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Temporal Depth & Directionality: Competitive Advantage for Sustainable Family Enterprises

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Abstract Firms seeking to embed sustainability into their core business strategy face inherent tensions of managing conflicting goals of performing on economic, social, and environmental dimensions, in the short- and long-term. Hahn et al. (2014) argue that managers that view these tensions as a paradox may consider radical strategies but end up adopting prudent strategies because they are unable to implement workable solutions due to higher awareness of uncertainty and risks. We argue that subjective interpretation of temporal depth and directionality influences the adoption of sustainable development strategies. Firms with long-term orientation that adopt an overarching vision, structures to incorporate diverse perspectives, and guardrails to prevent tunnel vision, are better positioned to balance financial and non-financial goals. Multi-generational family enterprises with aspirations for transgenerational continuity draw selectively upon their historic past to prepare for success in distant future. When focused on balancing wealth creation for their families and communities, they have the potential to unleash creativity and innovation for a sustainable competitive advantage.

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PALABRAS CLAVE
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Perspectiva temporal y direccionalidad: Ventaja competitiva para las empresas familiares sostenibles

Resumen Las empresas que tratan de integrar la sostenibilidad en el núcleo de su estrategia empresarial, se enfrentan a tensiones inherentes a la gestión de objetivos contrapuestos en lo referente a las dimensiones económica, social y medioambiental, a corto y largo plazo. Hahn et al. (2014) afirman que los directivos que ven estas tensiones como una paradoja pueden plantearse estrategias radicales, pero acaban adoptando estrategias prudentes ya que no pueden aplicar soluciones viables debido a una mayor concienciación en términos de incertidumbre y riesgos. Nosotros sostenemos que la interpretación subjetiva de la profundidad temporal y la direccionalidad influye en la adopción de estrategias de desarrollo sostenible. Las empresas con una orientación a largo plazo, que adoptan una visión global, estructuras para incorporar diversas perspectivas y barreras de seguridad para evitar la visión de túnel, están mejor posicionadas para equilibrar los objetivos financieros y no financieros. Las empresas familiares multigeneracionales, con aspiraciones de continuidad transgeneracional, recurren selectivamente a su pasado histórico para prepararse para el éxito en un futuro lejano. Cuando se centran en equilibrar la creación de riqueza para sus familias y comunidades, tienen el potencial de dar rienda suelta a la creatividad y la innovación para lograr una ventaja competitiva sostenible.

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1. Sustainability: The Balancing of Conflicting Goals

The Brundtland Commission Report "Our Common Future" released by the World Commission on Environment and Development (WCED) in 1987 offered the most popularly cited definition of sustainability as the development that that meets the *needs of the present* without compromising the ability of *future generations* to meet their own needs (emphasis added). In recent years, this definition expanded to 17 United Nations Sustainable Development Goals (SDGs) to improve the quality of human life and the environment. At its core, the WCED definition includes the notion of balancing the needs of the present and the future generations, that is balancing economic development, societal needs, and the preservation of natural resources. Sustainable development draws lessons from history to understand the patterns and causes of environmental destruction, climate change and social injustice, to develop strategies and policies for a more justifiable and secure future.

Businesses seeking to contribute to one or more SDGs need to add social and environmental performance metrics to the current economic and financial metrics in their operations (e.g., Gamble et al., 2020). Such integration takes the business into unfamiliar territory introducing uncertainty, ambiguity, and complexity in decision-making (Aragón-Correa & Sharma, 2005). Sustainable strategies cannot be based on incremental tweaks in current operations but usually require significant or even radical innovations in products, services, processes, technologies and/or business models (Sharma, 2014). Such innovations require investments with uncertain or long-term paybacks and may affect short-term financial performance and results. Research in organizations and the natural environment over the past three decades has provided examples of companies that have successfully developed sustainable strategies and business models to some extent, but embedding and integrating sustainability principles remains a major challenge for most businesses (Bansal, 2005).

Publicly listed companies must resolve tensions between investing for the long-term with uncertain payback, and their obligations for quarterly reporting of short-term performance. These tensions are aggravated due to the close scrutiny by analysts of the company's investment decisions and strategies that could signal a potentially negative effect on short-term shareholder value (Desjardine & Bansal, 2019). Private companies must also reconcile short-term financial performance with investments in sustainable practices and strategies expected to generate returns in the long-term. By adding greater complexity, ambiguity, and uncertainty for future financial performance, simultaneous pursuit of multi-pronged goals generates tensions and conflicting choices for managerial decision-making.

