

Entrepreneurial orientation in family firms: the effects of long-term orientation

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Enterprise
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Abstract

Purpose – This paper aims to shed light on the relationship between long-term orientation (LTO) and the dimensions of entrepreneurial orientation (EO) in family firms while adopting a stewardship perspective.

Design/methodology/approach – A survey of the top managers of family firms in Iran's science and technology parks was conducted, and partial least squares structural equation modeling (PLS-SEM) was used to analyze the collected data.

Findings – The research results showed that LTO has a positive effect on innovativeness and proactiveness and a negative effect on riskiness. Therefore, family firms' LTO pays off by enhancing their EO.

Practical implications – In today's competitive world, EO is gradually becoming an inevitable necessity in many industries. Executives who want their firms to have a high level of performance should pay special attention to entrepreneurial behaviors. The present research informs the family firms' managers and practitioners to be long-term oriented to embrace more innovativeness and proactiveness, and less riskiness.

Originality/value – So far, the relationship between the LTO and entrepreneurial characteristics of family firms has remained ambiguous; this research is one of the first studies investigating this relationship.

Keywords Long-term orientation, Entrepreneurial orientation, Innovativeness, Proactiveness, Risk-taking, Family firms

Paper type Research paper

Introduction

Entrepreneurial orientation (EO) refers to strategic orientation of an organization for developing new possibilities, offerings and creative competitive actions characterized by innovation, risk-taking and proactivity (Kearney *et al.*, 2020). EO is important to family firms since it is associated with positive performance results such as the increase in profitability, growth, internationalization, innovation and overall performance (Hernández-Perlines and Ibarra Cisneros, 2017; Arzubigi *et al.*, 2019; Alayo *et al.*, 2019; Calabrò *et al.*, 2021; Strobl *et al.*, 2022). However, research on entrepreneurship in family firms is divided as to whether these organizations represent a context where entrepreneurship flourishes or is hindered (Zellweger and Sieger, 2012; Duran *et al.*, 2015; Le Breton-Miller and Miller, 2018; Arz, 2019; Moreno-Menéndez *et al.*, 2022; Jovic *et al.*, 2021).

There are two competing viewpoints about EO in family firms. On the one hand, a number of researchers argue that family firms gradually become inert and resistant to change (Jones *et al.*, 2008; Block *et al.*, 2013; Duran *et al.*, 2015). Protecting family assets (Naldi *et al.*, 2007), restricting legacy (Kelly *et al.*, 2000), and incompetent human capital (Hayton and Kelley, 2006) are among the reasons that have been mentioned for the stagnancy. On the other hand, some scholars argue that family firms are a rich context for entrepreneurial behaviors (Zahra, 2005; Lumpkin *et al.*, 2010; Le Breton-Miller and Miller, 2018). This fertility stems from factors such as good governance (Le Breton-Miller and Miller, 2006), clan and hierarchical organizational culture (Cherchem, 2017), and perceived organizational support (Bammens *et al.*, 2015). Opposing perspectives may have resulted from the fact that family firms are heterogeneous. Characteristics such as patterns of governance (Arzubigi *et al.*, 2019), generational involvement (Cherchem, 2017) and stewardship behavior (Le Breton-Miller and Miller, 2018) are among the traits that explain EO differences in family firms.



Not all family firms possess a stewardship culture. It is an unparalleled resource that could bring a competitive advantage to the firm. Stewardship behaviors can be materialized in different ways (Eddleston *et al.*, 2010). Long-term relationships, family identification with the business, generous investments, involvement-oriented governance, and cohesive corporate cultures are known as stewardship goals or traits that enable family firms to preserve the business for the long run (Davis *et al.*, 1997; Arregle *et al.*, 2007; Zahra *et al.*, 2008; Kotlar and De Massis, 2013; Le Breton–Miller and Miller, 2015). The proclivity of family firms' managers to act as stewards rather than as agents has been associated with applying longer time horizons (Short *et al.*, 2009). To the extent that a family firm's owners/managers behave more stewardlike, the firm likely embraces a time orientation that privileges the long term. In this situation, managerial opportunism and impatient capital may be significantly reduced, and the goals may be more aligned and focused on long-term results (Lumpkin *et al.*, 2010).

Family businesses have a long history in Iran. In the 20th century, although families like Khosrowshahi are among the families that created and developed large family-owned businesses, the government confiscated most of their properties during the Islamic revolution of 1979 (Saeedi and Shirinkam, 2016). Now, most family businesses are small or medium-sized enterprises, and little information is made public about the performance of the larger ones. Family businesses are the main economic force in many countries and are capable of generating stable jobs (Hernandez-Perlines *et al.*, 2020). There are no official data on family businesses in Iran, but according to estimations, family-owned SMEs constitute around 80% of private sector companies and represent 60% of employment in Iran (Coville, 2020). Regarding the role of family-owned SMEs in Iran's sustainable economic growth, and considering the positive effects of EO on the performance of family businesses, studying the family-level traits that explain EO differences in family-owned SMEs of Iran gains considerable importance.

