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Book

Bridging long-term vision and entrepreneurial orientation: The role of learning orientation and willingness to change in family firms

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2/2025

Bridging Long-Term Vision and Entrepreneurial Orientation

The Role of Learning Orientation and Willingness to Change in Family Firms

Karamjit Kaur

Ilmenauer Schriften zur Betriebswirtschaftslehre

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The Role of Learning Orientation and Willingness
to Change in Family Firms

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List of Abbreviations

AVE	Average Variance Extracted
CEO	Chief Executive Officer
CR	Composite Reliability
EO	Entrepreneurial Orientation
GI	Generational Involvement
HOC	Higher-Order Construct
HTMT	Heterotrait–Monotrait Ratio
LO	Learning Orientation
LTO	Long-Term Orientation
MAE	Mean Absolute Error
PLS-SEM	Partial Least Squares Structural Equation Modeling
RMSE	Root Mean Square Error
SEW	Socioemotional Wealth
VIF	Variance Inflation Factor
WTC	Willingness to Change

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Chapter 1: Introduction

Family firms are among the most prevalent types of businesses in the world and have a major impact on employment, innovation, and economic stability (cf. De Massis et al., 2018). Their unique characteristics result from the intersection of business and family systems, where organizational culture and strategic behavior are shaped by kinship, ownership, and familial management (cf. Chua et al., 1999). Family involvement impacts the firm's objectives, decision-making process, and identity in addition to defining governance and succession patterns (cf. Chrisman et al., 2005). In contrast to non-family firms, family firms frequently aim for goals that extend beyond monetary gains, such as maintaining the family's reputation, preserving legacy, and ensuring continuity throughout generations. They, therefore, frequently implement long-term plans that prioritize stability, sustainability, and success across generations (cf. Le Breton-Miller & Miller, 2006). Furthermore, studies have examined a wide range of topics to assess whether distinctive characteristics of family firms support or undermine their entrepreneurial actions (cf. Hernández-Linares & López-Fernández, 2018; Lumpkin et al., 2010).

An established framework for examining entrepreneurial behavior at the firm level is reflected by the concept of entrepreneurial orientation (EO) (cf. Covin & Slevin, 1989; Lumpkin & Dess, 1996; Miller, 1983). EO is strongly linked to growth and performance in various organizational conditions (cf. Rauch et al., 2009). It reflects the company's strategic posture toward innovation, proactivity, and risk-taking (cf. Covin & Slevin, 1989; Miller, 1983). EO has emerged as a key concept in the research on family firms, contributing to explaining how family involvement influences entrepreneurship and performance (e.g., Kalali, 2022; Lumpkin et al., 2010; Zahra, 2005). Consequently, research has examined its several antecedents, especially those linked to the unique characteristics of family firms (cf. Hernández-Linares & López-Fernández, 2018; Kalali, 2022). Some of the antecedents include different organizational cultures such as error management culture (Kuckertz et al., 2024); stewardship and family commitment culture (Arz, 2021); organizational learning and market orientation (Hernández-Linares et al., 2018; Linares & Fernández, 2020); willingness to change (Kellermanns & Eddleston, 2006); CEO tenures (Kellermanns et al., 2008); socioemotional wealth (SEW) (cf. Rodrigues et al., 2022); family involvement and ownership (Chrisman et al., 2012; Cherchem, 2017); and long-term orientation (LTO) (Kalali, 2022; Lumpkin et al., 2010; Zahra et al., 2004). Among these, LTO is one of the most distinctive features that sets family firms apart from other types of organizations (cf. Le Breton-Miller & Miller, 2006). As Miller

and Le Breton-Miller (2005) also pointed out, LTO is a key characteristic of family firms (cf. Miller and Le Breton-Miller, 2005, as cited in Lumpkin et al., 2010) that enables them to outperform other family and nonfamily firms (cf. Zahra et al., 2004).

Several yet similar concepts, including extended time horizon (cf. Zellweger, 2007), long-term focus (cf. Narver & Slater, 1990), long-term horizon (James, 1999), and managing for the long run (cf. Miller & Le Breton-Miller, 2005), have been used by scholars to examine LTO in family firms. Although these studies have used different terminologies, they all focus on a forward-looking strategy where strategic choices are made considering the long-term consequences rather than immediate profits (cf. Brigham et al., 2014; Lumpkin et al., 2010). This perspective is particularly prominent in family firms due to their strong focus on maintaining SEW, family control, and transgenerational continuity (cf. Gómez-Mejía et al., 2007; Le Breton-Miller & Miller, 2006; Zahra et al., 2004). This long-term thinking affects how family firms allocate funds, make strategic plans, and create a balance between stability and growth (cf. Le Breton-Miller & Miller, 2006; Lumpkin & Brigham, 2011). Consequently, LTO has emerged as a key concept in comprehending how family firms promote EO and maintain their competitive edge over time (cf. Zahra et al., 2004).

Research on the relationship between LTO and EO has presented contradictory results. Studies connect LTO to risk aversion and conservatism that restrict entrepreneurial behavior and simultaneously also present it as a driver for creativity and innovation (cf. Kalali, 2022; Lumpkin et al., 2010; Zahra et al., 2004). This ambivalence implies that the impact of LTO on EO is multifaceted and could be influenced by internal behavioral and cultural processes that govern how long-term priorities are implemented in day-to-day decision-making. Despite ongoing scholarly interest, the majority of the empirical research that has been done so far has primarily focused on the direct effects of LTO on EO or its dimensions (e.g., Lumpkin et al., 2010; Kalali, 2022; Zahra et al., 2004), neglecting the mediating mechanisms that can convert these long-term goals into entrepreneurial actions. This limitation has been highlighted by recent studies (e.g., Hernández-Linares & López-Fernández, 2018; Lumpkin et al., 2010; Arz, 2019; Kalali, 2022) and have called for a more thorough investigation of this direct relationship. It remains unclear *how* LTO either promotes or inhibits EO in family firms. Thus, it is crucial to comprehend these internal mechanisms to explain why LTO sometimes encourages and other times restricts entrepreneurship.

To address this gap, the present research introduces *learning orientation (LO)* and *willingness to change* as mediating variables. Prusak (1996) stated that “the only thing that gives an organization a competitive edge—the only thing that is sustainable—is what it knows,

how it uses what it knows, and how fast it can know something new” (cf. Prusak, 1996, p. 6, as cited in Linares & Fernandez, 2020, p. 8). This statement highlights the importance of LO in an organization as it reflects the company's commitment to knowledge acquisition, sharing, and application for continuous enhancement (cf. Calantone et al., 2002; Sinkula et al., 1997). It is particularly relevant in family firms, where knowledge, experience, and values are transferred across generations (cf. Zahra, 2012). Through intergenerational learning, family businesses develop unique relational capital and tacit knowledge that foster strategic renewal (cf. Hernández-Linares et al., 2018). Additionally, willingness to change measures a company's behavioral preparedness to accept change, modify long-standing practices, and explore new paths in reaction to changing environmental conditions (cf. Arzubiaga et al., 2018; Kellermanns & Eddleston, 2006). In family firms, emotional attachment, legacy concerns, and a desire for control frequently limit an organization's flexibility and response to external factors (cf. Gómez-Mejía et al., 2007; Gómez-Mejía et al., 2025). Therefore, it is important to explore whether development of this change orientation can help translate a family firm's LTO into entrepreneurial outcomes.

Building on this foundation, the purpose of this research is to investigate both direct and indirect effects through LO and willingness to change to enhance understanding of the relationship between LTO and EO in family firms. Accordingly, this study addresses the following research question:

What is the influence of LTO on EO in family firms, and to what extent do LO and willingness to change mediate this relationship?

The study uses stewardship theory as a guiding theoretical framework to respond to this question. Stewardship theory becomes particularly relevant in the context of the family firm because it emphasizes the intrinsic motivation of family leaders to act as accountable stewards who put the company's long-term survival and the welfare of the group ahead of their own immediate interests (cf. Davis et al., 1997; Hernandez, 2012). This viewpoint provides a favorable starting point for describing how LTO in family firms can foster EO.

This study contributes to the literature in three ways. First, by going beyond the analysis of direct effects, this study advances the theoretical understanding of how the LTO affects EO in family firms. While earlier studies have acknowledged the LTO as a salient cultural trait influencing their strategic behavior, little is known about the processes by which this orientation is converted into entrepreneurial actions. This thesis directly addresses calls from

scholars (e.g., Arz, 2021; Hernández-Linares & López-Fernández, 2018; Lumpkin et al., 2010) for increased attention to explore LTO and EO relationship in family firms by introducing LO and willingness to change as mediators. Second, it contributes to the family firm heterogeneity literature by addressing the primary question: why do some family firms with LTO exhibit higher levels of EO than others by examining internal capabilities that can influence the promotion or restriction of EO. Third, this study employs a stewardship theory lens to describe how LTO emerges and is translated into EO. It improves knowledge of how the values and intents of family business leaders impact firm-level strategic orientations by situating LTO inside this stewardship rationale. In doing so, this study contributes to the understanding of why certain family firms manage to develop and renew throughout generations, while others remain stable but stagnant.

To address the research question, the remainder of this thesis is structured as follows: The next chapter reviews existing literature on EO, LTO, LO, and willingness to change. Chapter 3 presents the theoretical framework of this study and hypothesis development, followed by Chapter 4, which outlines the methodology, including data sources, sample, and analytical procedures using SmartPLS 4. Chapter 5 presents results; Chapter 6 includes a discussion on empirical results; Chapter 7 elaborates on the theoretical and practical implications; and finally, Chapter 8 comprises limitations and directions for future research.

Chapter 2: Literature Review

2.1 Entrepreneurial Orientation

In recent years, the concept of EO has been studied extensively in the literature. However, it first gained scholarly attention with Miller's (1983) publication. Miller (1983) defined it as "an entrepreneurial firm is one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch" (Miller, 1983, p. 771). Building on Miller's (1983) theoretical concept, Covin and Slevin (1989) conducted empirical research on firm-level entrepreneurship, evaluating firms' strategic behavior (cf. Anderson et al., 2014; Wales et al., 2011). Furthermore, Lumpkin and Dess (1996) suggested that "EO refers to the processes, practices, and decision-making activities that lead to new entry...It involves the intentions and actions of key players functioning in dynamic generative processes aimed at new-venture creation" (Lumpkin & Dess, 1996, pp. 136-137).

Previous literature has shown vast interest in specifying and classifying dimensions of EO (cf. Rauch et al., 2009; Lumpkin & Dess, 1996). For instance, based on Miller's (1983) definition, EO comprises three key dimensions: *innovativeness*, *proactiveness*, and *risk-taking*. *Innovativeness* specifies a firm's propensity to be creative through generating new ideas, experimenting, and creating novelty that can generate technological advancements, new products, or services. *Proactiveness* refers to a firm's ability to anticipate and quickly take initiative in seeking new opportunities that result in the creation of new products or services (cf. Lumpkin & Dess, 1996, pp. 140-146). *Risk-taking* can be described as bold actions taken by firms to seize market opportunities and gain high returns, along with their willingness to invest the firm's commitment in large resources and incur heavy debts (cf. Lumpkin & Dess, 1996, pp. 140-146; Miller, 1983, p. 780; Rauch et al., 2009, p. 763).

Although Lumpkin and Dess (1996) later expanded this dimensional framework by introducing *autonomy* and *competitive aggressiveness* as two additional salient components, this research adheres to the recognized three-dimensional conceptualization by Miller (1983). This study considers EO as a composite construct, indicating the simultaneous existence of innovativeness, proactiveness, and risk-taking that encapsulates a firm's overall entrepreneurial stance (cf. Miller, 1983; Rauch et al., 2009). This comprehensive approach is consistent with prior scholarly investigations related to family firms, which cohesively adopt this framework to evaluate firms' EO (e.g., Naldi et al., 2007; Pimentel et al., 2017; Zahra et al., 2004).

According to Hernández-Linares and López-Fernández (2018), this triadic, composite perspective has also emerged as the predominant approach in the literature on family firms.

Building on this conceptual foundation, EO has emerged as one of the most frequently used frameworks in strategic management and entrepreneurship research to describe the performance and entrepreneurial behavior of enterprises in diverse organizational situations (cf. Rauch et al., 2009; Wales et al., 2021). In the context of family firms, research on EO has received significant attention in recent years (cf. Hernández-Linares & López-Fernández, 2018). In this scenario, the strategic behavior of family firms is influenced not just by their financial objectives but also by their intentions to pass on the company to the next generation (cf. Chua et al., 1999; Cruz & Nordqvist, 2010), stewardship motives (cf. Kalali, 2022; Miller et al., 2007), and the continuation of SEW (cf. Gómez-Mejía et al., 2007). These distinguishing traits imply that EO might not appear consistently in family firms as compared to their nonfamily counterparts (cf. Chua et al., 1999; Hernández-Linares & López-Fernández, 2018). This heterogeneity, which stems from variations in family firms' objectives, governance, and resources (cf. Chua et al., 1999; Chua et al., 2012), also helps to explain the reason behind the contradictory findings of past studies associated with EO (cf. Hernández-Linares & López-Fernández, 2018; Lumpkin et al., 2010).

On the one hand, research supports the notion that distinctive characteristics of family firms can promote EO. For instance, Zahra et al. (2004) evaluated 536 family and nonfamily manufacturing businesses in the US to investigate the correlation between entrepreneurship and the organizational culture of family firms. The study found that the cultural traits, such as LTO, decentralization, and external orientation, act as unique intangible strategic resources that encourage entrepreneurial activities, including risk-taking, proactiveness, and innovation (cf. Zahra et al., 2004). Similarly, Zahra (2005) evaluated the risk-taking dimension of EO and examined 209 American family manufacturing businesses. His research also confirmed that family control and involvement can reinforce entrepreneurship.

On the other hand, research indicates that family ownership and control may limit the EO of family firms by fostering conservatism and risk aversion (cf. Hernández-Linares & López-Fernández, 2018; Lumpkin et al., 2010; Zahra et al., 2004). Building on this point, Naldi et al. (2007) discovered that family firms take entrepreneurial risks; however, there is a negative correlation between risk-taking and performance due to their focus on maintaining SEW and reputation. Consequently, they avoid taking risks and making decisions regarding future investments. Extending this argument, Zahra (2005) demonstrated that within family firms,

risk-taking and innovativeness have a negative relationship with long-term CEO tenures. Thus, the longer the time served as CEO, the less entrepreneurial family firms become. Moreover, Pimentel et al. (2017) argued that family involvement could reduce EO and found the negative correlation between family involvement and all three EO dimensions suggested by Miller (1983). These findings suggest that familial ties may impede entrepreneurial activities.

