent project with the students. It works great, and it even costs less’ (#17).

#### 4.2.2. Protecting key natural resources

Most regions in both Italy and Germany are famous for specific types of wine. As stated by Owner #12, ‘We are located in the area called “Chianti”, and only here can we produce the traditional taste of our red wine. So, if we destroy our territories here, we will run out of business. It would be like suicide.’ Therefore, they decided to concentrate on finding new processes that would not harm the environment: ‘Some of our

machinery is more than 30 years old .... It will cost us a lot of money, but we need to consider the long-term benefits.’

The subject wineries are all located in small villages close to their vineyards in the countryside. Based on their traditions, these family firms all exhibited strong connections with the local environment and local community, which could also be seen in their business presentations for clients. One owner (#3) in Piedmont, Italy, claimed, ‘My grandfather has contributed to making this village grow. We have lived here for more than 100 years. This is our home.’ Furthermore, regarding the strong ties between the local environment and family firms, one German winery representative stated, ‘For a long time, we have used pesticides for our vineyards. Can you imagine the pollution that we have created not only for our wine grapes but also for our neighbours?’ (#8). Another representative explained, ‘If we use chemicals in our fields, the wind usually will blow them towards our village. Everyone here will be affected’ (#5). In summary, it seems that the family firms were becoming increasingly conscious of their responsibility towards the people living close to their wineries and vineyards, as one winery employee highlighted: ‘They [the family firm] have realised that they have a responsibility also for the people living close to the firm. Here, we are all one big family, and we know each other’ (#8). Furthermore, the winery owners expressed a certain degree of responsibility towards not only key partners and the local community but also their customers: ‘We have a responsibility because our consumers trust in us and in our tradition. We need to ensure high quality and at the same time a natural product which does not harm our nature.’<sup>6</sup> Accordingly, in recent years, these wineries have transformed all or at least some of their wines into organic wines (including biodynamic and natural wines).

#### 4.3. Developing environmental passion

Developing environmental passion refers to the successor evoking enthusiasm and motivation for environmental transformation within the family and the family firm. This begins with personal lifestyle and mindset changes so that family members ‘start to deeply care about the future and the next generation’. As noted earlier, this last dimension, being related to the successors’ passion, determines the highest level of eco-innovation. With environmental passion, the successors embrace a holistic approach towards eco-innovation that becomes a way of living and thinking. By doing so, they can encourage other family members and employees to follow the same path, and thus the scope of eco-innovation becomes stronger.

##### 4.3.1. Starting to deeply care about the future

In most wineries, succession was coincidentally linked with the fact that the successor had recently gained parental experience after starting their own family. The transition to parenthood has been defined as one of the key drivers of changes to the status quo in these firms. For instance, one Bavarian winemaker (#13) described the radical change in their life when they had a baby: ‘For every single decision I made, I thought about what the best thing for my child could be.’ Another interviewee (#1) stated, ‘I actually got an incredible feeling of responsibility and a strong sense of taking care of others. I never had this before.’ One of the German successors further said, ‘Of course, this also has an impact on every decision of our firm. We are the same family with the same values when we talk about our winery.’ In addition, the wineries had begun to consider the possible implications of their behaviour. Owner #27 stated, ‘Having children changed my life. I thought about how, and under what conditions, I would like to see my children in our home and our vineyards.’ Extending this idea, Owner #7 stated, ‘I want my children to find our territories in the same way I found them in my childhood. We need to take care of our vineyards as if they were our

<sup>6</sup> During the interviews with some clients, they have confirmed their trust in the high quality and sustainability of the wines.



**Table 5**  
More evidence on ‘developing environmental passion’.

Second-order themes	Selected evidence on first-order codes
<b>Starting to deeply care about the future</b>	<p><i>Gaining parental experience:</i> ‘I can still remember the moment when my son was born. It is like 2 years ago. Everything that I do now, I think about which impact it has for the future of my child’ (#18). ‘Honestly, I never imagined that being a father is such a change. I feel like a completely different person that is always thinking about the future. Like you know, what will happen because now I am responsible for this human being’ (#14). <i>Wishing to pass the same quality of territory to the children:</i> ‘I appreciate so much my father, for all the things he did to provide me with this amazing land and vineyard. Now my biggest duty is to do at least the same for my children’ (#08). ‘As a parent you always try to avoid problems for your children, you always try to protect them. And you know, I guess I want to try the same when it comes to our vineyards’ (#15). <i>Being motivated for radical change:</i> ‘Luckily, I also did some experience out of Italy. And so, I have seen that there are other cultures, especially like in Scandinavia, that are so much more respectful for the environment. So, I really wanted to change my way of living too’ (#10). ‘During university time, we had the chance to do have few exchanges. Because you know, you cannot miss such a long time in the family firm. But I was overwhelmed by the difference; I was talking to a guy from the US, and they worked with all chemicals. So, I really got scared and I felt like that is definitely not a road I want to take’ (#04). <i>Overcoming conflict with parents:</i> ‘You know parents can always be stubborn when it comes to changes. Especially at the beginning it was not easy because my father did not listen to me. But then, I came up with numbers and he listened’ (#14). ‘My father would never listen to me; just too proud you know. So, I convinced a good colleague of his, and then I sent him to have the talk with him (laugh)’ (#02). <i>Being appreciated by the employees:</i> ‘We have now 12 employees; with some of them I went to primary school. We know each other for a long time, and we appreciate each other. That helped a lot’ (#06). ‘Most of our employees are part of our vineyard for more than 20 years. So, (laugh) they basically have seen me during my whole childhood. They care about me, and I do care about them, so we really value our thoughts’ (#17). <i>Passing the interests and commitments:</i> ‘For instance, whenever I have a new idea, we exchange, and they are curious to understand more about it. They try to follow me’ (#17). ‘We are a very close and inner circle as we only have two employees. So honestly, everything I do has an impact on them. And they directly ask to understand those changes, and they want to adopt’ (#08).</p>
<b>Making the business case for eco-innovation</b>	