Considering the previous inconsistent studies, Lumpkin *et al.* (2010), and Hernández-Linares and López-Fernández (2018), suggested that it is necessary to study the relationship between long-term orientation (LTO) and EO in family businesses. In response to their call, while adopting a stewardship perspective, this study contributes to the body of literature by surveying a sample of family firms that are situated in Iran's science and technology parks to investigate the relationship between LTO and EO. Thus, this research aims to further our understanding of EO antecedents in family firms. The study makes three critical contributions:

First, regarding several calls to study the drivers of family firm's heterogeneity (Cherchem, 2017; Arz, 2019), a stewardship perspective was adopted to provide new insights into the sources of heterogeneity of family firms' entrepreneurial efforts. The results are significant mainly because of the inconsistencies in the literature about the effect of LTO on EO. The present study reveals why some family firms are entrepreneurial and while others are stagnant. Second, considering the newness of entrepreneurship research in Iran, studying the drivers of EO in the context of family firms can be considered as a novel investigation in this context. This neglect is tragic since family firms are a major source of value creation and economic growth (Short *et al.*, 2009). Therefore, this research contributes to the growing body of entrepreneurship literature and the under-studied family business literature in Iran's context.

Finally, in the present study, EO was broken into its constitutive elements and the relationship between LTO and these characteristics was independently investigated. In this regard, the research contributes to the debate related to EO conceptualization in family firms (Zahra, 2005, 2018; Naldi *et al.*, 2007; Pittino *et al.*, 2017). Along with the scholars who believe that the firms' entrepreneurial behaviors are not a perfect correlate to the strategic decision maker's attitude towards risk (Anderson *et al.*, 2015; Wales *et al.*, 2019), the results of the present research show that the risk-taking response to different levels of LTO is different

from that of innovativeness and proactiveness. This finding confirms the suitability of the multidimensional view of EO (Lumpkin and Dess, 1996) in the context of family firms (Pittino *et al.*, 2017).

The remainder of this paper is structured as follows: The theoretical and empirical backgrounds of the study are discussed, and research hypotheses are developed. Subsequently, the research method is described, which consists of explaining the sample, measures, and analytical technique. Next, the data are analyzed and the results are presented. Findings and contributions are discussed in the next section. Finally, the paper is concluded by explaining the study's implications, discussing its limitations and suggesting directions for future research.

Theoretical background and hypotheses

Entrepreneurial orientation

Miller (1983) defined entrepreneurial firm, which today serves as the primary basis for EO research as: "An entrepreneurial firm engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations, beating competitors to the punch." Following Miller (1983), Covin and Slevin (1989) also categorized firms into two groups, namely, entrepreneurial and conservative firms. According to them, the top managers of the entrepreneurial firms have entrepreneurial management styles, which are reflected in the firms' strategic decisions and operating management philosophies. On the other hand, they describe non-entrepreneurial or conservative firms as those with risk-averse, non-innovative, and passive or reactive management styles. However, a few years later, Lumpkin and Dess (1996) expressed a different view of EO. They believed that EO includes the processes, practices and decision-making activities that lead to a new entry. In their opinion, to achieve this goal, entrepreneurial firms exhibit one or more of the five characteristics of innovativeness, proactiveness, risk-taking, aggressiveness and autonomy.

While Covin and Slevin (1989) believed in the one-dimensionality of the EO construct and considered it as the simultaneous exhibition of high levels of innovativeness, proactiveness and risk-taking, Lumpkin and Dess (1996) considered EO construct to be multidimensional. They believed that an organization must have one or more of the five mentioned characteristics to be considered entrepreneurial. The debate in the literature on the dimensionality of EO continues with a third viewpoint (Anderson *et al.*, 2014), but it is beyond the scope of our discussion. However, the three dimensions of EO, i.e. innovativeness, proactiveness and risk-taking, are similar characteristics among the three perspectives. Innovativeness is seeking technological leadership through welcoming creativity and experimentation and introducing new products, services, processes and business models. Proactiveness is an opportunity-seeking, forward-looking perspective characterized by introducing new products and services ahead of the competition, entering new market spaces, acting in anticipation of future demand, and seeking market leadership positions. Risk-taking involves taking bold actions by venturing into the unknown, borrowing heavily and contributing resources to ventures with uncertain outcomes (Rauch *et al.*, 2009; Anderson *et al.*, 2014).