In accordance with the aforementioned considerations, a significant characteristic that can further lead to variation in EO among family firms is *generational involvement* (cf. Kellermanns & Eddleston, 2006). Based on the study by Kellermanns et al. (2008), the participation of multiple generations serves as a primary stimulus for entrepreneurial activities, which in turn significantly enhances the growth of family enterprises. Consistent with this perspective, Cruz and Nordqvist (2010) found that factors that influence EO in family firms change from generation to generation. For instance, in first-generation firms, the goals and personality of the founder impact a firm's EO. In second-generation firms, technological opportunities and market dynamism are key factors that affect EO (cf. Cruz & Nordqvist, 2010). By contrast, later generations' entrepreneurial perspective is more reliant on the involvement of external investors and managers that are not part of the family, bringing necessary resources and creative ideas to the company (cf. Cruz & Nordqvist, 2010). Contrary to these assertions, Kellermanns and Eddleston (2006) discovered that no direct relationship exists between generational involvement and corporate entrepreneurship. However, strategic planning can enhance entrepreneurial activities in first-generation enterprises, whereas in later generations' firms, this planning does not significantly improve their EO (cf. Kellermanns & Eddleston, 2006). These findings highlight that the level of EO in family firms is diverse, and its factors vary from one generation to the next.

To conclude, EO offers a valuable framework for understanding how family-specific characteristics shape firm-level entrepreneurship. One of the most prominent aspects of family firms that have an impact on EO is their temporal logic, or more precisely, their LTO (cf. Le Breton-Miller & Miller, 2006; Zahra et al., 2004). It is crucial to look at how family businesses' long-term emphasis influences their entrepreneurial activity because they frequently pursue enduring goals connected to legacy and transgenerational continuity (cf. Gomez-Mejia et al., 2007). Accordingly, the next section covers the influence of LTO on the development of EO within family firms.

2.2 Long-Term Orientation

As researchers attempt to comprehend the distinct temporal logics that set family firms apart from their nonfamily counterparts, LTO has emerged as a core concept in family business studies (e.g., Le Breton-Miller & Miller, 2006; Zahra et al., 2004). Fundamentally, LTO is defined as “the tendency to prioritize the long-term implications and impact of decisions and actions that come to fruition after an extended time period” (Lumpkin et al., 2010, p. 245). However, Le Breton-Miller and Miller (2006, p. 732) describe LTO as “priorities, goals, and most of all, concrete investments that come to fruition over an extended time period, typically 5 years or more, and after some appreciable delay.” In simpler terms, it is a reflection of firms' propensity to focus on the long-term impact of their actions, maintain efforts across long time horizons, and preserve the enterprise's continuity over generations (cf. Le Breton-Miller & Miller, 2006; Lumpkin et al., 2010). In particular, LTO is relevant in family firms, where concerns about legacy, longer CEO tenures, and transgenerational succession are heightened by a combination of family and company objectives (cf. Le Breton-Miller & Miller, 2006; Lumpkin et al., 2010). These attributes are drivers of this temporal dimension, as they influence how businesses make strategic decisions, allocate their resources, and exploit opportunities (cf. Le Breton-Miller & Miller, 2006).

Furthermore, Lumpkin and Brigham (2011) characterized LTO in terms of three unique dimensions. The first is *futurity*, which describes the degree to which businesses anticipate future possibilities and difficulties, prepare for long-term goals, and conduct in-depth forward-looking analysis. Instead of concentrating on immediate benefits, futurity entails a careful assessment of long-term effects (cf. Lumpkin & Brigham, 2011). The second dimension is *continuity*, which emphasizes the goal of maintaining the company's long-term survival and safeguarding it for future generations. Finally, the third dimension, *perseverance*, indicates determination in pursuing a firm's objectives over extended periods of time, demonstrating patience and the readiness to sacrifice short-term gains in favor of longer-term outcomes (cf. Brigham et al., 2014; Lumpkin & Brigham, 2011). Collectively, these three dimensions offer an extensive framework for understanding how family firms shape their strategic orientations and entrepreneurial behaviors by thinking and acting from a long-term perspective (cf. Brigham et al., 2014; Lumpkin & Brigham, 2011).

LTO has a direct influence on strategic decision-making and family firms' propensity to pursue entrepreneurial endeavors (cf. Le Breton-Miller & Miller, 2006; Lumpkin et al., 2010; Zahra et al., 2004). Therefore, it is crucial to examine LTO in connection with EO. For

instance, some family firms prioritize continuity and preservation, which may restrict risk-taking (cf. Gómez-Mejía et al., 2007; Kalali, 2022; Lumpkin et al., 2010), while others use their long-term vision to proactively innovate and explore new opportunities (cf. Zahra et al., 2004). In light of its dual character, LTO plays a significant role in explaining the differences in entrepreneurial practices among family firms. Based on these theoretical justifications, empirical research illustrates these dual characteristics in a distinct pattern. Early studies have emphasized the positive consequences of LTO. For example, Zahra et al. (2004) adopted a resource-based perspective, demonstrating that a company's competitive edge can be reinforced by utilizing LTO as a cultural resource. Furthermore, this study posits that family firms with enduring cultural characteristics, such as decentralization and external orientation, exhibit a higher level of entrepreneurial activity than those without these attributes (cf. Zahra et al., 2004). Eddleston et al. (2012) expanded on these findings by highlighting the importance of stewardship principles and long-term objectives in influencing entrepreneurship in family firms. The authors reported that family businesses are more likely to participate in entrepreneurial renewal when they integrate stewardship-oriented governance with a strong focus on long-term continuity, suggesting that LTO positively impacts firms' entrepreneurship and participative family involvement strengthens this relationship (cf. Eddleston et al., 2012).

Extending this line of investigation, some later scholars evaluated the impact of this time orientation on the five dimensions of EO proposed by Lumpkin and Dess (1996). For instance, Lumpkin et al. (2010) asserted that futuristic thinking and perseverance allow organizations to invest patiently in experimentation, seek opportunities over extended horizons, and empower individuals to act on new ideas, indicating that LTO fosters innovativeness, proactiveness, and autonomy. Concurrently, the authors contended that conservatism is strengthened by continuity because families are less inclined to take risks and want to protect their wealth and heritage (cf. Lumpkin et al., 2010). Therefore, they postulated that LTO indicate a negative correlation with risk-taking and competitive aggression but a positive relationship with innovativeness, proactiveness, and autonomy (cf. Lumpkin et al., 2010). According to this view, LTO can be perceived as a "double-edged sword," demonstrating how long-term vision encourages entrepreneurial behavior but inhibits visionary strategic plans (cf. Lumpkin et al., 2010). To support this proposition, a study by Kalali (2022) presented empirical evidence based on 282 Iranian family firms, adopting a stewardship perspective, to confirm the ambivalent perspective of Lumpkin et al. (2010). The study validated that LTO is negatively linked to risk-taking but positively associated with innovativeness and proactiveness. This demonstrates that long-term priorities motivate businesses to innovate and take proactive

measures in anticipation of future opportunities, but they also encourage conservatism by avoiding ambitious, high-risk projects (cf. Kalali, 2022). A more nuanced viewpoint was presented in a study by Arz (2021), which showed that LTO, by itself, does not immediately promote EO in established family firms. Instead, its impact is observed indirectly through an environment of stewardship, highlighting the role that cultural mechanisms play in converting long-term goals into EO (cf. Arz, 2021). This observation supports the findings of Arz (2019), who illustrated that organizational and cultural layers are not just structural characteristics; they contribute to the emergence of EO in family firms. This scenario situates LTO within the context of management-level logic that needs cultural reinforcement to achieve entrepreneurial results (cf. Arz, 2019).

Although these studies highlight the importance of LTO in comprehending entrepreneurial behavior in family firms, new research indicates that its impact varies depending on the context. For example, according to Pinelli et al. (2024), national cultures and institutional settings significantly influence the effectiveness of long-term logics. LTO enhances firms' capacity to maintain entrepreneurial activity in cultural contexts that value patience and continuity. However, its beneficial impacts are more limited in situations where short-term pressures predominate (cf. Pinelli et al., 2024). Moreover, Chua et al. (2025) also cautioned against the assumption that all family owned enterprises are inherently long-term focused. Their work revealed that family businesses articulate succession goals or legacy preservation, but these do not necessarily translate into meaningful long-term strategies. This study signifies the notable variation in the implementation of LTO (cf. Chua et al., 2025).

The research highlights LTO as a unique yet contradictory feature of family firms, promoting both creativity and initiative (cf. Zahra et al., 2004) and reinforcing risk aversion and conservatism (cf. Kalali, 2022; Lumpkin et al., 2010). Although earlier research has shed light on the strategic and cultural implications of LTO, it also indicates that its impact on entrepreneurship varies. This variance implies the existence of internal processes that enable long-term thinking to be implemented in daily decision-making. Expanding on this knowledge, the subsequent sections, 2.3 and 2.4, examine two organizational mechanisms, LO and willingness to change, that help to explain how LTO influences entrepreneurial conduct in family firms.

2.3 Learning Orientation

In the modern world, learning has become a crucial part of every organization's strategy for maintaining a competitive advantage (cf. Calantone et al., 2002), as it enables organizations to recognize and rectify mistakes (cf. Van Dyck et al., 2005). This orientation towards learning, also named LO, is described as a set of organizational norms that influence a firm's propensity to generate and implement knowledge, which in turn affects its competitiveness and adaptability (cf. Sinkula et al., 1997). In general, it is the organizational ability to generate, disseminate, and apply knowledge in ways that alter choices, practices, and tactics, which further influence creativity and performance outcomes (cf. Calantone et al., 2002; Sinkula et al., 1997). Following Sinkula et al. (1997), LO is characterized by three dimensions: commitment to learning, shared vision, and open-mindedness. The term "*commitment to learning*" describes an organization's understanding that continuous learning is crucial for its existence and expansion. Businesses that prioritize learning are more likely to make investments in procedures and systems that encourage reflection and development (cf. Sinkula et al., 1997). *Shared vision* represents the degree to which members of an organization are in agreement with common goals, such as shared learning and knowledge application (cf. Sinkula et al., 1997; Wang, 2008). It is imperative for every individual within an organization to concentrate on one specific objective, as this is the only way to effectively apply new knowledge and foster enthusiasm for learning (cf. Sinkula et al., 1997; Wang, 2008). Lastly, *open-mindedness* refers to being prepared to challenge established practices, discard outdated information, and maintain an open mind for novel perspectives (cf. Sinkula et al., 1997). Later, Calantone et al. (2002) proposed *intraorganizational knowledge sharing* as an additional component, highlighting that learning takes place when information flows across units and levels. Together, these concepts establish an organizational culture that accepts change and innovation (cf. Calantone et al., 2002; Sinkula et al., 1997).

In empirical research, LO is often linked with entrepreneurial outcomes (cf. Zahra, 2012). First, strong learning environments can increase an organization's likelihood of acquiring new information and foster knowledge creation and experimentation that result in new products, procedures, and business models, thereby boosting innovativeness (cf. Calantone et al., 2002). Second, it additionally enhances proactiveness, as companies that are dedicated to learning and have a shared goal for renewal are more inclined to thoroughly examine their surroundings and gain an understanding of their external environment, including market demands and customer preferences (cf. Zahra, 2012). This broader awareness enables

them to discover opportunities more quickly (cf. Wang, 2008; Zahra, 2012). Finally, decision-makers can better manage risk by reducing ambiguity through shared understanding (cf. Wang, 2008).

LO plays a significant role in family firms. Family ownership is positively associated with organizational learning speed and breadth, which means that family firms acquire a wide range of information quickly, although depth of expertise may sometimes be limited (cf. Zahra, 2012). Due to a strong reliance on internal and familiar resources, family firms occasionally struggle to establish deep and specialized knowledge (cf. Zahra, 2012). However, they often overcome this problem by employing their social capital and intergenerational involvement to access knowledge at a faster pace and much more broadly (cf. Zahra, 2012). Accordingly, entrepreneurial activity becomes a result of both breadth and depth of learning, demonstrating that knowledge management practices directly affect family firm renewal and opportunity pursuit (cf. Zahra, 2012). These dynamics are further strengthened by knowledge-sharing practices in family businesses (cf. Zahra et al., 2007), as knowledge-sharing is an integral part of LO (cf. Hernández-Linares et al., 2018; Sinkula et al., 1997). Stronger technological capabilities have a direct connection with both formal systems and informal generational exchanges (cf. Zahra et al., 2007). The participation of multiple generations strengthens knowledge of the organization and promotes a shared potential for innovation by allowing information to flow from individual members to the collective. Through these techniques, family firms can establish an organizational and technological base that helps them with their entrepreneurial activities, from finding new opportunities to creating new products and processes (cf. Zahra et al., 2007). Complementing these insights, Pittino et al. (2018) showed that family members' psychological ownership encourages information sharing, which in turn mediates the link between EO and psychological ownership. It implies that a company is more likely to demonstrate creativity, initiative, and careful risk-taking at the organizational level when families feel invested in the company and feel responsible enough for sharing their knowledge (cf. Pittino et al., 2018). Therefore, when knowledge is shared, learning takes place (cf. Hernández-Linares et al., 2018).

Furthermore, using a sample of small and medium-sized enterprises in Spain, Hernández-Linares et al. (2018) examined LO, market orientation, and EO and found that in firms owned by family members, the influence of LO on EO is much stronger as compared to nonfamily firms. The authors suggest that once a direction is decided upon, familiness can boost the entrepreneurial benefits of learning by encouraging dedication and coordination. In other words, when a family firm is oriented towards learning, its social structure helps convert this

orientation into entrepreneurial outcomes (cf. Hernández-Linares et al., 2018). Moreover, Linares and Fernández (2020) extended this analysis to include family and nonfamily businesses in Portugal and Spain, highlighting the impact of these orientations on the performance of an organization. They revealed that LO has a significant indirect impact on organizational performance through creating an environment that supports EO, and EO directly impacts the level of organizational performance (cf. Linares & Fernández, 2020). A recent study by Hernández-Linares et al. (2023) analyzed the three LO factors independently, taking leadership contingencies into account. It concludes that open-mindedness, shared vision, and a commitment to learning significantly influence EO, and that in family businesses, these correlations can be particularly strong when supportive female leadership is present (cf. Hernández-Linares et al., 2023).