Managers attempt to resolve these tensions by simplifying and categorizing external data and information by adopting cognitive frames that create a set of beliefs to guide decision-making on strategic issues (Dutton & Jackson, 1987). Hahn et al. (2014) present theoretical arguments that to resolve the inherent tensions in sustainability, managers either frame it as a business case or a paradox which is defined by Smith and Lewis (2011, p. 382) as 'contradictory yet interrelated elements that exist simultaneously and persist over time'. Hahn et al. (2014) conclude that there is no satisfactory resolution of the tensions inherent in sustainability regardless of whether managers frame it as a business case or as a paradox. When framed as a business case, managers focus on narrowly defined environmental and social initiatives that align with financial outcomes. Guided by an assumption of the supremacy of economic objectives, they respond pragmatically to sustainability challenges by making incremental changes to established routines and practices, thereby having a limited positive social and/or environmental impact. In contrast, managers adopting a paradoxical frame accept the interdependency of economic, social, and environmental objectives. They attempt to develop strategies that depart radically from established routines to accommodate achievement of these goals. However, an awareness of the magnitude of inherent risks of such changes hampers their ability to implement workable solutions to address sustainability challenges. Thus, based on the reasoning of Hahn et al. (2014), regardless of whether managers consider sustainability challenges as a business case or a paradox, they end up adopting incremental strategies. We contend that Hahn et al.'s (2014) diagnosis presents a pessimistic outlook for the role of business in being able to tackle sustainability challenges. How, then, can the longevity and success of firms like Patagonia, IKEA, or those that make lists like 'Corporate Knights Most Sustainable Companies' (Scott, 2023) be explained?

In this article, we argue that managers' subjective interpretation of temporal depth (short vs. long term) and directionality (past vs. present vs. future) influences efficacy of adopted strategies (Ancona et al., 2001; Bluedorn, 2002; Shipp & Jensen, 2021). Drawing upon the paradox theory presented by Smith and Lewis (2011) (as explained above) and the arguments subsequently presented by Lewis and Smith (2022), we contend that the tensions in balancing of social, ecological and economic goals need not lead to incremental or unworkable strategies, but rather have the potential to guide major strategic decisions provided three conditions are present: (i) *an overarching vision* that unites thinking at different extremes; (ii) *structures* that both define and unite the distinctions within an organization; and (iii) *guardrails* that prevent one extreme or power dynamic to dominate a decision. We submit that family-owned enterprises with long-term orientation have the potential to resolve the inherent tensions in embedding sustainability strategy into investment decisions by successfully deploying the three conditions listed above (Lumpkin et al., 2010; Lumpkin & Brigham, 2011).

eWe elaborate on our conceptualization in the sections below. Next section reviews the importance of managerial cognitions in making decisions on sustainability investments and strategies. Then, we elaborate on the concept of subjective interpretations of time as cyclical versus linear. This is followed by a brief review of the literature on temporal orientation of decision-making in family enterprises and why they are more likely to transcend time under certain conditions. Subsequently, we conduct a preliminary test of our arguments using existing research. And, then explain how at least two of the three conditions ('overarching vision' and 'differentiating and integrating structures') necessary to resolve sustainability conflicts are more likely in family-enterprises than non-family firms and can foster the development of long-term sustainability strategies. Last, we argue why family enterprises with an extended temporal depth and cyclical interpretation of temporal directionality are better positioned to reap sustainable competitive advantages.

2. The Role of Managerial Cognitions in Decision Making

Despite increasing pressure from external and internal stakeholders on business organizations to adopt strategies to reduce their negative environmental footprint and more specifically address the impacts on climate change due to their operations (Fetting, 2020), economic goals continue to dominate the metrics by which most businesses and managers are evaluated. In the absence of strong motivations, integration of social and environmental metrics into decision-making is either superficial or symbolic, or if pursued seriously adds a great deal of complexity, uncertainty, and ambiguity to decision-making (Aragón-Correa & Sharma, 2005; Block et al., 2023). Managers with bounded rationality attempt to simplify this complexity by adopting cognitive frames that may foster decision biases and irrational risk aversion or risk-seeking behavior and decisions (Kahneman & Tversky, 1979). These biases may take the form of viewing environmental issues either as threats or opportunities (Sharma, 2000). Research shows that issue categorization as an opportunity rather than as a threat helps managers reduce the ambiguity and unpredictability surrounding environmental investments and spurs a more open search for innovative solutions (Cornelissen & Werner, 2014; Laslo et al., 2020).

Selective interpretations of issues by the top management team or dominant coalition in a firm are transmitted to others in the organization through social processes and formal interactions (Dutton & Jackson, 1987; Hambrick & Mason, 1984). This enables the creation of collective interpretations and shared meaning of issues (including environmental or societal issues) within the organization. According to Weick (1995) "Pressures to move toward generic sensemaking are strong in organizations because of the need for swift socialization, control over dispersed resources, legitimacy in the eyes of the stakeholders, measurable outcomes, and accountability" (p. 170). Thus, such interpretations by the top decision-making team "may become embedded in organizational systems that generate predictable action" (Dutton & Jackson, 1987, p. 85). Collective interpretations within the organization enable not only the development of, but effective execution of a strategy to address social and environmental sustainability challenges.

Swift socialization of sensemaking (Weick, 1995) occurs within decision-making units of firms due to the experience and tenure of working together and sharing of a common vision (Hambrick & Mason, 1984). Within the dominant coalitions of family enterprises such socialization is strengthened by the dominance of family vision and values (Sharma & Sharma, 2011). Hence, decision-making teams in organizations arrive at common subjective interpretations about strategic issues, chief among these is how they interpret time (Suddaby et al., 2023).