Previous studies show that under different conditions, the willingness of family firms to engage in entrepreneurial activities will differ (Zahra, 2005, 2018). There are two competing viewpoints about EO in family firms. A number of scholars argued that family firms gradually become more risk-averse and less innovative than non-family firms (Allio, 2004; Jones *et al.*, 2008; Zellweger and Sieger, 2012; Duran *et al.*, 2015). On the contrary, some other researchers argued that entrepreneurship can come to fruition in these firms (Aldrich and Cliff, 2003; Miller *et al.*, 2009; Lumpkin *et al.*, 2010; Le Bretton-Miller and Miller, 2018). Opposing perspectives may have resulted from the fact that family firms are heterogeneous. Thus, a critical line of research

has focused on EO antecedents, especially those that can be considered aspects and characteristics related to family firms (Arzubiaga *et al.*, 2019; Hernández-Linares and López-Fernández, 2018). CEO tenure (Boling *et al.*, 2016), family ownership and involvement (Zahra, 2005), growth opportunities and business group membership (Choi *et al.*, 2015), organizational learning (Zahra, 2012), governance and social identity (Miller and Le Breton Miller, 2011), and the CEOs' noneconomic goals (Kammerlander and Ganter, 2015) are among the antecedents of EO in the literature.

LTO

Stewardship theory (Donaldson and Davis, 1991) was developed as an alternative to agency theory (Jensen and Meckling, 1976). While agency theory describes top managers as selfish actors who pursue their interests in running an organization, stewardship theory considers these actors as stewards who act to fulfill their principals' best interests (Donaldson and Davis, 1991). Hence, these stewards pursue the long-term collective goals of the firm, not the short-term opportunistic and self-serving interests (Pittino *et al.*, 2018). Since members of family firms feel high responsibility toward the firm, Family firms can be considered as suitable contexts for developing stewardship (Henssen *et al.*, 2014). In these firms, owners/managers are sensitive to the long-term continuity and reputation of the business because they consider the firms' success as their success (Miller *et al.*, 2008; Lumpkin *et al.*, 2010). Family members who feel that they are stewards of their organizations tend to ignore their interests for the bigger picture.

Stewardship culture can be realized in different ways (Eddleston *et al.*, 2010). Long-term relationships, family identification with the business, generous investments, involvement-oriented governance and cohesive corporate cultures are among the stewardship goals or traits that enable family firms to preserve the business for the long run (Davis *et al.*, 1997; Arregle *et al.*, 2007; Zahra *et al.*, 2008; Kotlar and De Massis, 2013; Le Breton-Miller and Miller, 2015). The proclivity of family firm managers to act as stewards rather than as agents has been associated with applying longer time horizons (Short *et al.*, 2009). Regarding the fact that the reputation of family firms' owners/managers is linked to the firm's reputation, they are concerned with the firm's long-term future (Le Breton Miller and miller, 2018). Therefore, LTO is the primary representation of stewardship culture in family firms (Miller *et al.*, 2008; Short *et al.*, 2009; Eddleston *et al.*, 2010).

To the extent that a family firm's owners/managers behave more stewardlike, the firm likely embraces a time orientation that privileges the long term. In this situation, managerial opportunism and impatient capital may be significantly reduced, and the goals may be more aligned and focused on long-term results (Lumpkin *et al.*, 2010). LTO can trace its roots back to the concepts like futurity. Futurity means preferring effectiveness over efficiency and the firm's tendency to build the desired future through activities with long-term results. It is not related to narrowly defined areas, such as marketing or manufacturing and is considered a realized strategy rather than an intended one (Venkatraman, 1989). The concept of futurity was later described with other terms such as extended time horizons (Zellweger, 2007), managing for the long run (Miller and Le Breton-Miller 2005), and most often LTO, especially in the family firms' context (Lumpkin *et al.*, 2010).

Several scholars believe that family firms are more long-term-oriented than non-family firms (e.g. Poza, 2007; Kellermans *et al.*, 2008) because of their transgenerational goals, longer CEO tenures and investment horizons and especially the inclination of family firms' managers to act as stewards instead of being agents (Lumpkin *et al.*, 2010). Le Breton-Miller and Miller (2006) define LTO as priorities, goals and concrete investments that come to fruition over a long period and after a noticeable delay. It is also defined as the firm's tendency to prioritize the long-range implications and impact of decisions and actions that come to fruition after an extended period (Lumpkin *et al.*, 2010). LTO can facilitate goal alignment and

balance among owners, managers and other stakeholders of the family firm (Hoffmann *et al.*, 2016).

LTO and EO

LTO and innovativeness. Only a few studies have endeavored to link a family firm's long-term perspective and innovation (Diaz-Moriana *et al.*, 2018). A number of researchers believe that LTO prevents a family firm from investing in risky, innovative activities (Naldi *et al.*, 2007), but adopting a stewardship perspective may explain the relationship between LTO and innovativeness differently. The family firms which are more long-term oriented and their stewards put privilege to the continuity and reputation of the firm may continuously allocate enough resources to R&D because they are in pursuit of longevity for their firms, and innovation is associated with long-term survival and performance of the firm. Long-term-oriented firms pay less attention to their short-term interests than the desired future and the process of achieving it (Venkatraman, 1989). Therefore, in a long-term-oriented family firm, an organization's future gains importance, and initiatives with long-term results become the priority. Future-oriented organizations seek sustainable competitive advantage, and temporary competitive advantages do not tempt or distract them.