Based on the literature, it can be observed that businesses that are committed to learning develop a shared vision for renewal, and have an open mind are more willing to innovate, take measured risks, and operate proactively in their markets, all of which support an entrepreneurial mindset and long-term success (cf. Calantone et al., 2002; Hernández-Linares et al., 2018; Hernández-Linares et al., 2023; Pittino et al., 2018; Zahra, 2012).

2.4 Willingness to Change

Adaptability has been increasingly recognized as a critical organizational survival skill in today's competitive environment. Long-term competitiveness depends on adaptation since strategic organizational change forces businesses to align their internal structures with external conditions (cf. Bloodgood & Morrow, 2003). Businesses are required to be open to experimentation and quick adjustments due to increased global competition, shorter product life cycles, and ongoing technological disruption (cf. Bloodgood & Morrow, 2003; Vago, 2004). In this particular context, the concept of *willingness to change* has become a crucial strategic and cultural characteristic (cf. Arzubiaga et al., 2018). It is commonly understood as an organization's ability to adapt to changing environmental conditions by accepting new ideas, implementing new procedures into place, and revising old routines (cf. Kellermanns & Eddleston, 2006). It displays a mindset that encourages experimentation, accepts ambiguity, and promotes change (cf. Arzubiaga et al., 2018; Kellermanns & Eddleston, 2006).

Organizational culture significantly influences the orientation toward change. According to Zahra et al. (2004), substantial differences exist between family and nonfamily firms in this regard. For instance, externally oriented and long-term focused cultures are more

supportive of entrepreneurial renewal, whereas conservative and rigid cultures are more likely to oppose change (cf. Zahra et al., 2004). In this way, willingness to change can be perceived as a cultural trait that influences organizational standards and simultaneously encourages or inhibits innovation and adaptation. It is particularly relevant in the context of family firms, where there is continuous pressure to create a balance between the need for renewal in unpredictable and competitive markets and the desire for continuity (cf. Kellermanns & Eddleston, 2006; Vago, 2004).

Family firms often oppose change due to concerns about conflicts, expenditures, and disrupting family ties, demonstrating that adapting to change depends on both emotional and economic considerations (cf. Vago, 2004). In order to overcome this problem, Vago (2004) developed a framework known as "integrated change management," which considers the practical as well as the emotional aspects of organizational change, promoting open discussion and organized adaptation. Similarly, Miller et al. (2003) further underscored how imbalances between continuity and change cause many family firms to struggle with intergenerational succession. They distinguished between three types of successions, each of which is linked to distinct adaptation outcomes (cf. Miller et al., 2003). First are conservative successions, which stagnate due to strict adherence to the founder's methods. Second are the rebellious ones, which generate inappropriate change due to extreme rejection of the past. Third, the wavering ones, which are characterized by inconsistency and uncertainty (cf. Miller et al., 2003). Building on this generational perspective, Moreno-Menéndez et al. (2021) also posit that change is frequently encouraged by shifts in generations, as younger generations often question long-standing practices and support renewal, specifically in emergency situations. Additionally, Zahra et al. (2007) emphasized that the intergenerational transfer of knowledge and family social capital serve as the basis for adaptation, thereby enhancing the company's capacity to innovate and seize new possibilities. These findings suggest that family firms' structural and governance factors also influence how open they are to change.

Furthermore, SEW perspectives have made substantial contributions to the theoretical foundation for comprehending willingness to change in family firms. Owners often place a high value on maintaining family control and identity. Therefore, traditional interpretations of SEW frequently portray family firms as risk-averse and reluctant to change (cf. Gómez-Mejía et al., 2007). More recent works, however, place more emphasis on this heterogeneity. According to Calabrò et al. (2025), depending on how goals are articulated, SEW can either promote risk aversion or openness to change rather than being universally restrictive. Gómez-Mejía et al. (2025) expand on this reasoning by combining viewpoints from implicit theory and

SEW. According to this study, family owners who have an incremental orientation view situations and skills as malleable, promoting change and risk-taking (cf. Gómez-Mejía et al., 2025). In contrast, owners with an entity orientation perceive attributes of the organization and its abilities as fixed; therefore, they see change as a threat and tend to oppose it (cf. Gómez-Mejía et al., 2025). Moreover, they also point out that performance hazards have the power to change these orientations, leading families to encourage change in order to safeguard SEW and ensure survival (cf. Gómez-Mejía et al., 2025). This cognitive framework helps explain the variation in willingness to change among family firms and the reasons why, despite of comparable market constraints, some are more entrepreneurial than others.

Research further indicates that family firms that welcome change exhibit greater entrepreneurial spirit. For instance, according to Kellermanns and Eddleston (2006), family firms that are more open to change exhibit higher levels of corporate entrepreneurship, as it promotes innovative thinking, risk-taking, and creativity. In a similar way, Upton et al. (2001) demonstrated that rapidly expanding family firms embrace proactive approaches, such as early follower and first-to-market behaviors, both of which depend on a firm's willingness to adapt. The above findings demonstrate that a willingness to change supports innovativeness, risk-taking, and proactiveness (cf. Kellermanns & Eddleston, 2006; Upton et al., 2001), key elements of EO (cf. Lumpkin & Dess, 1996), along with reducing organizational rigidity within family firms (cf. Miller et al., 2003). Additionally, through an analysis of small and medium-sized family businesses, Arzubiaga et al. (2018) showed how willingness to change strengthens a firm's EO by encouraging the exploration and exploitation of new opportunities. According to their results, willingness to change shapes the firm's entrepreneurial mindset by acting both proactively and reactively, but board involvement and control can significantly reduce this impact (cf. Arzubiaga et al., 2018). Consistently, Moreno-Menéndez et al. (2021) assert that family businesses with adaptable capacities, often based on willingness to change, are better equipped to maintain and even develop their EO over time during crises. Furthermore, Alonso et al. (2019) emphasized that the ability of family firms to respond to external change and challenges depends on their ability to create dynamic capabilities, which include recognizing, seizing, and modifying resources. This establishes willingness to change as a resilience mechanism that enables family firms to maintain a balance between renewal and continuity in times of uncertainty.

All of this research points to a key process by which family firms leverage their unique attributes to adopt an entrepreneurial mindset: willingness to change (cf. Arzubiaga et al., 2018; Kellermanns & Eddleston, 2006). Cultivating an environment of willingness to change enables

family firms to take advantage of their LTO (cf. Zahra et al., 2004), social capital (cf. Zahra et al., 2007), and intergenerational knowledge for economic advantage (cf. Miller et al., 2003; Zahra et al., 2007), even though they frequently struggle with the conflict between stability and renewal (cf. Vago, 2004). Family businesses are more inclined to innovate, take proactive measures (cf. Upton et al., 2001), and accept measured risks (cf. Gómez-Mejía et al., 2025) when WTC is high, which helps maintain EO throughout generations (cf. Moreno-Menéndez et al., 2021). However, in the absence of the firm's willingness to change, the drive for consistency could turn into rigidity (cf. Schweiger et al., 2024; Vago, 2004), which would restrict long-term competitiveness and entrepreneurial activity.

The following section outlines the theoretical framework of this study and explains how LO and willingness to change act as mediating mechanisms in family firms, through which LTO is translated into EO.

Chapter 3: Theoretical Framework and Hypotheses Development

3.1 Stewardship Theory

Stewardship theory offers a theoretical framework for comprehending why organizational actors may prioritize communal interests over individual self-interests. It was first proposed by Davis et al. (1997) as a critique of agency theory, which posits that managers are self-interested individuals, also referred to as opportunistic agents, who need incentives and supervision in order to align their behavior with company objectives (cf. Davis et al., 1997; Jensen & Meckling, 1976). As opposed to this, stewardship theory holds that owners and managers act as stewards, individuals who are naturally inclined to work in the best interest of the organization (cf. Davis et al., 1997; Hernández, 2012); seek fulfillment in the organization's success, and prioritize the long-term goals ahead of short-term gains (cf. Hernández, 2012). This theory is especially applicable to family firms. Family entrepreneurs tend to identify strongly with their businesses and perceive them as an extension of themselves, in contrast to non-family firms where ownership and management are usually separated (cf. Le Breton-Miller & Miller, 2009). Therefore, owners and managers are intrinsically motivated to establish a legacy for future generations and preserve continuity (cf. Chrisman, 2019; Le Breton-Miller & Miller, 2009). As argued by Corbetta and Salvato (2004), the "*model of man*" in family firms emphasizes trust, altruism, and long-term responsibility and is often more comparable to self-actualizing stewards than self-serving agents. They highlight that stewardship practices such as collaboration and collectivism often minimize agency costs and promote sustained entrepreneurial activity (cf. Corbetta & Salvato, 2004).

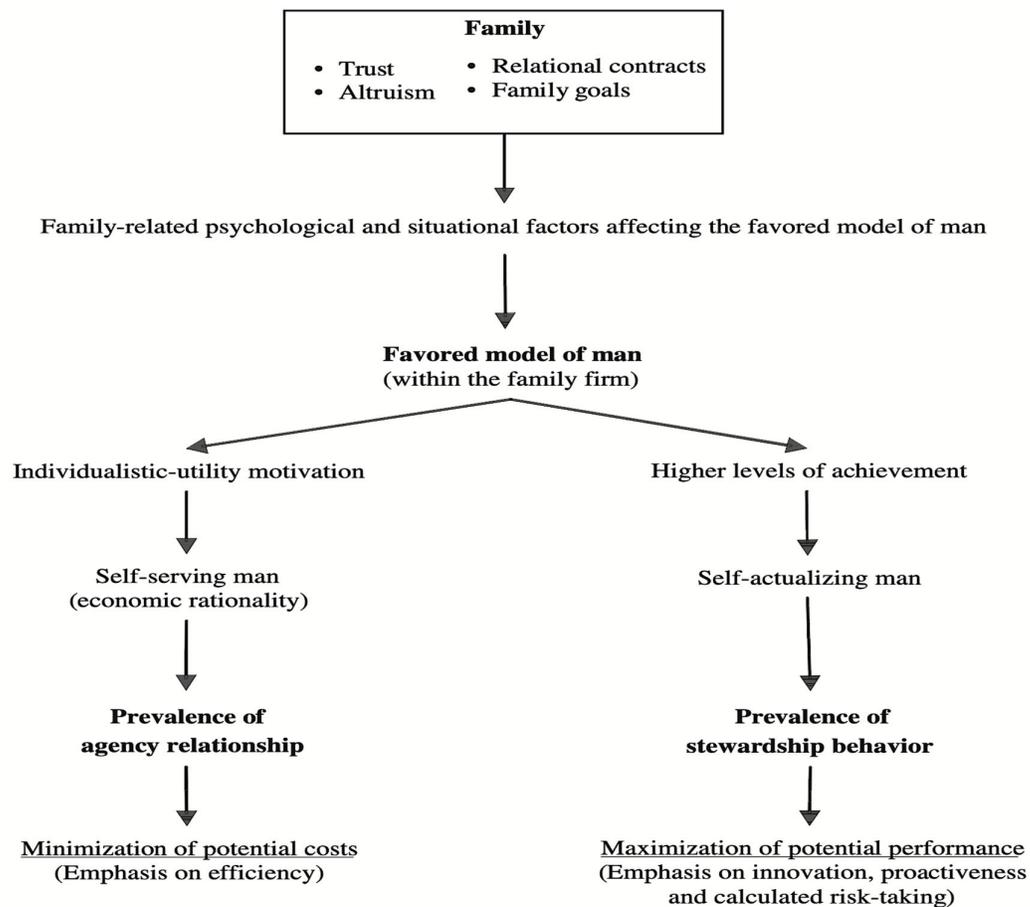
The model of Corbetta and Salvato (2004), as depicted in Figure 1, illustrates how various "*models of man*" that family members accept influence organizational outcomes. The present study's application of stewardship theory is supported by this framework, which emphasizes the direct correlation between entrepreneurial outcomes and the responsibilities and orientations of family members when they act as stewards (cf. Corbetta & Salvato, 2004).

Moving beyond individual-level motives, Neubaum et al. (2016) operationalized stewardship theory at the organizational level by creating and validating a stewardship climate scale that measures whether leader behaviors, policies, and practices promote stewardship-oriented behavior across the company (cf. Neubaum et al., 2016). The study suggests six interrelated dimensions, which capture cultural norms: *intrinsic motivation* (individual's internal motivation; enhanced by intrinsic rewards such as praise by a manager and

recognition), *organizational identification* (employees identify themselves as part of an organization; strong sense of attachment with a company), *use of personal forms of power* (trust formed by interpersonal relationships fostered over time), *collectivism* (the whole organization working toward one single goal to achieve success rather than individualism), *low power distance* (individuals that are in power or family members in family firms receive the same treatment as other members in an organization), and *involvement orientation* (an environment in which employees have involvement in decision-making processes; foster employees' autonomy) (cf. Neubaum et al., 2016). It was found that family firms cultivate a better stewardship climate, which ultimately leads to better performance outcomes than nonfamily firms (cf. Davis et al., 1997, pp. 28-31; Neubaum et al., 2016).

Figure 1

Model of Man within Family Firms



Source: From Corbetta & Salvato, 2004, p. 358

An increasing amount of research has employed the stewardship lens to explain the behavior of family firms. For instance, in public family businesses, stewardship and agency logic were empirically reconciled by Le Breton-Miller and Miller (2009). The study demonstrates how family ownership, when incorporated into stewardship environments, can encourage patient capital, long-term investments, and entrepreneurial risk-taking, whereas agency-dominated environments are far more inclined to discourage these activities (cf. Le Breton-Miller & Miller, 2009). Additionally, Eddleston and Kellermanns (2007) investigated family relationships by adopting stewardship theory. The authors discovered that the hallmarks of stewardship and participative strategy processes enhance family business performance, while altruism helps to minimize relationship conflict. This illustrates how cultures that prioritize stewardship foster teamwork and support entrepreneurial endeavors (cf. Eddleston & Kellermanns, 2007).