children’s.’ Similarly, Owner #10 said, ‘I actually changed my perspective because I realised that if we continued the way we used to work, we would destroy our soil, and I know for sure that my son would not be able to continue producing wine.’ The findings show that consideration of the interrelationships between the next generation, the family winery, and the environment outweighed the tendency to avoid changes. For instance, a German wine producer said, ‘I usually hate to change things. I like the way things are .... We are kind of forced to take this risk because we realise that, for sure, we cannot continue destroying our vineyards. My children would never forgive me’ (#13). During the

field visits, it emerged that, in most cases, both the winery and the family home were in the same location. One interviewee (#23) commented on this observation: ‘You see (laugh), we cannot destroy our home. We need to do something.’ An Italian winemaker (#6) affirmed their willingness to change by stating, ‘We have been a family firm for more than 100 years, and our business is very stable. You can imagine that we are not very used to change. So, it takes us a while to understand how to overcome our burden. We feel that we kind of owe this to our children and the environment.’

#### 4.3.2. Making the business case for eco-innovation

During the field visits, it was possible to meet the entire family and get a tour guided by the successor and the previous generation. In those conversations, some degree of conflict was observed when the successor and previous generation discussed future projects at the winery, such as in the case of a father and son in Abruzzo. The latter (#6) explained the next planned project: ‘We want to improve our wine-making process because our current way is not that efficient.’ However, before he could finish his sentence, the father commented, ‘I really don’t understand what you want to improve. We always did it like that, and it works.’ A similar situation was observed in a German winery (#23), where the previous generation offered such comments as, ‘I preferred the old labels; I don’t understand this modern taste’, after the successor had shown us the new bottles and labels for their wine. Later, the son explained to us, ‘It was very hard to convince my parents of the new ideas. They are so in love with what they have created. But I used key facts about the benefits this change could bring, like reducing energy consumption, improving quality, and so on.’ In doing so, this young successor overcame their internal conflict with their parents. Moreover, many employees highly appreciated the management successors because they had witnessed them growing up or had grown up alongside them. Therefore, some employees provided strong arguments to convince the previous generation of the successor’s competence. For example, one interviewee said, ‘Once I had the support of most of our employees, my father couldn’t say no’ (#21). An employee of an Italian winery (#7) stated, ‘We have known each other since childhood, and we went to school together. I really trust him and his ideas.’ Another added, ‘I know how great he is as a father – how responsible – and I know that he will do the same for the winery. So, I follow him and his ideas’. Yet another wine producer (#28) said, ‘It was funny to see how curious our employees got once we started to change several things in our private lives as well as in the winery. They asked me so many questions about why and how we had changed because they wanted to follow our new approach, you know, even proactively.’

## 5. Discussion

### 5.1. Implications for prior studies

Overall, this study advances prior knowledge on internal individual motivational factors for eco-innovation (Ben Amara and Chen, 2022; Bossle et al., 2016; Rhaïem and Doloreux, 2022; Tamayo-Orbegozo et al., 2017) with a focus on how intra-family succession drives eco-innovation in family firms. In so doing, this study also responds to suggestions from extant literature, which called for more studies focused on family firms’ specificities rather than the comparison between family and non-family firms (Block et al., 2023; Wright, 2017) and for the investigation of new drivers of eco-innovation (Passaro et al., 2023; Tamayo-Orbegozo et al., 2017). Indeed, to the authors’ knowledge, no prior studies have specifically considered intra-family succession in eco-innovation. Furthermore, this work contributes to extending the understanding of the role of family in determining innovation and eco-innovation (Block et al., 2023; Chrisman et al., 2015).