3. Subjective Interpretation of Time

Anacona, Okhuysen, and Perlow (2001) describe time as 'a non-spatial continuum in which events occur in apparently irreversible succession from past through the present to the future' (p. 513). Shipp and Jansen (2021) distinguish between objective and subjective time elucidating that while objective time is the linear experience of clock or calendar time, subjective time is 'experiencing of the past, present, and future within the current moment' (p. 299). Thus, *temporal depth* – short vs. long term, is a subjective interpretation of objective time (Bluedorn, 2002). For example, the answer to the question of whether ten years is short-term or long-term varies based on individual perceptions and contextual factors. Time serves as a mechanism to interpret the past and present, to imagine the future, and to prioritize, coordinate and align action. Interpretation and imagination draw on subjective time, while prioritization, coordination and alignment combine the use of subjective time for planning with objective or clock time for execution of the plans. Thus, subjective interpretation of time does not necessarily preclude the objective interpretation, but the degree to which managers or decision-makers view time objectively or subjectively varies from one extreme to another. At the individual level, subjective time is an inherent part of consciousness and essential aspect of the human experience as it involves memory (past), perception (present), and anticipation (future). Addressing sustainability challenges such as climate change involves goal setting within a temporal frame. Considering the perceived *temporal distance* to a future goal individuals attempt, in the present, to connect the past to the future (Doob, 1971; Kunisch et al., 2017). For example, some managers may frame climate change as a crisis needing immediate attention, while others may either deny climate change or relegate it to distant future (Binder & Watkins, 2024). Time is also interpreted in terms of duration, quality, or importance for sensemaking and identifying the right moment to form and implement strategy (Shipp & Jansen, 2021). Research on managerial decision making has found that cognitive bias or subjectivity plays into individual perception of deadlines (Waller et al., 2001). When faced with the same environment, each decision-making team or dominant coalitions in family enterprises mentally creates its own temporal zones (e.g., short-term vs. long-term) when deciding on strategic actions (Nadkarni et al., 2016).

Shipp and Jansen (2021, p 303) summarize that "*inter*-subjective time (versus *intra*-subjective time—parentheses and emphasis added) addresses how *collectives* cocreate the experience of time through social construction (e.g., via social norms that provide the meaning of time…….)." Inter-subjective time relates to collective understanding that happens via dialogue between people and amongst teams, while intra-subjective time relates to time as understood by the individual. Bluedorn and Denhardt (1988, p. 4) introduce collective event time as "event-based or cyclical work processes [that] may establish temporal rhythms inconsistent with the objective notion of time." The literature on inter-subjective time refers to the importance of historical narratives or organizational remembering, both characteristics that are very relevant for multi-generational family firms. A sense of time has been linked to how organizations frame issues such as climate change, carbon markets (Bansal & Knox-Hayes, 2013) and fair trade (Reinecke & Ansari, 2015).

When setting deadlines for achieving environmental goals, individuals and collectives experience objective as well as subjective time frames. As the antithesis of clock time, subjective time involves social construction and individual perception (Hernaldi, 1992; Lee & Liebenau, 1999). Both types of time exist simultaneously creating tensions, even though some literature assumes that accounting for one type automatically precludes the other (Reinecke & Ansari, 2015).

Slawinski and Bansal's (2012) study of five oil and gas firms found differentiation based on perspectives on time as linear (objective) or cyclical (subjective) in their responses to climate change. Although firms are not identified as family or non-family firms in this research, those with a linear perspective found narrow technology solutions, had a low tolerance for uncertainty, showed a disconnected perspective on time—not considering the distant past or distant future in decision making, and applied a short planning horizon of less than five years. Their investments were focused on compliance rather than value generation for the business. In contrast, those firms with cyclical time perspectives, pursued a broad set of initiatives, connected the past and future to the present, had a higher tolerance for uncertainty in their response, and considered long planning horizons of around forty years and made investments with the potential to build successful businesses to compete for the future.

In their comprehensive review of the literature on subjective time, Shipp and Jansen (2021) point out the research gap in how collective interpretations of time are formed. These authors present this as an important area of study as subjective interpretations of organizational leaders are more likely to lead to action on climate change and other sustainability challenges. And other research indicates that actions at organizational level are much more impactful than those taken by individuals (Amel et al., 2017). We address this gap in research by arguing that as compared to individual managers who catalyze action by selling their interpretations of strategic issues to others within corporations (Dutton & Jackson, 1987), the dominant coalitions in family firms organically arrive at collective interpretations of temporal depth and directionality due to the influence of family vision, values, history, tradition, and legacy (Sharma & Sharma, 2011).

4. Temporal Orientation of Family Enterprises

Since decisions and investments to address environmental sustainability challenges such as climate change realize their impact over time, managers will differ in their interpretations of the strategic value of such investments. Sustainability related decisions and investments need a historical perspective to generate a better understanding of the past patterns of the business operations that led to environmental destruction and social injustice. Such awareness is the first step in enabling the development of strategies and investments in innovations to avoid and rectify past negative impacts. Managers also have differing interpretations about future trends related to sustainability challenges that may be viewed either as an immediate crisis that needs to be addressed in the present by the enterprise via strategies and investments, or relegated to distant future and hence not requiring strategic changes or investments in operations.