Hernández (2012) focused on psychological mechanisms to further improve empirical understanding of stewardship. In contrast to financial incentives, she found that pro-organizational actions are driven by higher-order needs, such as responsibility and recognition, which are the source of stewards' identity and sense of satisfaction (cf. Hernández, 2012). Direct empirical evidence was put forward by Miller et al. (2007) to contrast the perspectives of stewardship and stagnation in family firms. In their analysis of small family and nonfamily businesses, they discovered that family businesses are more likely to engage in stewardship practices, such as making research and development (R&D) investments, developing enduring relationships with customers, and establishing a strong reputation. By promoting innovation and long-term competitiveness, these measures disproved the idea that family firms are essentially conservative or stagnant (cf. Miller et al., 2007). This study demonstrates that stewardship-oriented practices cultivate behaviors that promote entrepreneurial actions in family firms, such as innovativeness and proactiveness (cf. Miller et al., 2007). Building on this, Zahra et al. (2008) argued that the strategic flexibility of family firms is enhanced by stewardship-oriented culture. Using a sample of 248 family firms, they proved that a culture of family commitment enhances the firm's ability to adapt and explore entrepreneurial opportunities, and that stewardship cultures reinforce this effect by boosting trust, collectivism, and employee involvement (cf. Zahra et al., 2008). Moreover, Dibrell and Moeller (2011) enhanced stewardship theory by integrating it with service-dominant reasoning. Upon analyzing 206 family enterprises and 101 nonfamily firms, the study reveals that a stewardship culture enhances the link between customer orientation and organizational innovativeness. The effect was more pronounced in family firms, indicating that stewardship-oriented values like

trust, collectivism, and employee engagement enable family firms to successfully incorporate customer knowledge into their strategy, thereby augmenting innovativeness (cf. Dibrell & Moeller, 2011).

In general, these empirical studies demonstrate that stewardship serves not merely as a theoretical alternative to agency theory but also as a robust explanatory framework for understanding the conduct of family firms. It clarifies how legacy objectives, LTO, and family values may be translated into entrepreneurial activities (cf. Eddleston et al., 2021; Hernández, 2012; Miller et al., 2007; Zahra et al., 2008). Therefore, this study utilizes stewardship theory as its principal theoretical framework that effectively elucidates how LTO is translated into EO via mechanisms such as LO and willingness to change in family firms. Although these specific mechanisms will be analyzed in the hypothesis development section, stewardship theory provides the fundamental basis by elucidating why family enterprises emphasize legacy and continuity in ways that promote EO.

3.2 Hypotheses Development

3.2.1 Long-Term Orientation and Entrepreneurial Orientation

As discussed in section 2.2, LTO is characterized by three key concepts: continuity, futurity, and perseverance (cf. Brigham et al., 2014). Previous studies have demonstrated that in family firms, LTO encourages entrepreneurial behavior. It has been identified as a cultural resource that strengthens a firm's competitive advantage (cf. Zahra et al., 2004), as a stewardship-related principle that nurtures corporate entrepreneurship (cf. Eddleston et al., 2012), and as a future-oriented perspective that encourages innovativeness, proactiveness, and autonomy, albeit with a more cautious approach to risk-taking and competitive aggressiveness (cf. Kalali, 2022; Lumpkin et al., 2010). These findings suggest that prior research has examined LTO from two distinct viewpoints: it fosters innovativeness and proactiveness while simultaneously increasing risk aversion (cf. Kalali, 2022; Lumpkin et al., 2010).

Building on stewardship theory, this study extends these insights by framing LTO as a foundation for family firms overall EO and by addressing the duality noted in earlier research. According to stewardship theory, family managers often consider themselves the company's guardians and take actions that preserve and strengthen its long-term viability (cf. Hernández, 2012; Neubaum et al., 2016). This sense of accountability encourages family decision-makers to put the continuity of future generations ahead of short-term financial gains (cf. Lumpkin et al., 2010). From the standpoint of stewardship, this kind of time horizon validates patient

investments, long-term priorities, and a focus on the company's long-term success (cf. Le Breton-Miller & Miller, 2006; Lumpkin et al., 2010). To safeguard their future, family firms are encouraged to embrace entrepreneurial practices. In particular, LTO fosters innovation as families make investments in new goods, systems, and procedures to maintain competitiveness (cf. Lumpkin et al., 2010; Zahra et al., 2004). It also promotes proactive behavior since forward-looking decision-makers anticipate changes in the environment and take action before competitors to maintain continuity (cf. Eddleston et al., 2012; Kalali, 2022). Despite the perception that family firms are risk averse (cf. Kalali, 2022; Lumpkin et al., 2010), LTO reframes risk-taking in terms of stewardship, where opportunities are not taken carelessly but rather accepted when they increase the firm's viability and protect the heritage of future generations (cf. Gómez-Mejía et al., 2007; Gómez-Mejía et al., 2025; Zahra, 2005). This is how LTO gives family firms the cultural and temporal foundation to incorporate creativity, initiative, and measured risk-taking into a broader entrepreneurial mindset. Based on this reasoning and the literature discussed in section 2.2, the following hypothesis is proposed:

H1: LTO positively influences EO in family firms.

3.2.2 Mediating Role of Learning Orientation

Knowledge is widely acknowledged as a key source of competitiveness and growth in contemporary companies (cf. Zahra et al., 2004). Particularly when businesses encounter dynamic settings, learning processes help them adapt, spot opportunities, and decide on entrepreneurial endeavors (cf. Wang, 2008). In family firms, LTO offers a distinctive foundation for fostering this kind of learning culture. In the stewardship framework, LTO signifies not merely a temporal preference but also a stewardship-based obligation to sustain and enhance the company's profitability over generations (cf. Le Breton-Miller & Miller, 2006). This orientation validates patient investments, promotes intergenerational knowledge transfer, and positions adaptive behavior as a fundamental obligation to future stakeholders (cf. Kalali, 2022; Le Breton-Miller & Miller, 2006; Zahra et al., 2004). As Le Breton-Miller and Miller (2006, p. 732) noted, “Long-term *priorities* include good stewardship aimed at reducing risk or building up resources.” The company's knowledge base is one such vital resource that needs to be built up, disseminated, and updated over generations to ensure transgenerational survival (cf. Hernández-Linares et al., 2018; Hernández-Linares et al., 2023; Zahra, 2012).

LO captures how this knowledge-based resource becomes institutionalized as a cultural value system, grounded in a shared vision, open-mindedness, and a commitment to learning (cf. Hult et al., 2004; Sinkula et al., 1997). Stewardship theory suggests that family managers who embrace long-term goals, identify with the firm, view their success as the company's success, and take responsibility for its continuity are likely to cultivate a collaborative environment that can promote collective learning (cf. Corbetta & Salvato, 2004; Hult et al., 2004; Neubaum et al., 2016). Additionally, the focus on continuity and the future encourages receptivity to challenging norms and to exploring new ideas (cf. Kalali, 2022; Lumpkin et al., 2010), thereby establishing open-mindedness as a cultural standard (cf. Hernández-Linares et al., 2018; Pittino et al., 2018).

Following its establishment, LO acts as a link, driving LTO toward an entrepreneurial mindset. Businesses with high LO create conditions conducive to entrepreneurial activities because they are more inclined to experiment, combine resources, and react proactively to changes in the environment (cf. Wang, 2008). Empirical research demonstrates that LO promotes EO by fostering innovativeness (cf. Hult et al., 2004), proactiveness, and risk-taking (cf. Hernández-Linares et al., 2018; Hernández-Linares et al., 2023; Linares & Fernández, 2020). Implementation of stewardship theory in family firms strengthens this effect by integrating learning as a collective responsibility that guarantees the company's ability to engage in long-term renewal. In simpler terms, following stewardship theory, family members function as stewards, prioritizing long-term objectives while safeguarding SEW and legacy (cf. Eddleston et al., 2012; Neubaum et al., 2016). They cultivate shared vision and commitment to learning (cf. Sinkula et al., 1997) because knowledge, as part of learning, is one of the important resources for maintaining continuity and improving the firm's performance (cf. Hernández-Linares et al., 2018). This alignment with objectives results in increased innovativeness, proactiveness, and calculated risk-taking (cf. Corbetta & Salvato, 2004), thereby enhancing EO (cf. Miller, 1983). Therefore, building on stewardship theory, this study proposes that LTO fosters EO indirectly by nurturing LO as a mediating cultural mechanism.

H2: LO mediates the relationship between LTO and EO in family firms.

3.2.3 Mediating Role of Willingness to Change

While LTO facilitates transgenerational priorities and patient capital for family firms (cf. Le Breton-Miller & Miller, 2006), entrepreneurial action also requires adaptability and openness to change. Willingness to change is demonstrated in strategy and entrepreneurship research by being adaptable, open to change, and strategic, that is, willing to adjust objectives, practices, frameworks, and resource arrangements in response to changing circumstances (cf. Bloodgood & Morrow, 2003; Vago, 2004; Zahra et al., 2008). Stewardship logics encourage willingness to change in family firms because leaders present adaptation as a measure to preserve the legacy of the family rather than undermining it (cf. Eddleston et al., 2012; Vago, 2004). Similarly, decision-making is oriented toward long-term horizons because family owner-managers identify with the company and feel accountable for transgenerational continuity (cf. Davis et al., 1997; Hernández, 2012). Therefore, LTO cultivates willingness to change in family firms by reinforcing (1) investments in R&D, development of individuals, knowledge systems, stakeholder partnerships that yield long-term benefits (cf. Le Breton-Miller & Miller, 2006; Zahra et al., 2004), and construction of sustainable capacities that enable adaptation (cf. De Massis et al., 2012); (2) implementation of strategic controls, participatory decision-making, and information-sharing as outcomes of long-term, stewardship-consistent governance, thereby normalizing adaptation and reducing the perceived threat of change (cf. Eddleston et al., 2011; Vago, 2004; Zahra et al., 2004, 2008); and (3) presentation of change as a safeguard for continuity, where leaders who prioritize continuity frame change as maintaining legacy rather than violating it (cf. Gómez-Mejía et al., 2025). This reinterpretation enables family firms to become more willing to adjust their routines when their surroundings change (cf. Eddleston et al., 2011; Vago, 2004), and it aligns with research that shows families can implement change when control or performance are at risk (cf. Gómez-Mejía et al., 2025).

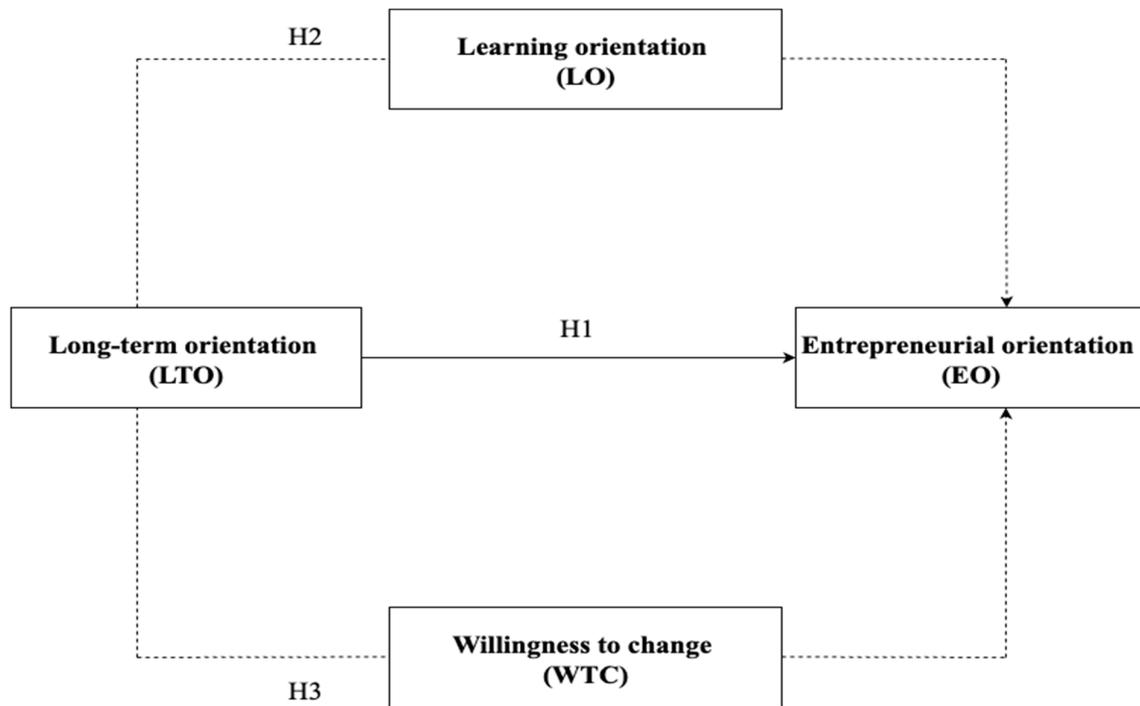
Furthermore, a stronger willingness to change increases the possibility that family firms will embrace innovation, update their strategies, and reallocate resources to take advantage of new opportunities (cf. Arzubiaga et al., 2018; Kellermanns & Eddleston, 2006). In contrast to traditions that tend to favor stability, this openness promotes proactive behavior, lowers inertia, and supports measured risk-taking (cf. Eddleston et al., 2011; Schweiger et al., 2024; Zahra et al., 2008). In this regard, willingness to change transforms the continuity and patience offered by LTO into the innovativeness, proactiveness, and risk-taking that define EO in family firms. Therefore, this study proposes the following hypothesis:

H3: Willingness to change mediates the relationship between LTO and EO in family firms.

Figure 2 presents the conceptual model summarizing the hypothesized relationships developed above based on stewardship theory.

Figure 2

Conceptual Model of this Study



Notes. H1, H2, and H3 represent hypothesized relationships; Learning orientation and Willingness to change are mediators; Dotted line represents mediation effect; Covariates: CEO tenure; Generational involvement; and Age of the family firm

Chapter 4: Methodology

4.1 Data Source and Sample Description

This study utilized open-access secondary data collected and published by Arz and Kuckertz (2019), who used a web-based survey method targeting owners and CEOs of German family firms. Family firms in Germany account for almost 70 percent of the GDP, making them an essential component of the national economy (cf. Nguyen et al., 2024). They play a crucial economic function because of their dominance in private enterprise, which makes them essential to innovation and employment creation (cf. Kuckertz et al., 2024; Nguyen et al., 2024). Accordingly, analyzing German family firms offers important insights into the workings of one of the most innovative economies in the world (cf. Kuckertz et al., 2020; Kuckertz et al., 2024). The dataset included 208 self-reported responses that were gathered between December 2017 and February 2018 (cf. Arz & Kuckertz, 2019). The original sample was drawn from the Orbis database (Bureau van Dijk) and was developed according to strict inclusion criteria for sample relevance. Participants in the original sample consisted of only mature German-based firms that were established prior to 1994, had a minimum of 25 employees, and generated at least €5 million in annual revenue (cf. Arz & Kuckertz, 2019).