Family businesses have unique governance conditions that help them adopt a more LTO than their competitors and are more apt to achieve sustainable competitive advantage (Miller and Le Bretton-Miller, 2003; Le Bretton-Miller and Miller, 2006). LTO is associated with behaviors such as superior long-term investments in R&D and brand building capabilities, skilled and motivated workforce, enduring relationships with customers, suppliers, partners and the community, and significant new infrastructure expenditures (Le Bretton-Miller and Miller, 2006).

Lumpkin *et al.* (2010) claimed that the stronger a family business's LTO, the higher levels of innovativeness it will exhibit because LTO makes the family firm more tolerant of experimentation and extends the time for creativity and innovation. Cassia *et al.* (2012) found that LTO positively affects new product development in family firms. Laforet (2013) found that LTO positively influences innovation in family firms. It is also found that long-term-oriented firms are more prone to enhance their product portfolio (Kraiczy *et al.*, 2014). Diaz-Moriana *et al.* (2018) found patterns on how the firms' LTO influences the innovation motives of family firms. These studies suggest that the stewardship culture materialized with LTO may help a family firm to have more opportunity and peace of mind to work on its innovative projects. These projects can include a wide range of activities, such as introducing new products, processes and business models (Anderson *et al.*, 2014).

Although the realization of some kinds of innovations is possible in the short term, it takes a long time for R&D to lead to outcomes with commercialization potential. Moreover, continuity in innovative efforts is a necessity to gain and sustain sustainable performance. The necessity of having a long-term perspective becomes even more for organizations in case of radical innovations (Leifer *et al.*, 2000). When a family firm is more long-term-oriented, it will be more accepting of long-term R&D projects, and its sense of urgency will decrease. Therefore, the following hypothesis is formulated:

H1. There is a positive relationship between a family firm's level of LTO and innovativeness.

LTO and proactiveness. Proactiveness is defined as "seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of the competition, strategically eliminating operations which are in the mature or declining stages of life cycle" (Venkatraman, 1989). Proactiveness involves tracking and monitoring changes in the competitive environment, consumer preferences and technologies. Whereas innovativeness refers to a company's efforts to discover potential opportunities,

proactiveness refers to a company's efforts to recognize and seize them (Lumpkin and Dess, 2001). Proactive firms are opportunity-seeking and forward-looking and try to be always ahead of the competition (Rauch *et al.*, 2009) and gain the position of the leader (Anderson *et al.*, 2014).

In the first look, it seems that the family firms which are more long-term oriented and their stewards put privilege to the continuity and reputation of the firm may avoid entering new markets and initiating actions in which the competitors respond. Instead, those who have a short-term perspective are likely to prefer fast action to capitalize on a trend or get ahead of the competition (Lumpkin *et al.*, 2010). Although it seems that responding quickly to the opportunities requires a short-term orientation, it is necessary to build the capacity to foresee and evaluate emerging trends and recognizing future events.

When you provide resources for observing technological advances and changing customer preferences, taking quick and measured actions would become possible constantly. Unless being ahead of competition would become limited to a short period, and it only yields a temporary competitive advantage for the family firm. Such firms, when opportunities appear, can take prompt action without comprehensive planning. Therefore, it could be claimed that seeking opportunities ahead of the competition often is accompanied by a LTO (Ward *et al.*, 1994; Lumpkin *et al.*, 2010). Long-term-oriented family firms monitor technological trends and assess their relevance to their activities. Reactive firms wait for the changes, and a long time after the market leaders, react to the changes. Having strong forecasting and environmental scanning capabilities will help the firms introduce their new products and services before their competitors (Lumpkin *et al.*, 2010; Seyed Kalali and Heidari, 2016). Lack of these capabilities will make the firms myopic. Short-sightedness will turn the firms into imitators incapable of ever shaping the environment. Therefore, the following hypothesis is formulated:

H2. There is a positive relationship between a family firm's level of LTO and proactiveness.

LTO and riskiness. Having a long-term oriented perspective may make family firms conservative and risk-averse in strategic decision making (Gentry *et al.*, 2016). The family firms that are more long-term oriented and their stewards put privilege to the continuity and reputation of the firm may avoid making uncalculated risks to keep their reputation and ensure their survival (Hernández-Linares and López-Fernández, 2018). Riskiness requires that the firm be willing to commit significant resources to ventures in uncertain environments (Rauch *et al.*, 2009). Entering unknown markets, investing in technologies with uncertain futures, or borrowing heavily can be instances of risk (Baird and Thomas, 1985).

Long-term-oriented family firms may not be that willing to invest in or enter uncertain environments. LTO makes firms more conservative and risk-averse (Zahra, 2005, 2018). These firms' tendency to maintain their reputation in the market does not allow them to jeopardize their business and start risky projects and ventures. The owners/managers of family firms consider their firms' reputation and properties as their own. Thus, they become more sensitive toward the potential negative consequences of their actions. Therefore, the following hypothesis is formulated as follows:

H3. There is a negative relationship between a family firm's level of LTO and riskiness.