Strategic management research often includes discussions on the temporal orientation when short-term plans are contrasted with long-term ones (temporal depth), and past focus is contrasted with future focus (temporal directionality). In this field, it has long suggested that firms adopt past vs. future oriented as they explore innovative products and business models (Ackoff, 1970; Chandler, 1962 ; Miles et al., 1978).

In family business literature, research has established the importance of financial and socio-emotional returns for controlling owners (Gomez-Mejia et al., 2007, 2011). While some research points towards a higher propensity of family enterprises for community stewardship (e.g., Craig & Newbert, 2020; Le Breton-Miller & Miller, 2006; Neubaum et al., 2012; Sharma & Sharma, 2019), recent meta-analytic review of 40,910 firms paints a negative view of family firms' environmental performance (Miroshnychenko et al., 2022). This research and others (e.g., Kang & King, 2020) indicate that while family firms are responsible on social and employee-related dimension, they tend to be irresponsible on environmental dimensions. Based on their review, Miroshnychenko et al. (2022) conclude that family firms 'gravitate towards the extreme tails of a variety of outcome distributions *(including environmental performance)* depending on their temporality' (p. 78; also see Miller & Le Breton-Miller, 2021). Our research explores how subjective interpretation of time influences whether a family firm falls into the negative or positive tail of the environmental performance curve.

Empirical studies on temporal depth suggest a positive relationship between past and future (Bluedorn, 2002). That is, the longer into the past that individuals or organizations delve in their thinking, the longer into the future they can consider in their decisions. Longer temporal vistas of the past make it easier to detect patterns in actions and consequences. This is especially important when attempting to understand patterns of actions, operations, and strategies that led to environmental destruction and social injustice. Temporal dimensions are mirrored in the family business and corporate sustainability literatures, where research has shown that future-focused firms are more likely to be concerned for the welfare of next generations and undertake strategies to preserve the natural environment (Hart, 1995; Miller & Le Breton-Miller, 2006).

Family business research shows that the focus of temporal directionality varies amongst firms that move beyond the founder's generation. In some generational firms, the dominant coalition tends to be past-oriented, that is, living in the founder's shadow and believing that all decisions of the founder are sacrosanct and should be continued forever (Davis & Harveston, 1999). In others, while the dominant coalition is respectful of the historical decisions and beliefs, it adopts strategies like 'innovation through tradition' to search and recombine mature knowledge for continuous renewal (De Massis et al., 2016; Gusenbauer et al., 2023). Thus, in terms of directionality, the literature shows that family firms can either be past- or future-focused.

However, in terms of temporal depth, in comparison to non-family firms, multi-generational family firms with trans-generational continuity intentions are better positioned to draw on 'deeper times' to see beyond 'shallow pasts and futures' (Bluedorn, 2002; Sharma et al., 2014). This is because not only can they identify with the vision and historical narrative of the family members who founded the firm, their desire to transition this firm to the next generation motivates thinking beyond the tenure of the current leadership.

History influenced research suggests that in order to establish the future direction and strategy, family business leaders are able to temper the past narrative through rhetorical history processes like *selective remembering* (Suddaby et al., 2010) to sharpen the focus on certain strategic issue (such as climate change) and motivate action based on *collective reminiscing* of historical narratives that support a desired future strategy (Suddaby et al., 2023). De Massis et al.'s (2016) study of six long lived Italian family enterprises explained how these firms drew lessons from their traditions to innovate products and business models for renewed competitive advantage in the present and future. In addition, while focusing on building and maintaining family's financial and socio-emotional wealth (Gomez-Mejia et al., 2007), attention is paid to the needs of other key stakeholders (Block et al., 2023; Miller & Le Breton-Miller, 2006).

The literature shows that family firms are more likely to be focused on trans-generational survival rather than short term or quarterly performance because they are more resilient in suffering short-term deprivation for long-term survival due to low overheads, flexible decision-making, and minimal bureaucratic process (Carney, 2005, Miller & Le Breton-Miller, 2006). Such firms are also more likely and able to make patient investments with a longer-term outlook (Sharma & Sharma, 2019; Sirmon & Hitt, 2003), and prefer proven effectiveness of mature knowledge to experimenting with risky new knowledge (Mazzelli et al., 2020). Hence, in comparison to family and non-family with shorter temporal focus, family firms aspiring for longevity are more likely to invest in projects with uncertain immediate returns but higher probability of long-range returns (Gersick et al., 1997; Gusenbauer et al., 2023). Of course, in cases where no subsequent generation is available to take over the leadership and running of the family firm, and in cases of internal family conflicts, it is unlikely that future oriented long-term investments with uncertain paybacks will be undertaken (Kidwell et al., 2024).