To maintain conceptual coherence and sample relevance, the study used a rigid definition of a family firm. In particular, a business was categorized as a family business if it satisfied three requirements: (a) the business was owned by a single family; (b) the family had a significant influence on strategic decisions and was represented in the management team; and (c) the company's chief representative recognized the firm as a family business (cf. Arz & Kuckertz, 2019). According to previous studies on family business identification (e.g., Chua, Chrisman, & Sharma, 1999; Chua et al., 2012), this definition guarantees that the data appropriately identify companies where family involvement is both managerial and perceptual. Collectively, the final dataset represented mature family firms with family members involved in strategic management (cf. Arz & Kuckertz, 2019). The dataset included measures of EO, LTO, willingness to change, LO, and various firm-level or organizational control variables, which were precisely relevant for this study. To address concerns about common method variance, the original authors attempted procedural solutions by varying item formats, using distinct scale anchors, and reverse-coded items. The authors also provided reliability and validity measures to demonstrate the dataset's robustness (cf. Arz & Kuckertz, 2019).

4.2. Measurement of Variables

4.2.1 Independent Variable

LTO was measured as a multidimensional second-order formative construct, grounded in the conceptual framework established by Brigham et al. (2007). It was represented by three distinct dimensions, namely futurity, continuity, and perseverance (cf. Arz & Kuckertz, 2019). The construct included a total of 12 items. For the measurement of items and responses, a five-point Likert scale was adopted, ranging from 1 = “not at all” to 5 = “to an extreme extent” (cf. Arz & Kuckertz, 2019).

Four out of five items representing the dimension of *futurity* were adapted from Hoffmann et al. (2016), that were originally derived from prior research by Covin and Slevin (1989) (cf. Arz & Kuckertz, 2019). The items for *continuity* and *perseverance*, on the other hand, were newly developed to align with the theoretical conceptualization by Brigham et al. (2007) (cf. Arz & Kuckertz, 2019). Some sample items included in the questionnaire were “The management in our firm values constancy to pursue an enduring mission” (*continuity*); “The management in our firm focuses in particular on long-term profitability” (*futurity*); and “The management in our firm demonstrates patience for future rewards” (*perseverance*) (cf. Arz & Kuckertz, 2019).

4.2.2 Mediators

Learning orientation

Following Sinkula et al.’s (1997) conceptualization, LO was evaluated as a multidimensional construct with three major dimensions: open-mindedness, shared vision, and commitment to learning (cf. Arz & Kuckertz, 2019).

For measurement of all eleven items reflecting these dimensions, a five-point Likert scale was used, where 1 = “not at all” and 5 = “to an extreme extent” (cf. Arz & Kuckertz, 2019). Some exemplary items included in the questionnaire were “The basic values of this organization include learning as a key to improvement” (commitment to learning); “There is a commonality of purpose in my organization” (shared vision); and “We are not afraid to reflect critically on the shared assumptions we have made about our customers” (open-mindedness) (cf. Arz & Kuckertz, 2019).

Willingness to change

WTC comprised four items developed by Kellermanns and Eddleston (2006), and all of them were measured using a five-point Likert scale ranging from 1 = “not at all” to 5 = “to

an extreme extent” (cf. Arz & Kuckertz, 2019). Sample items used to assess responses included “Managers are generally fascinated by novel ideas” and “Managers are generally open to trying new things for our family firm” (cf. Arz & Kuckertz, 2019).

4.2.3 Dependent Variable

EO was characterized as a second-order, multidimensional construct and quantified by three fundamental dimensions, namely innovativeness, proactiveness, and risk-taking (cf. Arz & Kuckertz, 2019). These dimensions were identified and taken into account from established research by Covin and Slevin (1989) and Knight (1997). A five-point semantic differential type scale was used to measure each dimension, which was assessed using three reflective items (cf. Arz & Kuckertz, 2019). Some examples of reflective scale items included for *innovativeness*, “How many new lines of products or services has your firm marketed in the past five years?” with anchor responses ranging from “No new lines of products or services” to “Many new lines of products or services.” For *proactiveness*, one item asked respondents to evaluate their firm’s strategic posture in dealing with competitors, “In dealing with its competitors, my firm...” with response options such as “typically responds to actions that competitors initiate” and “typically initiates actions which competitors then respond to.” For *risk-taking*, one of the items stated, “In general, the top managers of my firm have...,” with response entries ranging from “a strong proclivity for low-risk projects (with normal and certain rates of return)” to “a strong proclivity for high-risk projects (with chances of very high returns)” (cf. Arz & Kuckertz, 2019).

4.2.4 Control Variables

Three control variables, namely age of the family firm, generational involvement, and CEO tenure, were included in this study to reduce biased results. These variables were selected due to their potential influence on EO and their relevance in prior family firm literature (cf. Cruz & Nordqvist, 2010; Kellermanns & Eddleston, 2006; Zellweger & Sieger, 2010).

The age of the family firm was assessed using the year of foundation of the business (open-ended question). Generational involvement was measured through the total number of family generations currently engaged in the firm, using a classification question with the following categories: 1 = one generation; 2 = two generations; 3 = multiple generations (more than two). CEO tenure was determined by the year in which the current CEO began working in the family firm (open question) (cf. Arz & Kuckertz, 2019).

4.3. Analytical Approach

This research applied Partial Least Squares Structural Equation Modeling (PLS-SEM) as the main analytical technique to estimate and test the hypothesized relationships among the latent constructs of this study using the software SmartPLS 4.0 (Ringle et al., 2024). PLS-SEM was selected due to its suitability for exploratory research and its ability to work especially well with models that incorporate higher-order constructs and both formative and reflective variables (cf. Hair et al., 2018, p. 5; Sarstedt et al., 2019, p. 108). Moreover, it is especially beneficial in modeling complexity, where numerous constructs and relationships (i.e., higher-order variables) are involved (cf. Richter et al., 2016; Sarstedt et al., 2019). These methodological characteristics are consistent with the present research, which uses secondary data to investigate the direct and indirect effects of LTO on EO through LO and willingness to change, and includes both formative and reflective as well as higher-order constructs. Furthermore, the dataset included 208 German family firms, which represents a moderate sample size (cf. Arz & Kuckertz, 2019); therefore, PLS-SEM is an appropriate technique for attaining high statistical power without the need for multivariate normality assumptions (cf. Sarstedt et al., 2019).

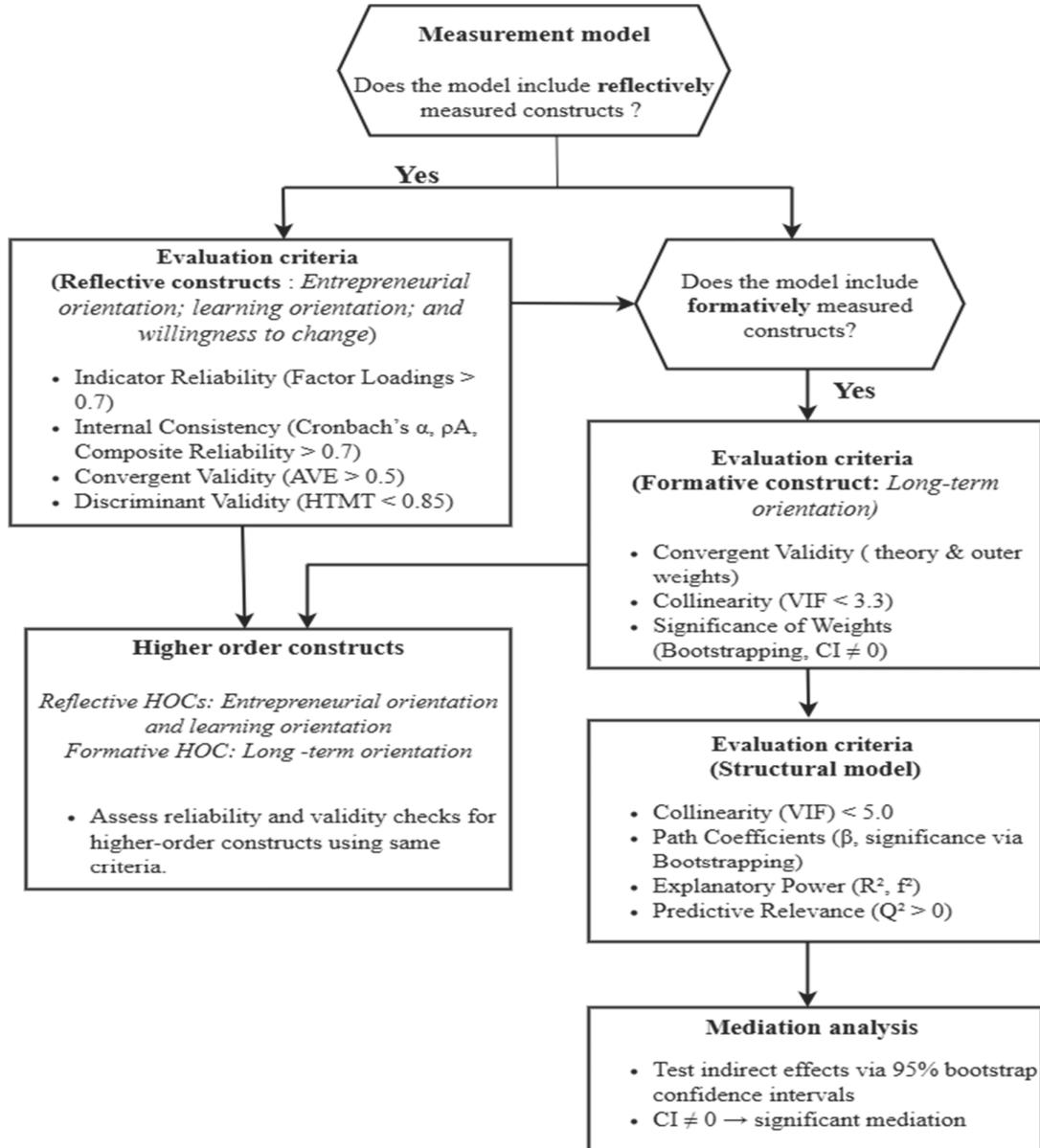
The model of the present study includes three higher-order constructs, LTO (formative, second-order independent variable), LO (reflective, second-order mediator), and EO (reflective, second-order dependent variable), along with an additional reflective first-order mediator, willingness to change. This model was estimated using the *disjoint two-stage approach* (cf. Sarstedt et al., 2019). As the name suggests, this methodology entails the evaluation of the lower- and higher-order constructs in two phases. In the first stage, latent variable scores for first-order dimensions were generated (e.g., for LTO: futurity, continuity, perseverance; and for EO: innovativeness, proactiveness, and risk-taking; and for LO: commitment to learning, shared vision, and open-mindedness). At the second stage, these scores were used as predictors of the second-order constructs to test the structural model (cf. Sarstedt et al., 2019).

The PLS-SEM analysis was divided into three main steps. Stage one examined the measurement model. The procedures that needed to be followed to evaluate the measurement model differed depending on whether the constructs were formative or reflective (cf. Hair et al., 2021; Sarstedt et al., 2014, pp. 108-110). After the measurement model quality of the variables was determined to be satisfactory, the analysis moved on to *stage two*, which consisted of an assessment of the structural model. Finally, *in stage three*, mediation analysis

was conducted to test the hypotheses. Every step followed the methodological recommendations made by Sarstedt et al. (2019) and Hair et al. (2021). Following these suggestions, Figure 3 shows the sequential assessment criteria for measurement and structural models for the constructs used in this study, along with mediation testing.

Figure 3

PLS-SEM Evaluation Process



Notes. Based on Sarstedt et al., 2014, p. 108; CI = Confidence Interval; VIF = Variance Inflation Factor; HOC = Higher Order Construct

Stage 1: Assessment Criteria for Measurement Model

As this study included both reflective and formative constructs, different evaluation criteria were applied.

Reflective Measurement Model

Following the guidelines of Hair et al. (2021a), the evaluation of the reflective constructs, i.e., EO, LO, and willingness to change, began with the assessment of indicator reliability. The reliability of the indicators was determined by evaluating factor loadings of each item in the context of the respective construct. Items with lower loadings were carefully reviewed, and only those that significantly added to the conceptual domain of the construct were included (cf. Hair et al., 2021a, pp. 77-78). The next step involves measurement of internal consistency reliability, verified through Cronbach's alpha (α), composite reliability (CR), and the reliability coefficient (ρ_A) values. Furthermore, convergent validity was assessed using the average variance extracted (AVE) (cf. Hair et al., 2021a, pp. 77-78). Lastly, discriminant validity was verified through the Heterotrait–Monotrait ratio of correlations (HTMT), ensuring that the constructs were empirically distinct from one another (cf. Hair et al., 2021, p. 78; Henseler et al., 2015).

Formative Measurement Model

For the formative construct, LTO required a different validation approach. To assess this formative construct, collinearity among indicators was analyzed using the Variance Inflation Factor (VIF) to confirm that the dimensions did not overlap either conceptually or statistically (cf. Hair et al., 2021b). Furthermore, the statistical significance of LTO indicators was examined using the 95% percentile bootstrap confidence interval (10,000 bootstrap samples) (cf. Hair et al., 2021, p. 145; Aguirre-Urreta & Rönkkö, 2018). Indicator weights were considered significant if the confidence interval did not contain zero (cf. Hair et al., 2021, p. 145). The convergent validity for LTO could not be established directly, as the dataset did not include either a global reflective item or an alternative reflective scale to encompass the construct in its entirety. However, the measurement model of the LTO was validated in earlier studies (cf. Brigham et al., 2014; Zellweger et al., 2012), which provided empirical evidence demonstrating its convergent validity.