Methods

Data collection

The population consisted of private family firms that reside in Iran's science and technology parks which only account for 1,100 firms. Considering this limited number, it was tried to include all of the firms in the study. However, there were difficulties in reaching all of the firms since some of them were involved in issues such as moving or business closure. Therefore,

after getting access to the contact information of 950 firms out of the mentioned 1,100 firms, finally, 950 family firms were invited to participate in an online survey (non-probabilistic convenience sampling). The respondents were either CEOs or executives. When firms asked for a printed questionnaire, it was sent via ordinary mail immediately. A cover letter was used to inform the respondents about the study's aim and ensure confidentiality issues. Most of the respondents identified their firms as family firms; Meaning one or more family members had the majority of shares (Arosa *et al.*, 2010). Finally, 282 useable questionnaires were considered for further analysis (30% response rate). The response rate can be considered satisfactory compared to other studies on family firms (Arzubiaga *et al.*, 2019). No significant difference was observed between the size and age of the firms whose managers had answered the questionnaire and those whose managers had not answered the questions (non-response bias).

The characteristics of the surveyed firms are presented in Table 1. Although the final sample is highly representative, given the limited number of private family firms that reside in Iran's science and technology parks, there are some disparities between the characteristics of all firms and the surveyed sample that should be mentioned (Haddoud *et al.*, 2021). Here, the surveyed sample includes a lower number of firms operating in the printing, publishing and media sectors. The common method bias was also addressed. A widely used test of common method bias is the highest full collinearity variance inflation factor (FCVIF) test (Kock, 2015; Kock and Lynn, 2012), whereby the highest FCVIF in a model is usually compared against the threshold of 3.3 (Kock, 2020). Here, since all factor level VIFS are lower than 3.3, common method bias is unlikely to be an issue.

Measures

The research variables were measured using a standard questionnaire. To measure innovativeness (INN), Hughes and Morgan's (2007) three-item scale was used. These items were primarily based upon the work of Calantone *et al.* (2002). Proactiveness (PRO) was measured using Hughes and Morgan's (2007) three-item scale, which was sourced from the works of Bateman and Crant (1993), Hult and Ketchen (2001), and Morgan and Strong (2003). Riskiness (RIS) was measured using Morgan and Strong's (2003) and Venkatraman's (1989) four-item scale. LTO was measured using Dou *et al.* (2019) four-item scale, which was mainly derived from prior studies of Venkatraman (1989) and Wang and Bansal (2012). Firms' age and size were also included as control variables. The natural logarithm of the employee

Firms' characteristics	Percent	
Size	Less than 10	12
	10–30	56
	30–50	14
	More than 50	18
Age	Less than 5	46
	5–10	37
	More than 10	17
Sector	Mechanics and machinery	8
	Electronics and control systems	13
	ICT, hardware and software	18
	Oil, gas, petroleum and chemicals	4
	Agriculture and forestry	4
	Food and beverages	6
	Printing, publishing and media	19
	Other	28

Table 1.
Firms characteristics

number was used to account for non-linear effects. Firms' age and size were not correlated with any of the research variables. All the variables were measured using a seven-point Likert scale. A seven-point Likert scale was preferred over the five-point Likert scale to prevent high neutral responses.

Analytical techniques

Partial least squares structural equation modeling (PLS-SEM) was used to test the research hypotheses. The use of this method in strategic management research has recently increased (Hair *et al.*, 2012). PLS is based on an iterative approach that maximizes the explained variance of endogenous constructs (Fornell and Bookstein, 1982; Hair *et al.*, 2014). Whereas Covariance-based structural equation modeling (CB-SEM) seeks to determine how well a model can estimate a covariance matrix for the sample data, PLS-SEM is more similar to multiple regression analysis (Hair *et al.*, 2011, 2014). PLS-SEM is used in three main steps: Model specification, outer model evaluation, and inner model evaluation. In the model specification stage, the inner model (structural model) and outer models (measurement models) are set up. In the structural model, the relationship between constructs is shown; and in the measurement model, the relationships between constructs and indicator variables are displayed. In the second stage, outer model evaluation consists of running the PLS-SEM algorithm and evaluating the reliability and validity of the construct measures. Finally, in the third stage, the hypothesized relationships within the inner model are evaluated (Hair *et al.*, 2014).

In the present research, PLS-SEM is suitable for data analysis, since the data were non-normal (Sarstedt *et al.*, 2014), the sample size was relatively small (Henseler *et al.*, 2009; Hair *et al.*, 2017), and the nature of the study was explorative (to the best of knowledge, no empirical study has investigated these relationships) (Fornell and Bookstein, 1982; Hair *et al.*, 2017). Recently the powerful features of the PLS technique lead to its increasing use in strategy and marketing research (Arzubiaga *et al.*, 2018). Here, SmartPLS 3.2.9 software was used to assess the research hypotheses (Ringle *et al.*, 2015).