Business concerns about social and environmental sustainability are relatively recent. Even though the scientific community has warned us about the disruptive effects of climate change for more than four decades (WCED, 1987), the extreme unpredictability and volatility of weather patterns caused by climate change have already disrupted or begun to disrupt business operations in many industries, especially those based on natural resources. The climate news site, Grist, describes the summer of 2023 as a time when "*reality caught up to climate fiction*" (Yoder, 2023). It is probable that the founders of many trans-generational firms were not aware or concerned about the negative environmental impacts of business or the potential role of business in addressing environmental problems. Even though past-focused firms that hold onto their founder's beliefs are less likely to undertake proactive sustainability strategies, the disruption caused by climate change in several industrial sectors is changing this past orientation. Future focused firms with long temporal vistas are more likely to incorporate recent information related to environmental changes in the mind-sets of the dominant coalition leading to the development of proactive solutions to sustainability challenges. Indeed, at recent family business research and practitioner forums and conferences, one major issue of discussion is about balancing multiple perspectives and cognitive frames on environmental sustainability within the dominant coalition. Research on long-lived family firms suggests the efficacy of family and non-family members working together to shift the mind-set of influential stakeholders towards making investments in future focused strategies (Salvato et al., 2010).

5. Preliminary Evidence

We have proposed that directionality and the depth of the time horizon are not necessarily discrete and separate. Managers guided by longer temporal depth into the past and the future are more likely to invest strategically to embed sustainability principles into their business models (Sharma & Sharma, 2021). To gain some validation for our conceptualization, we conducted a brief review of research available on winery industry as it extends into deep past with old world wine regions of Mediterranean and Europe, and the new age wineries of South and North America, Australia, and New Zealand. Annual revenues are heavily reliant on climatic factors. Converting a conventional vineyard into an organic or bio-dynamic one is a multi-year heavy investment process. Thus, wine industry is well-suited for an examination of the influence of temporal variables in strategic decisions and investments in sustainable business practices.

Gusenbauer et al.'s (2023) quantitative study of knowledge search in family versus non-family firms based on a dataset of the global wine technology between 1956 and 2013 found that family firms use mature (traditional and historical) knowledge in their innovation processes to a greater extent than non-family firms. Family firms also draw higher value from mature knowledge than non-family firms.

When an organization is rooted in place as in the case of winery industry (Spielmann et al., 2021), firms with longer temporal depths are more inclined than those with shorter time frames to invest in the ecological well-being of their land even when financial returns may be several years in the making. Preliminary evidence for this proposition is provided by two contrasting quotes from wineries in the Bordeaux region of France (Sharma & Sharma, 2019):

> "*The Chateau's leadership and expertise in organic viticulture and winemaking was already well known in Bordeaux. When the winery became available, we were ready to take over and carry forward the momentum to incorporate biodynamic practices and certification. Our family believes strongly that we must become stewards of the ecosystems and communities if we have to survive into*

the future."

Note the long-temporal horizon of the Guillard family leader who acquired the 1931 founded Chateau Fonroque winery in 2012. Contrast this with the temporal orientation of the non-family manager of Chateau Lascombs, a 17th century winery owned by a French insurance company since 2011:

> *"Organic or biodynamic practices take several years to implement and require experimentation which makes the quality of wine unpredictable for a long period of time. We cannot afford to risk our financial survival, quality, and reputation to undertake these risky unpredictable practices to satisfy a niche market. Moreover, none of the rating systems add any points for organic or biodynamic."* (Sharma & Sharma, 2019, p. 112)

Even when dominant coalitions of family enterprises have a future oriented temporal orientation, they may interpret the reality and urgency of sustainability challenges heterogeneously. However, these challenges are not heterogeneous, and the balance of power rests with the natural environment. Nature sets the timeline for extreme weather events—hurricanes, heat waves, droughts, flooding, polar vortex brought upon by a warming jet stream, resource depletion, etc., all of which affect businesses today and increasingly into the future. During the past decade, we have witnessed the accelerating pace of unpredictable changes in weather patterns that affect many industries and increase the volatility of the business environment they face (Yoder, 2023). Since tackling sustainability challenges such as climate change requires goal setting within temporal frames and deadlines, family values, cognitive bias, and narratives based on rhetoric history (Suddaby et al., 2010) influence perceptions of reality and hence the strategic investments in sustainability initiatives.

Legacy family enterprises benefit from a collective reminiscing or remembering (Suddaby et al., 2023), and share transgenerational continuity aspirations. Such firms are more likely to transcend time (Aronoff & Ward, 1995) as compared to non-family businesses. Family enterprises are characterized by shared dreams, plans, fears of the future enacted in present decisions (Radu-Lefebvre et al., 2020). These dreams and aspirations include the preservation of the family's socio-emotional wealth, the long-term survival of the family enterprise, and responsible stewardship of communal assets for future generations. Hence, family enterprises with longer temporal depths are more likely to undertake patient long-term investments in new businesses, products, and capabilities (Miller & Le-Bretton Miller, 2006; Sharma & Sharma, 2019). Mature knowledge from history and tradition can lead to innovations in products and business models, and renewed competitive advantage (De Massis et al., 2016; Gusenbauer et al., 2023).