Stage 2: Assessment Criteria for Structural Model

After confirmation of the reliability and validity of the measurement models, the structural model was evaluated in accordance with the procedures set forth by Hair et al. (2021c) and Sarstedt et al. (2014). The evaluation involved four steps: First, VIF values were analyzed to evaluate possible multicollinearity issues among predictor constructs (cf. Hair et al., 2021c; Sarstedt et al., 2014, p. 109). Second, the significance and relevance of the path coefficients were evaluated. Significance of path coefficients was determined by the 95% percentile bootstrap confidence interval, as suggested by Aguirre-Urreta & Rönkkö (2018), when zero did not fall between the upper-level and the lower-level bounds of the confidence interval (cf. Hair et al., 2021c, pp. 116-119). Third, path coefficients were estimated to capture the strength and direction of the postulated relationships among constructs. Path coefficients range from -1 to +1, with values nearer +1 denoting strong positive relationships and those nearer -1 showing strong negative associations (cf. Hair et al., 2021c, pp. 116-119). Fourth, the explanatory power of endogenous constructs was evaluated using the coefficient of determination (R^2). Greater explanatory power was indicated by a higher R^2 value (cf. Hair et al., 2021c, pp. 116-119; Sarstedt et al., 2014, p. 109).

To determine the relative influence of each exogenous construct on the endogenous variable, effect sizes (f^2) were also computed (cf. Hair et al., 2021c, pp. 116-119). Lastly, the model predictive power was examined using Stone-Geisser's Q^2 statistic. As a rule of thumb, Q^2 values larger than zero indicate a reasonable level of predictive accuracy for the path model (cf. Hair et al., 2021c, pp. 116-119; Sarstedt et al., 2014).

Stage 3: Assessment Criteria for Mediation Analysis

After assessing both the measurement and structural model, mediation analysis was performed to test hypotheses proposed in this study, using a bootstrapping procedure in which 10,000 bootstrap samples were drawn (cf. Hair et al., 2021d, p. 145). The bootstrapping procedure was based on the 95% percentile bootstrap confidence interval, as it is considered the most relevant and reliable method (cf. Hair et al., 2021d, p. 145; Aguirre-Urreta & Rönkkö, 2018). A mediation effect is considered statistically significant when the confidence interval does not contain zero (cf. Hair et al., 2021d, p. 145).

In addition to this, the effect of a mediator between two variables was examined using partial and full mediation models. *Full mediation* occurs when the direct effect is not significant and only the indirect effect is significant, whereas *partial mediation* holds when both the direct and indirect effects are significant (cf. Hair et al., 2021d, p. 142).

Chapter 5: Results

5.1 Descriptive Statistics

Table 1 presents an overview of the descriptive statistics of the variables used in this study, namely EO, LTO, LO, willingness to change, and control variables: age of the family firm, generational involvement, and CEO tenure. For each variable, Table 1 displays the mean, standard deviation, minimum, and maximum statistics.

Means of variables, namely EO ($M = 3.154$, $SD = 0.7313$), LTO ($M = 4.141$, $SD = 0.5094$), LO ($M = 3.800$, $SD = 0.5602$), and willingness to change ($M = 3.864$, $SD = 0.6692$), are moderately high, signifying that the sample of German family firms exhibits high levels of entrepreneurial and cultural traits. Moreover, the average firm's age is 64.39, suggesting that most German family firms are well-established, whereas the standard deviation is 37.038, showing more variability; including startups to very mature firms. Average CEO tenure is 23.47, showing long-term family leadership, and the mean value for generational involvement ($M = 2.33$, $SD = 1.916$) implies that most family firms are under the management of the second generation.

Table 1

Descriptive statistics of the Study Variables

Constructs	N	Minimum	Maximum	Mean	Std. Deviation
EO	208	1.22	4.89	3.1544	.73132
LO	208	1.73	4.91	3.8003	.56029
LTO	208	2.50	5.00	4.1414	.50944
WTC	208	2.00	5.00	3.8642	.66929
CEO Tenure	208	1	60	23.47	11.822
Age	208	6	236	64.39	37.038
GI	208	1	8	2.33	1.916

Notes. EO = Entrepreneurial orientation; LO = Learning orientation; LTO = Long-term orientation; WTC = Willingness to change; Age = Age of the family firms; GI = Generational involvement; N= Total number of family firms

5.2 Measurement Model Evaluation

5.2.1 Validating First-Order Constructs

For the majority of items, as indicated in Table 2, indicator reliability was established, as their factor loadings were higher than the suggested cut-off of 0.70. Nonetheless, factor loadings for some of the items, such as *FUT1*, *FUT3* (futuraity), and *CONT2* (continuity), ranged between 0.40 and 0.70. These items were kept due to their theoretical relevance and role in contributing to the overall conceptualization of the constructs, specifically supported in prior literature (cf. Brigham et al., 2014; Zellweger et al., 2012). Moreover, their inclusion in the measurement model was supported by the fact that their absence did not significantly improve AVE and CR (cf. Hair et al., 2021a, pp. 78–79). Conversely, items with outer loadings lower than 0.40, such as OM3 (open-mindedness item 3) and WTC4 (willingness to change item 4), were removed from their respective first-order constructs.

Internal consistency reliability was further confirmed through CR, reliability coefficient (ρ_a), and Cronbach's alpha values, all of which were above the suggested threshold value of 0.7, with the exception of the dimension CONT (continuity), which had an alpha value of 0.699 that fell slightly below this benchmark. This variation is still considered acceptable because its CR value of 0.805 showed satisfactory reliability, and fell within the range of 0.60 to 0.70, adequate for exploratory research (cf. Hair et al., 2021a, p. 78). Furthermore, convergent validity was supported by AVE values above 0.50 for all constructs (Table 2). The graphical representation of the first-order measurement model, encompassing all latent constructs and associated indicators generated in stage 1 of the disjoint two-stage approach, is presented in **Appendix A**.

Finally, as shown in Table 3, all HTMT values were lower than the recommended threshold of 0.85, thereby signifying the establishment of discriminant validity.

Table 2*Results of Measurement Model Evaluation: First-Order Dimensions*

Latent variables	Items	Loadings	Cronbach's α	CR (rho_a)	CR (rho_c)	AVE
INN	INN1	0.807	0.808	0.816	0.886	0.723
	INN2	0.856				
	INN3	0.885				
PRO	PRO1	0.834	0.796	0.797	0.880	0.710
	PRO2	0.868				
	PRO3	0.826				
RISK	RISK1	0.837	0.786	0.795	0.875	0.700
	RISK2	0.809				
	RISK3	0.863				
CTL	CTL1	0.856	0.873	0.876	0.913	0.723
	CTL2	0.861				
	CTL3	0.825				
	CTL4	0.859				
SV	SV1	0.828	0.860	0.864	0.905	0.704
	SV2	0.866				
	SV3	0.839				
	SV4	0.839				
OM	OM1	0.842	0.704	0.738	0.869	0.769
	OM2	0.910				
WTC	WTC1	0.855	0.843	0.857	0.905	0.760
	WTC2	0.911				
	WTC3	0.847				
CONT	CONT1	0.701	0.699	0.709	0.805	0.512
	CONT2	0.541				
	CONT3	0.807				
	CONT4	0.784				
FUT	FUT1	0.669	0.765	0.797	0.837	0.508
	FUT2	0.705				
	FUT3	0.631				
	FUT4	0.788				
	FUT5	0.758				
PER	PER1	0.848	0.829	0.831	0.897	0.744
	PER2	0.873				
	PER3	0.868				
AGE	-	1.000				
CEO TENURE	-	1.000				
GI	-	1.000				

Notes. INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking; CTL = Commitment to learning; SV = Shared vision; OM = Open-mindedness; WTC = Willingness to change; CONT = Continuity; FUT = Futurity; PER = Perseverance; AGE = Age of the family firms; and GI = Generational involvement

Table 3*Results of Discriminant Validity Assessment (HTMT): First -Order Constructs*

	CEO tenure	CONT	CTL	FUT	GI	INN	OM	PER	PRO	RISK	SV	WTC	Age
CEO tenure													
CONT	0.055												
CTL	0.040	0.520											
FUT	0.094	0.737	0.567										
GI	0.099	0.082	0.032	0.113									
INN	0.037	0.078	0.059	0.141	0.058								
OM	0.052	0.406	0.687	0.491	0.068	0.226							
PER	0.090	0.646	0.452	0.833	0.043	0.124	0.421						
PRO	0.050	0.136	0.256	0.156	0.236	0.539	0.325	0.095					
RISK	0.135	0.129	0.079	0.117	0.251	0.446	0.144	0.063	0.545				
SV	0.102	0.422	0.615	0.493	0.049	0.083	0.806	0.440	0.127	0.095			
WTC	0.091	0.395	0.542	0.503	0.092	0.153	0.637	0.455	0.286	0.204	0.543		
Age	0.121	0.139	0.046	0.111	0.233	0.246	0.051	0.071	0.211	0.070	0.033	0.099	

Notes: INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking; CTL = Commitment to learning; SV = Shared vision;
OM = Open-mindedness; WTC = Willingness to change; CONT = Continuity; FUT = Futurity; PER = Perseverance;
AGE = Age of the family firms; and GI = Generational involvement.

5.2.2 Validating Second-Order Constructs

Assessment of Reflective Constructs

Higher-order assessment of reflective constructs, namely EO and LO, demonstrated indicator reliability, as factor loadings for all the dimensions were higher than 0.7, except for the dimension INN (innovativeness) (Table 4). However, removing this dimension negatively impacted the composite reliability of EO; therefore, it was retained. Furthermore, CR and Cronbach's alpha coefficients for both constructs exceeded the threshold of 0.7, confirming internal consistency reliability. Despite the fact that the Cronbach's alpha coefficient for the dimension INN (innovativeness) was slightly lower than the threshold ($\alpha = 0.670$), it still retained an acceptable level of reliability within the framework of exploratory research (cf. Hair et al., 2021, p. 78). Moreover, the AVE of both constructs surpassed the threshold of 0.5, hence confirming the convergent validity of the constructs (see Table 4).

Table 4

Results of Measurement Model Evaluation: Second-Order Reflective Constructs

Construct	Dimensions	Factor loadings	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EO	INN	0.694	0.670	0.725	0.815	0.597
	PRO	0.863				
	RISK	0.751				
LO	CTL	0.792	0.799	0.804	0.881	0.712
	SV	0.846				
	OM	0.843				

Notes. EO = Entrepreneurial orientation; LO = Learning orientation; INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking; CTL = Commitment to learning; SV = Shared vision; OM = Open-mindedness

In addition, discriminant validity was confirmed across all higher-order reflective constructs, i.e., EO and LO, given that HTMT values remained below the recommended threshold of 0.85 (see Table 5).

Table 5*Results of Discriminant Validity Assessment (HTMT): Second-Order Constructs*

Constructs	Age	CEO tenure	EO	GI	LO
Age					
CEO tenure	0.121				
EO	0.249	0.095			
GI	0.233	0.099	0.257		
LO	0.033	0.076	0.221	0.047	

Notes. EO = Entrepreneurial orientation; LO = Learning orientation; GI = Generational involvement; Age = Age of family firms

Assessment of Formative Construct

Higher-order assessment of LTO revealed that VIF values for all dimensions were less than the recommended value of 3, indicating the absence of multicollinearity (Table 6). Furthermore, the outer weights of all the dimensions were statistically significant. The relevance and contribution of each dimension to the formative construct were further supported by outer loadings exceeding the value of 0.7, 95 percent bias-corrected bootstrap confidence intervals that excluded zero, and p-values less than .05 (Table 6).

Table 6*Results of Measurement Model Evaluation: Second-Order Formative Construct*

Formative Construct	Dimensions	VIF	Outer Weights (Outer Loadings)	95% Confidence Intervals	Significant p < 0.05?
	CONT	1.622	0.298 (0.792)	(0.035, 0.537)	0.025 (Yes)
LTO	FUT	2.093	0.606 (0.940)	(0.382, 0.814)	0.000 (Yes)
	PER	1.909	0.242 (0.804)	(0.021, 0.463)	0.035 (Yes)

Notes. LTO = Long-term orientation; CONT = Continuity; FUT = Futurity; PER = Perseverance

5.3 Structural Model Evaluation

Assessment of the structural model indicated that there were no collinearity issues because all VIF values were below the suggested cut-off value of 3 (Table 7). Evaluation of direct effects revealed that a family firm's age ($\beta = -0.145$, $p = .036$) and generational involvement ($\beta = -0.180$, $p = .013$) exerted a statistically significant but negative impact on EO. Similarly, willingness to change exhibited a statistically significant and positive relationship with EO ($\beta = 0.178$, $p = .024$). On the other hand, LO ($\beta = 0.093$, $p = .220$), LTO ($\beta = -0.049$, $p = .295$), and CEO tenure ($\beta = 0.067$, $p = .164$) revealed statistically insignificant paths to EO. Furthermore, the findings showed a statistically significant and positive relationship between LTO and LO ($\beta = 0.561$, $p < .05$) as well as between LTO and willingness to change ($\beta = 0.450$, $p < .05$) (Table 7). The comprehensive structural model figure derived from stage 2 of the disjoint two-stage method, representing standardized path coefficients and the interrelations across all higher-order constructs, is shown in **Appendix B**.

The f^2 analyses provided evidence of a moderate to large effect for the path from LTO to willingness to change ($f^2 = 0.254$), as well as from LTO to LO ($f^2 = 0.459$). All other paths had effect sizes between 0.021 and 0.034, indicating minor but potentially meaningful effects (cf. Cohen, 2013) (see Table 7).

Table 7
Output of Structural Model Assessment

Direct Paths	VIF	Path coefficients (β)	T statistics	p values	Confidence Intervals		f^2
					5%	95%	
Age -> EO	1.076	-0.145	1.801	0.036	-0.273	-0.010	0.023
GI -> EO	1.091	-0.180	2.232	0.013	-0.310	-0.045	0.034
CEO tenure -> EO	1.050	0.067	0.979	0.164	-0.050	0.172	0.005
LTO -> EO	1.574	-0.049	0.540	0.295	-0.196	0.100	0.002
WTC -> EO	1.566	0.178	2.010	0.022	0.024	0.314	0.021
LO -> EO	1.779	0.093	0.774	0.220	-0.091	0.303	0.006
LTO -> WTC	1.000	0.450	7.835	0.000	0.358	0.548	0.254
LTO -> LO	1.000	0.561	10.872	0.000	0.484	0.652	0.459

Notes. EO = Entrepreneurial orientation; GI = Generational involvement; LTO = Long-term orientation; WTC = Willingness to change; LO = Learning orientation; Age = Age of family firms

In addition, the R^2 values indicated that the model explained the highest variance (31.4 percent) in LO, 12.9 percent of the variance in EO, and 20.3 percent of the variance in willingness to change. Finally, the Q^2 values for all the constructs were greater than zero, thereby confirming the model's predictive power, as shown in Table 8. The complete outcomes of the PLS-Predict analysis, encompassing $Q^2_{predict}$, $RMSE$, MAE , and predictive-power classification for all first-order dimensions, are presented in **Appendix C**.