Data analysis and results

Assessment of the measurement model

Both reliability and validity were verified to evaluate the outer model. To assess the individual item reliability of the measurement model, the loading values were evaluated onto each of the latent variables. All of the items had loading values of equal or more than 0.7 and exceeded the threshold (Table 2). To evaluate internal consistency reliability, Cronbach's alpha and composite reliability criteria were used. Cronbach's alpha is a conservative measure of reliability, whereas composite reliability tends to overestimate reliability. Therefore, it is reasonable to assess both of them (Hair *et al.*, 2017).

Cronbach's alpha, which is grounded on the intercorrelations of the observed indicator variables, was more than 0.7 for all of the latent variables. Composite reliability shows whether the indicators truly measure the constructs (Hair *et al.*, 2017). It was more than 0.7 for all of the constructs. Moreover, recently the Dijkstra–Henseler's rho_A coefficient was introduced as a consistent reliability coefficient that overcomes the traditional PLS's consistency problems (Benitez *et al.*, 2020). Since the rho_A coefficients of the research variables were above 0.7, this requirement was also met. Convergent validity is evaluated using the average variance extracted (AVE). Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct (Hair *et al.*, 2017). Convergent validity was supported since each construct's AVE is more than 0.5 (Table 3).

Discriminant Validity means the extent to which a construct is genuinely distinct from other constructs. Thus, establishing discriminant validity implies that a construct captures

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	LTO	INN	PRO	RIS
LTO1	<i>0.86</i>	0.33	0.31	-0.37
LTO2	<i>0.91</i>	0.40	0.33	-0.35
LTO3	<i>0.83</i>	0.25	0.26	-0.33
LTO4	<i>0.85</i>	0.37	0.27	-0.33
INN1	0.29	<i>0.91</i>	0.30	-0.23
INN2	0.39	<i>0.94</i>	0.35	-0.28
INN3	0.38	<i>0.88</i>	0.29	-0.29
PRO1	0.29	0.32	<i>0.84</i>	-0.22
PRO2	0.25	0.26	<i>0.83</i>	-0.18
PRO3	0.32	0.30	<i>0.89</i>	-0.14
RIS1	-0.14	-0.12	-0.12	<i>0.72</i>
RIS2	-0.34	-0.28	-0.17	<i>0.88</i>
RIS3	-0.40	-0.26	-0.19	<i>0.93</i>
RIS4	-0.40	-0.29	-0.22	<i>0.94</i>

Table 2. Factor and cross-loadings of indicators on constructs

Note(s): Italic numbers represent the items' loading values onto the respective constructs

	Mean	SD	CA	CR	rho_A	AVE
LTO	4.18	1.42	0.90	0.92	0.89	0.74
INN	3.17	1.07	0.88	0.94	0.91	0.83
PRO	3.75	1.26	0.81	0.89	0.82	0.72
RIS	3.52	1.16	0.90	0.93	0.95	0.76

Table 3. Construct reliability and convergent validity

Note(s): SD: standard deviation; CA: Cronbach's alpha; CR: Composite reliability; AVE: Average variance extracted

phenomena not represented by other constructs in the model. The cross-loadings are traditionally the first approach to assess discriminant validity. Based on this approach, an indicator's outer loading on the associated construct should be greater than any of its cross-loadings on other constructs (Hair et al., 2017). The assessment of the loadings and cross-loadings suggests that discriminant validity was established (Table 1). The discriminant validity was also verified by using the Fornell-Larcker criterion. This method states that the AVE of each construct should be higher than the highest squared correlation with any other construct (Hair et al., 2017). Table 4 shows the results of this test, which also suggests that the discriminant validity was supported.

The newer criterion of the heterotrait-monotrait (HTMT) ratio of correlations was also applied to assess discriminant validity. HTMT is the ratio of the between-trait correlations to the within-trait correlations. HTMT is the mean of all correlations of indicators across constructs measuring different constructs relative to the geometric mean of the average correlations of indicators measuring the same construct (Hair et al., 2017). The performance of this approach has been proved to be superior to the Fornell-Larcker criterion and the

	LTO	INN	PRO	RIS
LTO	<i>0.86</i>			
INN	0.39	<i>0.91</i>		
PRO	0.34	0.35	<i>0.85</i>	
RIS	-0.40	-0.29	-0.21	<i>0.87</i>

Table 4. Discriminant validity (Fornell-Larcker criterion)

assessment of cross-loadings (Henseler et al., 2015). The HTMT ratio of correlations should be lower than 0.85 (Kline, 2011) or one (Henseler et al., 2015). The HTMT ratios are reported in Table 5. All ratios are below the value of 0.85.