The proposed grounded model theoretically elaborates on this idea and suggests that the entry of a new generation can be an internal driving force towards eco-innovation (Frigon et al., 2020; Kiefer et al.,

2019) rather than creating tensions or rigidity between different generations in family firms (e.g., Block et al., 2023; Chrisman et al., 2015) and/or between tradition and innovation (e.g., Biscotti et al., 2018; Erdogan et al., 2020; Wright, 2017). Therefore, the model not only confirms prior studies that have shown that intra-family succession results in an engagement with eco-innovation models and practices (Annunziata et al., 2018; Ferrer et al., 2022; Kariyapperuma and Collins, 2021) but also advances the understanding of the internal motivations behind such engagement at the moment of intra-family succession.

Three key internal individual motivations that orient firms towards eco-innovation have been identified: 'becoming a facilitator in the community', 'fostering environmental consciousness', and 'developing environmental passion'. Thus, this study identifies relevant dimensions that can inform the relationship between intra-family leadership succession, suggesting that internal individual factors should be taken into consideration in determining family firm propensity to eco-innovation. Similarly, the study identifies new factors that affect the impact of new generations on orienting family firms towards eco-innovation. Extant studies mainly explain this impact by reference to knowledge sharing and social capital (Woodfield and Husted, 2022; Zybura et al., 2021) or to the fact that incoming leaders are not tied to existing organisational practices (Sydow et al., 2009). According to the results of the present study, however, the incoming leaders' personal enthusiasm for environmental transformation and lifestyle, their commitment to foster a more natural approach to productive processes and resources, and their sense of responsibility towards the community and stakeholders should be considered in the eco-innovation field.

Finally, this study introduces eco-innovation in the grounded model as a phenomenon with various degrees of scope driven by internal factors. The moment of intra-family succession is crucial, and its role as a driver of eco-innovation is diverse, depending on how many – out of three – internal factors influence the leader. While all the interviewees (some more than others) confirmed that they felt they must become facilitators in the community, some – the successors – were motivated to foster environmental consciousness. A limited number of the sample also desired to develop an environmental passion. Therefore, as expressed in the interviews, the respondents implemented eco-innovative practices at different levels and displayed a sequential and cumulative adoption of eco-innovative practices, which ranged from an initial product innovation (i.e., a switch to organic and/or biodynamic wine) to process innovation (i.e., adoption of solar energy) and environmental passion. Thus, this study provides preliminary insights describing eco-innovation practices from a more nuanced view (Choi and Williams, 2014; Liao and Tsai, 2019) rather than as a fixed type of innovation.

### 5.2. Managerial implications

According to this study's findings, if family firms want to improve their business and make it greener, they should support next-generation members to develop not only their managerial and technical skills but also their future orientation, willingness to improve, consciousness about the importance of protecting natural resources, and personal responsibility towards the stakeholders and community. Nurturing such dimensions is likely to support the success of intra-family succession as the incoming members might differentiate their managerial orientation from their parents' and introduce innovative environmental solutions (Canovi et al., 2022). Additionally, the results inform the research on the identification process of successors; the internal motivations determined here should be taken into consideration when choosing a new leader to ensure business survival and flourishing across generations.

### 5.3. Limitations and future research

Although this study employed a rich field dataset, it has two key limitations: It is bound to the limited geographical context of Germany and Italy and to one specific business sector, namely, wine production.

These limitations suggest useful directions for future research. Specifically, future research could explore four main areas in depth. First, it could further extend the investigation of internal motivations for eco-innovation by adopting an individual-level analysis and thus extending the understanding of the influence of personal orientation on the successor (Phung et al., 2023; Wang et al., 2021). Although the study sheds light on this topic, further support is required for a better construct. Second, the individual motivations of successors are key factors for eco-innovation during a succession, but no evidence exists on whether – and how – such motivations will continue to be key factors for future eco-innovation. Thus, future research could build on the results of this study by exploring how the three internal motivations identified by this study might play a role in future innovation processes, not only during the early stages of a succession. Third, an investigation into potential country- or context-related variations could be useful in determining whether internal leadership factors or sustainability-related behaviours are influenced by aspects such as social constructivism, culture, and institutional factors (Matten and Moon, 2020).

## 6. Conclusion

Despite the increasing relevance of environment-friendly practices in the wine industry, which is mainly shaped by family firms, research to date has not fully examined the internal motivations that can drive eco-innovation in such firms after an intra-family succession. By revealing three internal motivations for eco-innovation – 'becoming a facilitator in the community', 'fostering environmental consciousness', and 'developing environmental passion' – this research extends the understanding of the factors that allow intra-family succession to drive eco-innovation with varying degrees of scope in the wine industry. These insights inform recommendations for future studies regarding eco-innovation in family firms and how intra-family succession can trigger engagement in innovation over the long term.

### CRediT authorship contribution statement

**Laura Maria Ferri:** Conceptualization, Writing – original draft, Writing – review & editing. **Chiara De Bernardi:** Conceptualization, Writing – original draft, Writing – review & editing. **Alisa Sydow:** Conceptualization, Data curation, Methodology, Writing – original draft, Writing – review & editing.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Data availability

No data was used for the research described in the article.

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