Table 8

Results of Explanatory Power (R^2) and Predictive Power (Q^2)

Constructs	Dimensions	R^2	$Q^2_{predict}$
EO	INN	0.129	0.012
	PRO		0.048
	RISK		0.019
LO	CTL	0.314	0.262
	OM		0.148
	SV		0.189
WTC	WTC1	0.203	0.099
	WTC2		0.178
	WTC3		0.134

Notes. EO = Entrepreneurial orientation; LO = Learning orientation; WTC = Willingness to change; INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking; CTL = Commitment to learning; OM = Open-mindedness; SV = Shared vision; WTC1, WTC2 and WTC3 = Willingness to change items 1, 2 and 3

5.4 Hypotheses Testing

As illustrated in Section 5.3, the direct effect of LTO on EO was statistically insignificant as the confidence interval included zero ($\beta = -0.049$, $p > .05$, LLCI = -0.196 , ULCI = 0.100), thereby rejecting Hypothesis 1. The mediation analysis results revealed that the indirect effect through LO ($\beta = 0.052$, $p > .05$; LLCI = -0.051 , ULCI = 0.183) was statistically insignificant because the 95 percent bias-corrected bootstrap confidence interval included zero. This indicates that LO did not mediate the relationship between LTO and EO; therefore, Hypothesis 2 was rejected. In contrast, the relationship between LTO and EO was positively mediated by willingness to change ($\beta = 0.080$, $p < .05$; LLCI = 0.011 , ULCI = 0.145). This indirect effect was statistically significant, confirming Hypothesis 3 and indicating *full mediation*.

The mediation analysis results are displayed in Table 9, indicating whether the hypotheses were confirmed. The significance of the mediators is also illustrated in Figure 4 through *p-values*.

Table 9

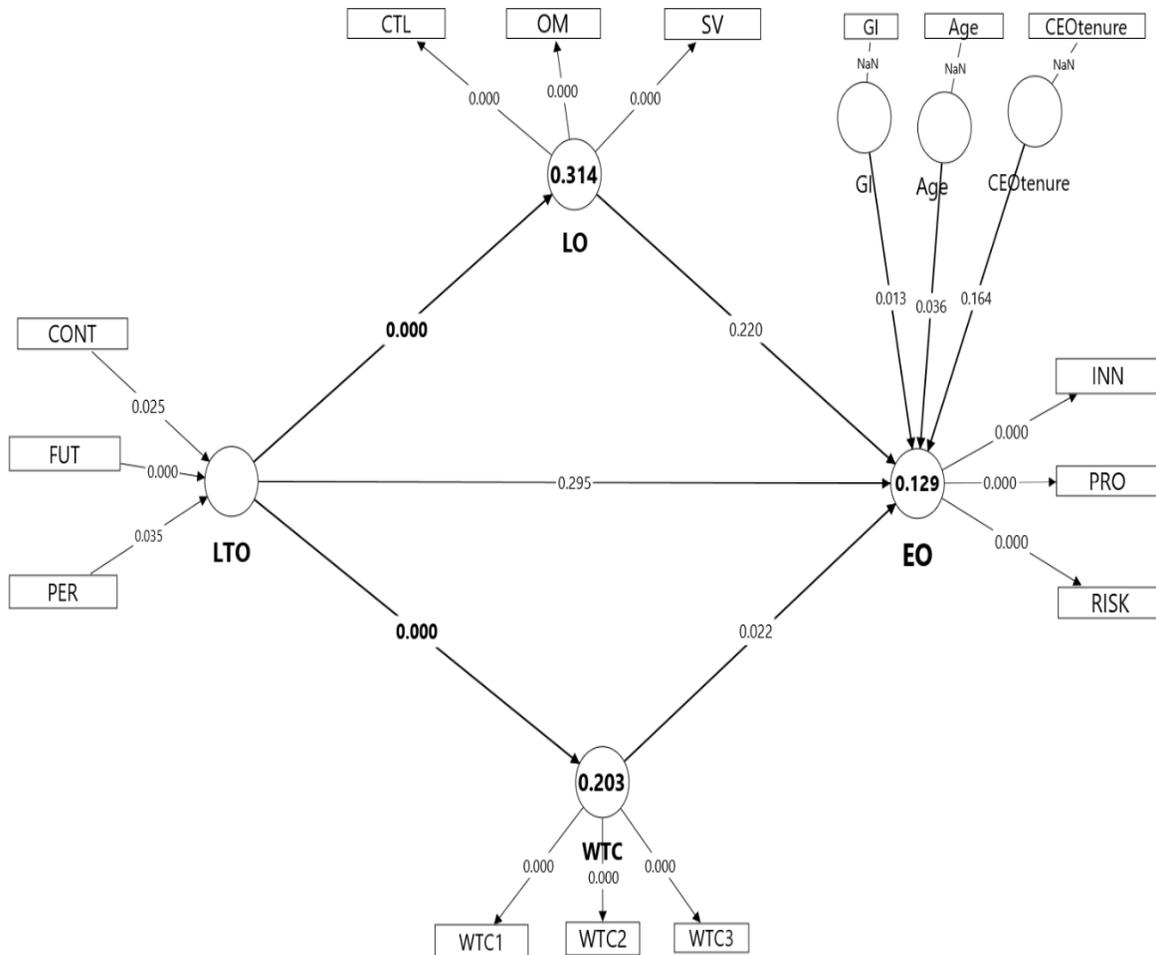
Results of Hypotheses Testing

Indirect Paths	Path coefficients (β)	T statistics	<i>p</i> values	Confidence Intervals		Result
				5%	95%	
LTO ->LO -> EO	0.052	0.735	0.220	-0.051	0.183	Not confirmed
LTO -> WTC -> EO	0.080	1.954	0.022	0.011	0.145	Confirmed
Direct Path						
LTO -> EO	-0.049	0.540	0.295	-0.196	0.100	Not confirmed

Notes. LTO = Long-term orientation; WTC = Willingness to change; LO = Learning orientation; EO = Entrepreneurial orientation; β = Standardized path coefficients

Figure 4

Output of Mediation Analysis



Notes. LTO = Long-term orientation; LO = Learning orientation; WTC = Willingness to change; EO = Entrepreneurial orientation; GI = Generational involvement; Age = Age of the family firms; CONT = Continuity; FUT = Futurity; PER = Perseverance; CTL = Commitment to learning; OM = Open-mindedness; SV = Shared vision, INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking

Chapter 6: Discussion

Based on stewardship theory (cf. Davis et al., 1997), this paper proposed the existence of a long-term temporal logic that directly and indirectly promotes entrepreneurial behavior by means of learning and change-driven cultural processes in family firms. The empirical findings partially support these expectations: LTO had a positive correlation with EO, but this direct relationship was not statistically significant, and LO did not mediate this relationship; willingness to change turned out to be a significant and strong mediator. The following paragraphs explain these results in the context of stewardship theory and locate them within the body of existing research.

Contrary to Hypothesis 1, the results indicated that LTO did not significantly enhance the family firm's EO. According to stewardship theory, family leaders are driven to maintain continuity and transgenerational sustainability and act as stewards of organizational resources (cf. Eddleston et al., 2012; Le Breton-Miller & Miller, 2006). Theoretically, this orientation is expected to stimulate entrepreneurial behavior in order to maintain the competitiveness of the firm in the future (cf. Eddleston et al., 2012; Zahra et al., 2004). Nevertheless, this study does not find any substantial connection between temporal and entrepreneurial orientation, which means that LTO does not necessarily lead to entrepreneurial initiative. Rather, it seems that the LTO of family firms can take a preservation-based form of stewardship instead of renewal-based stewardship (cf. Arz, 2021; Miller & Le Breton-Miller, 2005).

In other words, certain family-owned companies might focus on protecting SEW, heritage, and stability, emphasizing continuity over creativity and being risky (cf. Gomez-Mejia et al., 2007). This explanation is consistent with Lumpkin et al. (2010) and Kalali (2022), who characterized LTO as a double-sided sword: on the one hand, it promotes patience and proactivity, but, on the other hand, it may strengthen conservatism and precaution. Futurity and perseverance can encourage the investment of patience and long-term thinking, but the aspect of continuity could lead to strategic inertia, with companies focusing on stability and control over exploration of opportunities (cf. Kalali, 2022; Lumpkin et al., 2010). This ambivalence is in line with the arguments that show LTO often works indirectly via cultural and governance processes that convert temporal priorities into entrepreneurial action (cf. Arz, 2019, Arz, 2021; Eddleston et al., 2012).

Furthermore, the findings of this paper also rejected Hypothesis 2, which stated that LO mediates the relationship between LTO and EO in family firms. This mediation path comprised two links: the effect of LTO on LO and the subsequent influence of LO on EO. Interestingly,

LTO was found to significantly enhance LO; however, there was no significant relationship found between LO and EO. This result contradicts earlier studies (cf. Hernández-Linares et al., 2018; Hernández-Linares et al., 2023; Linares & Fernández, 2020; Hult et al., 2004), which showed that LO can strengthen EO, especially in family firms. This indicates that while family firms with a long-term perspective do create learning cultures, entrepreneurial behavior is not always the outcome of these learning initiatives. Stewardship theory states that long-term oriented family leaders act like stewards who invest in knowledge, relationships, and people in order to ensure long-term success of the firm (cf. Le Breton-Miller & Miller, 2006; Hernández, 2012). However, the findings suggest that this type of learning is often aimed at maintaining the existing patterns, improving efficiency, and maintaining stability, rather than exploring new opportunities or taking a risk. This occurs due to the presence of stewardship-based values, such as trust, harmony, and responsibility in family firms (cf. Hernández, 2012), which facilitate cooperation and knowledge sharing and prevent conflict, uncertainty, and experimentation. Therefore, the learning in family companies takes a protective side rather than being transformational.

On the other hand, willingness to change had an important mediating influence on the relationship between the LTO and the EO, and thus, it supports hypothesis 3. This outcome suggests that the long-term vision and patient capital in family firms only appear when leaders and employees are open to the change in established routines, the exploration of new practices, and reorganization of resources (cf. Arzubiaga et al., 2018; Kellermanns & Eddleston, 2006). In accordance with stewardship theory, this dynamic can be viewed as a reformulation of change, as change is seen as a continuity-preserving mechanism, not as something that threatens a firm's SEW (cf. Eddleston et al., 2012; Vago, 2004). Those leaders who are driven by the values of stewardship drive change not because they seek to gain a profit immediately but to ensure the long-term sustainability and tradition of the firm.

Willingness to change also offers a behavioral explanation of the inconsistency in the previous studies that have been able to determine both positive and negative effects of LTO (e.g., Kalali, 2022; Lumpkin et al., 2010). It sets the vision and temporal patience needed to maintain strategic endurance, but without preparedness to change, it becomes inflexible. In the current research, willingness to change becomes the driving force that converts long-term priorities into entrepreneurial ventures. This observation aligns with the stewardship theory, which explains that the guardianship position of family leaders involves not only the conception of conservation of resources but also the process of adaptive renewal. The ability to adjust is justified when change is interpreted as a practice that protects the heritage of the

firm and its SEW (cf. Gómez-Mejia et al., 2025). This interpretation is further supported by the previous study results that show that family firms often introduce significant change to address a threat in order to stabilize or enhance their performance (cf. Eddleston et al., 2011; Moreno-Menéndez et al., 2021). This also explains why family firms vary significantly in their entrepreneurial behavior even though they share the same long-term commitments: those that integrate long-term thinking with adaptive willingness manage to maintain EO across generations, whereas the ones that fail to do so stagnate.

Besides the hypothesized paths, this study also controlled the firm-level and leadership variables, such as firm age, generational involvement, and CEO tenure. The findings showed that the firm's age as well as generational involvement has a statistically significant negative effect on EO, but the tenure of CEOs had shown no observable impact. The negative impact of a firm age means that older family firms are likely to exhibit lower EO. This can be explained by the fact that, as family firms age, they often acquire strict hierarchies, standardized processes, and a strong inclination toward stability, which reduces their willingness to take risks or seek new opportunities (cf. Zahra, 2005; Miller & Le Breton-Miller, 2005). Similarly, the negative influence of generational participation implies that an increase in generational involvement in management can lead to conflicting interests or more conservative decision-making, thereby reducing the overall entrepreneurial drive of the firm (cf. Kellermanns & Eddleston, 2006). This finding is consistent with the previous studies, which suggested that later-generation family firms tend to focus more on familial cohesion and preservation of control than innovation and experimentation (cf. Kellermanns & Eddleston, 2006; Cruz & Nordqvist, 2012). On the other hand, there is no substantial relationship between the period of CEO tenure and EO, consistent with the findings of Kellermanns et al. (2008), which means that the tenure of a leader in itself does not directly affect the entrepreneurial behavior of a firm. This could be due to the fact that tenure effects are more about the type of leadership and vision rather than the sheer temporal effect.

Chapter 7: Implications

7.1 Research-Oriented Implications

Theoretically, by expanding the understanding of how LTO influences EO through internal cultural mechanisms, this work adds to the growing body of research on family-firm entrepreneurship (e.g., Arz, 2021; Hernández-Linares & López-Fernández, 2018; Kalali, 2022; Lumpkin et al., 2010). The study goes beyond standard direct-effect models by looking at LO and willingness to change as mediators, offering a comprehensive understanding of how stewardship-driven principles manifest in organizational behavior.

By showing that LTO does not always promote EO, and instead, the impact relies on complementary cultural forces, this study further develops stewardship theory. Adaptability is a behavioral capacity that enables stewardship values to translate into innovation and renewal, as evidenced by the conclusion that openness to change strongly mediates the relationship between LTO and EO. By connecting stewardship theory with willingness to change perspectives and encouraging future studies to examine the relationship between stewardship values and adaptive capacities in understanding family-firm heterogeneity, this enhances the discussion regarding stewardship theory.