Hence, we argue that as compared to non-family firms, family enterprises with a historical perspective and an anticipation of transgenerational perpetuation, have a higher propensity to interpret time subjectively and cyclically embedded in the past and future (Gusenbauer et al., 2023). Such firms are more likely to undertake long-term patient investments that not only have the potential for real positive impact on the environment and society but are based on careful planning and innovation that can lead to cost and differentiation advantages and possible disruption of current business models (Sharma & Sharma, 2019). They are more likely to adopt substantive (as opposed to symbolic) sustainability strategies and may even have a penchant for privacy regarding their contributions (Combs et al., 2020). Some family firms with the most advanced biodynamic practices have been found to avoid advertising their sustainability credentials on their products, instead letting the quality of their premium wines speak for themselves (Sharma & Sharma, 2019).

The tensions and conflicts inherent in sustainable development for business have a unique alignment with how most family enterprises have historically sought to balance present financial and societal, community, and stakeholder needs with stewardship, succession, wealth, and legacy for future generations. Of course, this alignment is more likely when the business family aspires for transgenerational continuity, decision-making control of the enterprise by the focal family, and a commitment to use the family enterprise as vehicle for societal good (Sharma & Sharma, 2021). If these factors are present, then family enterprises will have a higher propensity to invest in initiatives and strategies for the long-term sustainability.

The unpredictability of how the climate changes will unfold requires the family's dominant coalition to make decisions by iteratively cycling between lessons from past via collective reminiscing (Suddaby et al., 2023), and their future aspirations as they interpret the temporal reality and urgency of sustainability challenges. The greater depth of past and future orientation of family firms as compared to non-family firms fosters a subjective interpretation of time as cyclical and creates a motivation and potential to address the tensions inherent in sustainable development.

6. The Advantage for Family Enterprises

To develop strategies and solutions to resolve the paradoxical conflicts like the balancing of short and long-term goals, Lewis and Smith (2022) propose that three conditions need to be present: overarching vision, differentiating and integrating structures, and boundaries that act as guardrails. In this section, we explain how at least two of the three conditions are more likely and/or stronger in family enterprises and the propensity of these enterprises to perceive time subjectively as cyclical enables the effective deployment of these conditions. While non-family firms, in concept, have the potential to create the three conditions to address the sustainability paradox, we argue that family enterprises have a distinct advantage in this regard.

6.1. Overarching vision

An overarching vision is a statement of purpose for the organization that integrates opposing poles of the tensions inherent in sustainability: economic vs. social and environmental performance, and short-term vs. long-term planning and investment outcomes. Such a vision shifts the focus from short-term competitive pressures to a long-term future scenario for the business thereby shifting urgency of proximate challenges toward a long-term competitive imagination of a positive upside (Hart & Sharma, 2004; Lewis & Smith, 2022; Slawinski & Bansal, 2015). Overarching visions can be inspirational and motivational in fostering stronger emotions and efforts to address the tensions and conflicts with a creative mind (Hart & Sharma, 2004; Raffaelli et al., 2019).

Hart (1995) proposed that a sustainable development strategy requires a shared vision for the future. This vision includes not only the challenges such as climate change that the world increasingly faces but also the role of the business in addressing these challenges. While a shared vision in an organization would be a powerful catalyst for developing capabilities and technologies that would lead to sustainable innovation, moving from concept to implementation is the challenge. Most examples of such visions in the literature refer to big broad nation level inspirational goals with the power to stir millions, such as President Kennedy's vision to put a man on the Moon before the end of the 1960s or NASA's vision to "help America return to the Moon, and eventually travel to Mars and beyond" (Lifshitz-Assaf, 2018). However, such big inspirational visions are more difficult to develop and implement in a business.

A key factor that dampens the inspirational power of corporate visions is the increasingly short tenures of CEOs of non-family enterprises, averaging around 7.2 years for CEOs of S&P 500, a drop of 34% from the 10.9 years in 2017. It is noteworthy that the median CEO tenure is 4.8 years, and 39% of CEOs last between one and five years (Chen, 2023). Frequent leadership changes encourage fresh rounds of strategic visioning and short-term planning horizons. In contrast, family-controlled firms with aspirations of transgenerational survival, tend to have long-serving CEOs. Even when leadership transitions are made there is multi-decades of overlap between succeeding leaders so that continuity becomes an organic process that transcends time. Thus, there is a greater propensity to perceive time using longer cyclical metrics.

The subjective interpretation of time as cyclical links the poles of the conflicts inherent in sustainability decisions into an overarching vision of the firm's principles and values, its history of success based on innovation and reinventing itself as the business environment changed, and aspirations to build a successful and prosperous enterprise for future generations. Their focus not only encompasses financial wealth but also socio-emotional wealth for their family and community (Craig & Newbert, 2020; Gomez Mejia et al., 2007, 2011). For example, the guiding principle for the fifth generation Wallenberg cousins of the Swedish conglomerate is: "*Like the generations before us, we are working on a long-term basis for the betterment of our country*" (Jack & Nordqvist, 2021); while the second generation leaders of Kemin Industries – a US manufacturer of nutritional and health products for humans and animals founded in 1961, strives to '*sustainably transform the quality of life every day for 80 percent of the world with our products and services*" (Craig & Bowman, 2021). Even large publicly listed companies like Berkshire Hathaway and Universal Health Services, long-serving founding CEOs Warren Buffett and Alan Miller, appointed their respective sons – Howard Buffett and Marc Miller, to carry on their company's vision and culture, albeit in roles suitable for each. In contrast, non-family firms caught up in a rhythm of quarterly reporting cycles and preferences of rapidly changing leadership.