Assessment of the structural model

The evaluation of the structural model includes the assessment of collinearity issues, the significance and relevance of the structural model relationships, the level of R^2 , the f^2 effect size, and the predictive relevance of Q^2 . Regarding collinearity issues, since no VIF values of predictor constructs are more than 5, the collinearity is not a critical issue, and we can go forward. The R^2 value for INN was 0.16, for PRO was 0.12, and for RIS was 0.16. It is difficult to provide rules for acceptable R^2 because it depends on factors such as the research discipline. For example, the R^2 value of 0.20 is considered high in consumer behavior research. However, based on a rule of thumb (Hair et al., 2011; Henseler et al., 2009), the R^2 value for INN, PRO and RIS could be considered satisfactory.

Regarding the f^2 effect size, LTO had a moderate effect size of 0.19 on INN, 0.14 on PRO and 0.19 on RIS (Benitez et al., 2020). To calculate the Q^2 statistic, we used a blindfolding procedure with an omission distance of eight (Hair et al., 2017). The Q^2 statistics of INN, PRO and RIS were greater than zero (0.12, 0.08 and 0.11, respectively), suggesting the predictive relevance of the model regarding the endogenous latent variables. To test the hypotheses, we assessed the path coefficients and their significance values by applying the bootstrapping approach (using 5,000 bootstrap subsamples, 255 cases, and a bias-corrected and accelerated bootstrap procedure with a significance level of 0.05) (Ringle et al., 2015). The results of PLS-SEM analysis showed significant positive relationships between LTO and INN (beta = 0.39, $p < 0.05$; $p < 0.01$), and LTO and PRO (beta = 0.34, $p < 0.05$; $p < 0.01$). The negative relationship between LTO and RIS was also supported (beta = -0.40, $p < 0.05$; $p < 0.01$). Therefore, hypotheses 1, 2 and 3 were confirmed (Table 6).

Discussion

The results of the present study showed significant positive relationships between LTO and innovativeness (H1) and between LTO and proactiveness (H2). Moreover, the negative relationship between LTO and risk-taking was confirmed (H3). Hence, hypotheses 1, 2 and 3 were all supported. Therefore, consistent with stewardship theory in the context of family firms (Miller et al., 2008; Eddleston et al., 2010; Henssen et al., 2014; Pittino et al., 2017), to the

Table 5.
HTMT ratios

	LTO	INN	PRO	RIS
LTO				
INN	0.43			
PRO	0.40	0.40		
RIS	0.41	0.30	0.24	

Table 6.
Results of structural model analysis

Path	Hypothesis	Path coefficient	T-statistics	p Values
LTO → INN	H1	0.39**	8.59	0.00
LTO → PRO	H2	0.34**	6.15	0.00
LTO → RIS	H3	-0.40**	8.12	0.00
Note(s): ** $p < 0.01$; * $p < 0.05$				

extent that the approach of the family firms' managers is stewardlike, the firms would be more long-term-oriented and consequently more innovative, more proactive and less risky.

The present study makes three critical contributions: first, while complementing earlier studies that explored stewardship determinants of the entrepreneurial behavior of family firms (Eddleston *et al.*, 2010), the results contribute to the family business literature by responding to the calls to study the drivers of family firms' heterogeneity (Cherchem, 2017; Arz, 2019) and to the calls to conduct empirical research to understand the role of LTO in strengthening entrepreneurial characteristics (Lumpkin *et al.*, 2010; Hernández-Linares and López-Fernández, 2018). Although some findings seem counter-intuitive, this study, while using a stewardship perspective, put the idea forward that to the extent that family firms are long-term oriented, they have higher EO. They also probably will benefit from higher performance than competitors, since as firms' EO increases, their performance generally improves.

The family firms which are long-term-oriented are prone to long-term investments in R&D, branding, and human resource development (Le Bretton-Miller and Miller, 2006). Therefore, they are more patient to see the results of innovative initiatives (innovativeness). Besides, LTO makes family firms more inclined toward environmental scanning (Lumpkin *et al.*, 2010), which can turn them into market leaders and shapers of the environment (proactiveness). On the contrary, long-term-oriented family firms are conservative in investing in uncertain opportunities to avoid endangering their reputation (Zahra, 2018). Therefore, they tend to become conservative (risk-averseness).

Second, the family business is the main model of economic organization in the private sector of Iran. Since the Islamic revolution of 1979, both vertical trust (confidence in public institutions) and horizontal trust (confidence in others) has decreased in Iran. Thus, the family business has become one of the most suitable modes of coordination in Iran's risky business environment (Coville, 2020). EO is important for family businesses since it is one of the primary sources of organizational innovation (Ferrerías-Méndez *et al.*, 2021), and performance (Strobl *et al.*, 2022). The research findings show that to enhance innovativeness, and proactiveness, and diminish riskiness level, family businesses that operate in Iran's turbulent economy could be powered by LTO, which is a proprietary characteristic that differentiates family businesses from their competitors.