Furthermore, a novel theoretical insight is offered by the non-significant role of LO: learning in family firms may not always be a source of entrepreneurial dynamism but rather a means of maintaining stability and knowledge. This refinement encourages future studies to look into the boundary circumstances that determine whether learning promotes exploration or exploitation, such as country context, governance processes, or generational involvement. Additional research might examine the ways in which learning and change-related abilities across generations and institutional contexts interact with the temporal evolution of LTO using longitudinal and comparative studies.

7.2 Practical Implications

From a managerial perspective, this study offers valuable insights for owners, executives, and decision-makers in family firms for maintaining their competitiveness and legacy. The results emphasize that while adopting a long-term perspective is important for entrepreneurship, it is not sufficient on its own; it needs to be combined with behaviors that are adaptable and creative. Therefore, managers should concentrate on creating a culture that encourages both renewal and continuity.

Integrating long-term objectives with adaptive measures can be facilitated by promoting experimentation, delegating authority to make decisions, and fostering open communication across generations. Leaders should also cultivate a culture that perceives change as a way to secure heritage rather than as a danger to it. This adaptive culture can be strengthened through training programs that will help increase flexibility, innovative capacity, and problem-solving abilities. The family-driven businesses should, therefore, institutionalize the learning processes that can convert accumulated knowledge into experimental activity instead of focusing solely on efficiency or keeping knowledge.

In order to promote entrepreneurial endeavors, family boards and executive teams should incorporate governance structures that promote stewardship values such as commitment, trust, and responsibility. A balance between tradition and change can be achieved by coordinating long-term planning with innovation investment approaches, reviewing decision-making procedures to reduce excessive risk aversion, and fostering intergenerational cooperation. Ultimately, this study highlights that family firms attain sustainable entrepreneurship when adaptability and stewardship goals coexist, ensuring both competitive renewal and transgenerational continuity.

Chapter 8: Limitations and Future Research

This study offered valuable insights, but it has some limitations too. First, this study conceptualized EO as a unidimensional and aggregate construct based on Miller (1983) and Covin and Slevin's (1989) approach. This approach provides a comprehensive assessment of overall EO (cf. Rauch et al., 2009); however, other research in family business studies has analyzed EO as a multidimensional construct, either by evaluating its dimensions individually or by incorporating five subdimensions (cf. Lumpkin & Dess, 1996; Hernández-Linares & López-Fernández, 2018). While no single conceptualization is necessarily superior, it would be interesting to see how the results vary when EO is operationalized using its five-dimensional framework or assessed at the subdimensional level using the same mediators.

Second, secondary data from German family firms, originally gathered by Arz and Kuckertz (2019), was used in the analysis. Although this dataset offered a solid empirical foundation, the capacity to improve or broaden construct indicators was limited by the use of pre-existing measurements. For example, the lack of global single-item measures that capture each component comprehensively prevented redundancy analysis from being conducted through SmartPLS 4. In order to enhance construct validity and facilitate more thorough model evaluation, future studies should take into account primary data collection that includes global items or alternative indicators.

Third, the data set included 208 German family firms, which is adequate for PLS-SEM analysis but limited generalizability of the findings. More robust analyses would be possible with a larger and more diverse sample. The study was restricted to family firms in Germany, which function in an institutional and cultural setting that prioritizes continuity, planning, and stability. Future studies should explore if the mechanisms found hold true in more unstable, short-term-focused, or innovation-driven situations by extending the analysis to non-family firms or cross-country situations. This could help to extend this research and answer the question: *Do national cultures of different countries of the world affect how LTO influences EO of family and non-family firms?*

Fourth, the cross-sectional design limits causal inference because the associations between constructs were assessed at one specific point in time. Future research could use longitudinal data to see how these linkages change over time, especially as family firms go through generational shifts.

Finally, future research could incorporate other mediators or moderators, such as innovation climate, absorptive capacity, or family governance participation, even though this

study concentrated on two mediating mechanisms: LO and willingness to change. These additions might offer a more thorough understanding of the conversion of values motivated by stewardship into entrepreneurial activities. Furthermore, given that LO was identified as a non-significant mediator, future research should investigate whether generational involvement or leadership style moderates this relationship, thereby providing a more nuanced understanding of the conditions under which learning influences EO in family firms.

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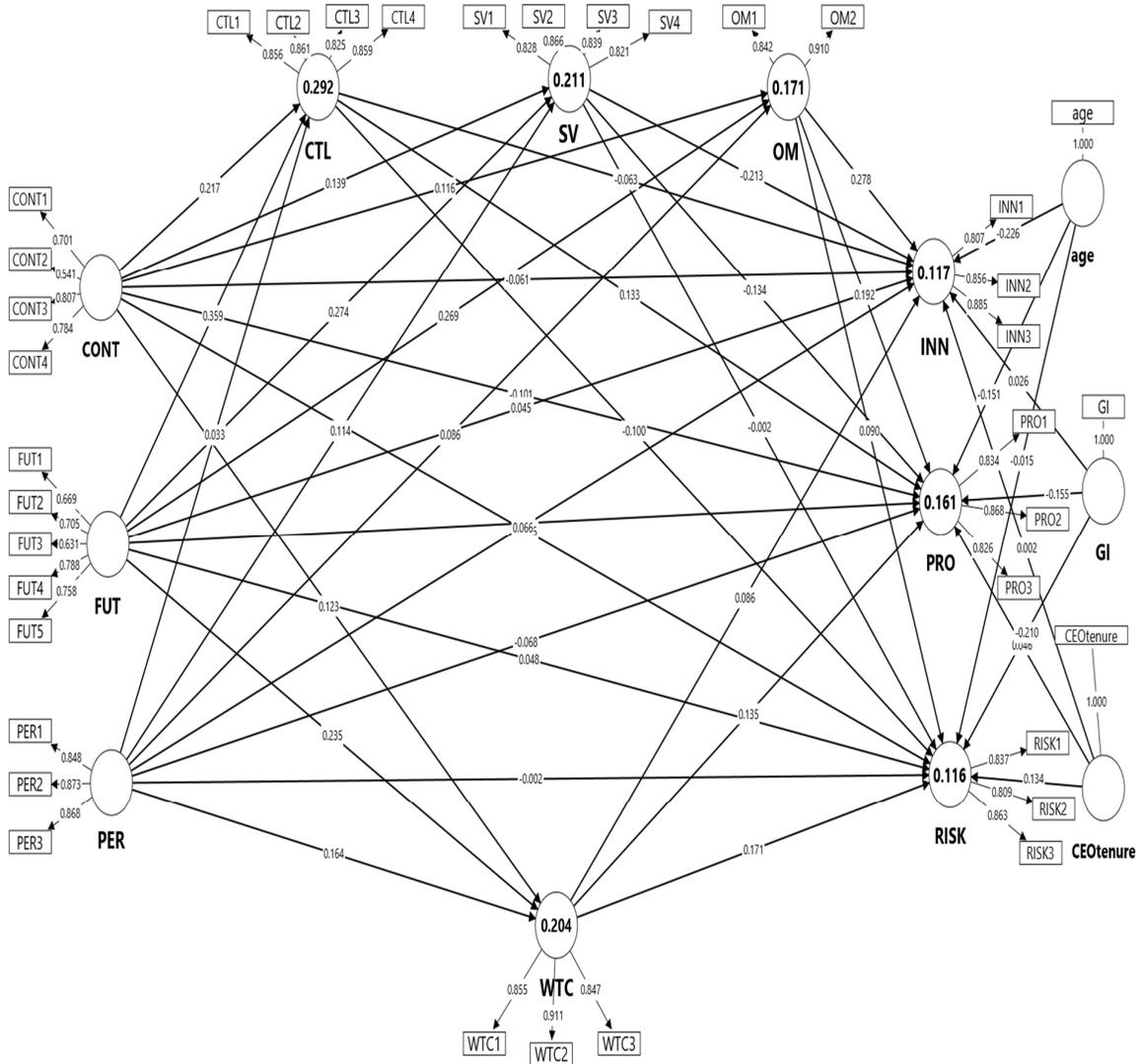
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Appendix A. First-Order Measurement Model (Stage 1)

Figure A1

Stage 1 of Disjoint Two-Stage Approach (First-Order Dimensions)

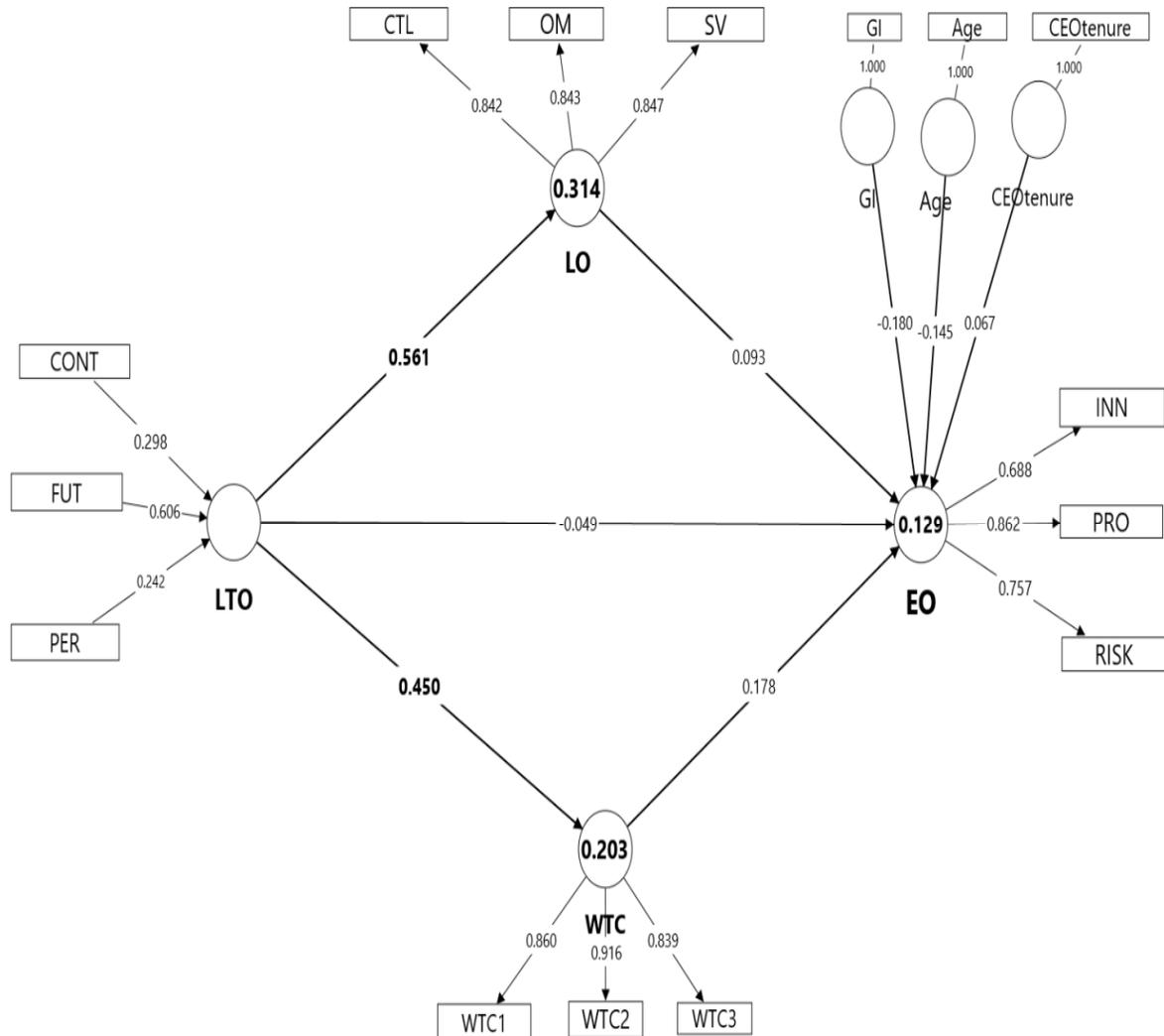


Notes. LTO = Long-term orientation; LO = Learning orientation; WTC = Willingness to change; EO = Entrepreneurial orientation; GI = Generational involvement; Age = Age of the family firms; CONT = Continuity; FUT = Futurity; PER = Perseverance; CTL = Commitment to learning; OM = Open-mindedness; SV = Shared vision; INN = Innovativeness; PRO = Proactiveness; and RISK = Risk-taking

Appendix B. Structural Model (Stage 2)

Figure B1

Stage 2 of Disjoint Two-Stage Approach



Notes. LTO = Long-term orientation; LO = Learning orientation; WTC = Willingness to change; EO = Entrepreneurial orientation; GI = Generational involvement; Age = Age of the family firms; CONT = Continuity; FUT = Futurity; PER = Perseverance; CTL = Commitment to learning; OM = Open-mindedness; SV = Shared vision, INN = Innovativeness; PRO = Proactiveness; and RISK = Risk-taking

Appendix C. PLS-Predict Results

Appendix C presents the PLS-Predict results assessing the model’s predictive accuracy across latent constructs. According to the PLS-Predict results, the model demonstrated low predictive power for RISK, medium predictive power for INN, CTL, and WTC1, and high predictive power for PRO, OM, SV, WTC2, and WTC3.

Table C1

PLS-Predict Results for Model Constructs

Dimensions	Q ² predict	PLS- SEM_RMSE	PLS- SEM_MAE	LM_RMSE	LM_MAE	Predictive Power
INN	0.012	0.998	0.836	1.001	0.819	Medium
PRO	0.048	0.981	0.788	0.987	0.792	High
RISK	0.019	0.995	0.842	0.992	0.828	Low
CTL	0.262	0.863	0.653	0.876	0.649	Medium
OM	0.148	0.927	0.735	0.936	0.744	High
SV	0.189	0.905	0.719	0.918	0.732	High
WTC1	0.099	0.745	0.570	0.741	0.572	Medium
WTC2	0.178	0.721	0.577	0.724	0.590	High
WTC3	0.134	0.781	0.627	0.795	0.641	High

Notes. INN = Innovativeness; PRO = Proactiveness; RISK = Risk-taking; CTL = Commitment to learning; OM = Open-Mindedness; SV = Shared vision; WTC 1, WTC 2, WTC 3 = Willingness to change items

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