Addressing sustainability tensions brings the experience and entrepreneurial abilities of the senior active generation in harmony with the aspirations of the rising generation to use the enterprise as a vehicle for good in society (Sharma & Sharma, 2021). As noted in the literature (Suddaby et al., 2010; Suddaby & Jaskiewicz, 2020), a historical overview of the family enterprise is often subject to interpretation and based on a rhetorical reframing in terms of current and future strategies. This research suggests that it not unusual for each generation of the family to highlight (and/or underplay) selected events and innovations to shape the present and the future in accordance with its preferences (Suddaby et al., 2023). When recorded history reveals a mix of alignment and misalignment with current and future aspirations, leaders have been found to acknowledge the misalignments as mistakes due to liabilities of newness to posit that gained experience enables continuity of positive dimensions (Gusenbauer et al., 2023). Hence, this subjective interpretation of time as cyclically embedded in history and aspirations for future transgenerational success enables the overarching vision to inspire creativity, innovation, strategy, and investments to resolve the paradox of sustainability.

In short, family-controlled firms with long tenures of leaders and an organic transition of responsibilities across generations, provides a competitive edge in continued pursual of an overarching vision focused on addressing sustainable development challenges. Emergence of a shared overarching vision may be hampered by short tenures of leadership that is more likely in non-family firms (Chen, 2023), or by destructive competitive within family rivalries (Kidwell et al., 2024).

6.2. Differentiating and integrating structures

Differentiating structures refer to the recognition and articulation of distinctions within the organization and integration refers to the identification of linkages within the organization (Lewis & Smith, 2022). Both are functions of the organization structure and demarcation of roles and responsibilities. Differentiation happens in organizations via the creation of subgroups such as strategic business or operating units, and/or functional areas such as finance, accounting, HR, etc.., levels of management (top management teams, middle management, back office, and front-line operational employees, regional or country offices, and so on). Similarly, integration can happen via cross-functional teams, physical workspaces that encourage interaction, social gatherings, newsletters and so on (Wright et al., 2023). Extant research shows that both differentiating and integrating structures need to be present to facilitate the resolution of paradoxes (Besharov et al., 2019; Lewis & Smith, 2022). Differentiating without integrating could lead to turf wars and conflict; and integrating without differentiating may lead to synergies that do not address the overarching organizational vision necessary to innovate for a sustainable future (Lewis & Smith, 2022).

While non-family firms can, and do, create such differentiating and integrating structures with the potential to resolve conflicts and tensions they face, family-owned firms have a distinct advantage as the private family space is available to build deeper connections among co-workers. Strategic decision-making and visioning take place within a dominant coalition of family and non-family members. The dominant coalition in a family enterprise is more likely to perceive time subjectively as cyclical due to inter-generational engagement in formal and informal settings. Such engagement brings a wider range of perspectives into focus including historical traditions and future aspirations and opportunities, thereby expanding the temporal depth under consideration. As compared to top management teams of non-family firms, dominant coalitions in family enterprises have been found more effective and efficient innovators (Duran et al., 2016).

Thus, family enterprises with differentiating and integrating structures (formal and informal) that extend the temporal depths considered and give voice to multiple perspectives and aspirations are better equipped not only to envision but also to implement sustainable development strategies. Such family enterprises are better positioned to develop innovative solutions that reconcile the inherent conflicts in sustainable investment decisions rather than arriving at incremental compromises as suggested by Hahn et al. (2014). In contrast, family or non-family firms that lack such structures may find it exceedingly difficult to implement such strategies, even when led by visionary leaders.

6.3. Guardrails

The third condition that Lewis and Smith (2022) propose for resolving paradoxes is incorporation of guardrails, that is, processes and systems to ensure that power dynamics do not suppress or silence diverse viewpoints and foster either-or choices when creativity and innovation is required to resolve a paradox (Smith & Besharov, 2019, p. 9). Built into organizational governance systems, guardrails foster a focus and discussions on the tensions and conflicts inherent in the paradox. To invest into sustainability strategies, guardrails need to be wide enough to encourage a simultaneous focus on the short-term and long-term goals, on past traditions and future aspirations, and on financial and non-financial performance. For example, if the dominant coalition of an enterprise or strategic decision-making bodies like the Board of Directors of a company lacks diversity of perspectives and backgrounds, it fosters group think toward one pole or the other and often toward short-term performance. Such groupthink hinders creativity and innovation.