Third, EO was broken into its constitutive elements and the relationship between LTO and entrepreneurial characteristics was independently investigated. In this regard, the research contributes to the debate related to EO conceptualization in family firms (Zahra, 2005, 2018; Naldi *et al.*, 2007; Pittino *et al.*, 2017). Along with the scholars who believe that the firms' entrepreneurial behaviors are not a perfect correlate to the strategic decision maker's attitude towards risk (Anderson *et al.*, 2015; Wales *et al.*, 2019), the results of the present research show that the risk-taking response to different levels of LTO is different from that of innovativeness and proactiveness. This finding confirms the suitability of the multidimensional view of EO (Lumpkin and Dess, 1996) in the context of family firms (Pittino *et al.*, 2017).

Conclusion

Today, EO is becoming a growing necessity in a wide range of industries, since it has been proved that entrepreneurial behaviors are generally accompanied by high performance levels (Hernández-Linares and López-Fernández, 2018). The present research informs the family firms' managers and practitioners to be long-term-oriented because, in this context, the desirable effects of LTO on entrepreneurial characteristics are significant. This study has demonstrated the complexity and importance of the LTO–EO relationship in the context of Iranian family firms, which has practical implications for those who are in charge of these companies:

First, regarding the finding that LTO can strengthen the levels of innovativeness and proactiveness in these firms, managers should focus on extending investment horizons and managing their business for the long run, instead of adopting short-term strategies and ineffective quick wins. Having the possibility to invest with an extended time horizon is an advantage that family firms' executives have over their public company peers. They have the chance to see the results of their investments come to fruition after a long period of time and significant delay. The tendency of family firms' executives toward short-sightedness and imitating the behaviors of public companies' executives would become an obstacle to exploiting this unique advantage.

Second, the fact that LTO makes family firms more conservative and risk-averse is also informative. The inclination of family firms' managers to act as stewards than being agent promotes a culture of connectedness and continuity in which the benefits of the whole family would be preferred over individual self-interest. This approach makes the managers of family firms avoid taking bold actions or welcoming uncalculated risks, ensuring the more prolonged survival of these firms. Adopting premeditated strategies and measures with higher meticulousity makes it possible for family firms to live longer. However, the family firms' owners/managers should note that a culture of extreme risk-aversion might result in inertia and dullness which can endanger the sustainability of their competitive advantages.

The present research faced a number of limitations that suggest opportunities for future studies: First, the studied sample was limited to the family firms situated in Iran's science and technology parks. Therefore, it is necessary to conduct similar studies in other geographical areas, primarily through using larger samples, so that generalizability of the findings of this research may be tested. Second, the research sample consisted of SMEs. Therefore, it is essential that the relationships examined in this research be tested in larger firms, especially because other studies show that the firms' size affects the relationship between firms' broader strategic orientations and domain-based orientations such as market orientation (e.g. [Johnson et al., 2012](#)).

Third, in this survey, data were collected using single key informants. Future researchers can use multiple informants to improve gathered data quality and validity of results. Fourth, LTO was measured using [Dou et al. \(2019\)](#)'s four-item scale. Although this scale is based upon previous studies of [Venkatraman \(1989\)](#) and [Wang and Bansal \(2012\)](#), it does not offset realized strategy vs. intended strategy and is more inclined toward measuring intended strategy. Fifth, it should be noted that this research was cross-sectional; thus, any claim about the existence of causal relationships is not certain. Future researchers can conduct longitudinal or qualitative studies to improve our understanding of the relationship between LTO and EO.

Sixth, in the present research, innovation is considered as a homogenous phenomenon, despite evidence that innovation patterns differ between family firms ([Damanpour, 1991](#); [Diaz-Moriana et al., 2018](#)). Finally, this study was conducted from a stewardship perspective. [Brigham et al. \(2013\)](#) suggested that using different theories can enhance our awareness of how and why temporal considerations should be integrated into family business research. Consistent with their argument, there would be opportunities to study the relationship between LTO and EO from other points of view. The resource-based view ([Wernerfelt, 1984](#); [Barney, 1991](#)), the capability-based theory of the firm ([Teece and Pisano, 1994](#)), and social capital theory ([Coleman, 1988](#)) are among the views that would be beneficial in giving us new insights.

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Appendix Scales

Innovativeness

- (1) We actively introduce improvements and innovations in our business.
- (2) Our business is creative in its methods of operation.
- (3) Our business seeks out new ways to do things.

Proactiveness

- (1) We always try to take the initiative in every situation (e.g. against competitors, in projects, and when working with Others).
- (2) We excel at identifying opportunities.
- (3) We initiate actions to which other organizations respond.

Riskiness (reverse scores)

- (1) We seem to adopt a rather conservative view when making major decisions.
- (2) New projects are approved on a "stage by stage" basis rather than with "blanket" approval.
- (3) We have a tendency to support projects where the expected returns are certain.
- (4) Our operations have generally followed the "tried and true" paths.

Long-term Orientation

- (1) Long-term goals (over 5 years) are an important part of the strategic planning of our firm.
- (2) Long-term goals are an important consideration when we make decisions related to resource allocation.
- (3) Building future competitive advantage is an important goal for our firm.
- (4) Building future competitive advantage is a major concern in the strategic planning of our firm.

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