In the case of family-owned enterprises, the guardrails are not necessarily an inherent advantage as they often lack separation between operating and family systems, especially in ownercontrolled companies (Gersick et al., 1997). As complexities on the family and business dimensions increase over time, family enterprises build guardrails including governance structures like a board of directors, family councils, and family constitutions. These structures provide opportunities to integrate both senior and rising generations to balance the past tradition and future aspirations, and with family and non-family members with diverse backgrounds and expertise to avoid a default to groupthink toward easy incremental solutions. Similarly, the operational decisions are made by a dominant coalition that includes multiple generations and non-family experts who can bring innovative and creative ideas to strategic discussions. Both the Board and the dominant coalition need to have forums where external stakeholder voices representing social and environmental causes impacted by, and impacting, the operations of the enterprise can be heard. Research has shown that such external stakeholder input generates knowledge and insights that help the organization innovate for a sustainable future (Hart & Sharma, 2004; Sharma & Vredenberg, 1998). Finally, the third leg of the family governance system, the family council in family enterprises should be open to hearing voices of multiple generations rather than succumbing to a deference to senior generations or the rebellion of the rising generation. Creating the guardrails in both family- owned and non-family-owned enterprises is a legal and structural exercise but it is important to ensure the separation of governance (Board), operations (dominant coalition), and family (family council) to allow diverse voices and learning from the past as well as future aspirations so that the process of creativity and innovation can be unleashed.

In short, we posit that in comparison to their non-family counterparts, family enterprises with trans-generational history and ambitions are better positioned to envision and use their business towards a sustainable future. As this temporal interpretation into past and future, is a firm-specific idiosyncratic and non-replicable resource, it is a source of competitive advantage (Barney, 1986). Such family enterprises with a long-term orientation are motivated to invest in enhancing their capabilities to proactively innovate and invest in sustainability strategies. When investments made to embed sustainable development mindset into operations are supported by differentiating and integrating structures, and overlaid by vigilant governance systems, sustainable development challenges may well serve as an opportunity of a century for family enterprises.

7. Conclusion

For the past decade or more, increasingly, nature has set the timeline for climatic changes (Yoder, 2023). Stakeholder pressures on business organizations to help address the global grand challenges of sustainability continue to accelerate. For example, as it transitions toward a carbon neutral economy by 2050, the European Union (EU) has mandated listed firms with over 500 employees to report carbon emissions (Fetting, 2020). Similar legislative requirements are emerging in other nations (Block et al., 2023). Business leaders are faced with a paradox of balancing their current operations and revenue sources, while undertaking transformative changes to embed sustainable development principles in their enterprises. Research that has examined this paradox has concluded that the enormity of risks involved in making related investments, deters managers from using their business enterprise towards addressing sustainability challenges (Hahn et al., 2014). Nevertheless, there is evidence of companies making great strides in using their business to progress on sustainable development challenges (e.g., Scott, 2023; Sharma & Sharma, 2021). Such enterprises are well positioned to gain early mover advantage over rivals who are stuck in strategies and business models that ignore this profound change in the business environment.

We focus on the integral role of temporal frames used by business leaders in making related investments. Time serves as a mechanism to coordinate and align action (Anacona et al., 2001; Gusenbauer et al., 2023). The subjective interpretations of time cycling from past through current to future, provides a sense of continuity in the midst the complexity and ambiguity that characterizes the major structural changes in the business environment due to climate change and societal demands that business be a part of the solution. It serves as a connective tissue for lessons from the past to a desired legacy and success in the future in a world where solving sustainability challenges offer opportunities for successful and profitable businesses (Bluedorn, 2002; Ship & Jansen, 2021).

In comparison to dominant coalitions of non-related individuals, those formed of people with close familial ties have an advantage to draw upon family legacy and values to reach a consensus around investments in innovations and strategies to achieve their aspirations. Such collective interpretations draw from history of stakeholder and societal engagement of the family enterprise and the aspirational future (De Massis et al., 2016; Suddaby et al., 2023). By fostering a collective narrative of how climate change and environmental sustainability have affected an enterprise over time and will affect its future trajectory, enterprising families have an opportunity to grow the economic and socio-emotional wealth of their enterprises and community. Drawing upon the theory of paradox, we argue that in addition to temporal vistas, enterprises with an overarching vision, and structures to give voice to multiple perspectives combined with disciplined governance, have the potential to create sustainable competitive advantages (Lewis & Smith, 2022; Smith & Lewis, 2011).

The arguments presented in this article draw on literatures of cognitive framing and paradox theory. An attempt is made to integrate temporal dimensions into these theoretical perspectives using insights from exploratory research on winery industry and research describing the sustainability journey of family enterprises leading in this domain (Sharma & Sharma, 2021). The subjective interpretation of temporal depth and directionality is unique to each family firm. Hence, it is a valuable competitive resource enabling them to manage their historical narratives and future aspirations, and thus motivating and precipitating innovative and creative strategic change and investments necessary for embedding sustainability into the business. Future research needs to integrate temporal dimensions to develop a nuanced understanding of the role of subjective interpretation of time in adoption of sustainability strategies.

Author contribution statement

The authors contributed equally to the work.

Conflict of interest statement

None.

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