

Family-Unique Resources, Marketing Resources, and Family Owners' Willingness to Pursue Radical Innovation: A Model and Test

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Highlights

- Resources possess attention-guiding, and incentivizing, properties.
- Marketing resources reduce family owners' willingness to pursue radical innovation.
- Family patient capital and family social capital ease this negative impact.
- Environmental dynamism lifts family owners' willingness to radically innovate.

Abstract

Interest in the family–marketing interface has snowballed, with considerable interest in family brand image as one marketing resource. However, a broader conceptualization of marketing resources is needed to understand their potential contribution to family business outcomes. We must also not lose sight of those family-unique resources that differentiate family firms. Drawing on the attention-based view of the firm and depicting resources as possessing attention-guiding properties, we provide a theory and model that anticipates an adverse effect from marketing resources on family owners' willingness to pursue radical innovation. We predict how this effect is contingent on family patient capital and family social capital as two family-unique resources. Data from a two-phased, multi-respondent, matched survey of private small-to-medium-sized family firms in the manufacturing industry in Chongqing region, China, validate our theory and model. Our study provides a new theory and insights to explain heterogeneity in family firm innovation behavior.

Keywords: Family-unique resources; Marketing resources; Attention-based view; Family owners; willingness; radical innovation

1. Introduction

Interest in the family–marketing interface is snowballing, with an array of conceptual and empirical studies, literature reviews, and special issues in the past few years alone (e.g., Astrachan & Botero, 2018; Astrachan et al., 2018; Beck, Prügl & Walter, 2019; Botero, Astrachan & Calabrò, 2018; Craig, Dibrell & Davis, 2008; Lude & Prügl, 2018; Rovelli, Ferasso, De Massis & Kraus, 2021; Sageder, Mitter & Feldbauer-Durstmüller, 2018; Schellong et al., 2019). However, the family business’ image (or brand) has received the most attention among these studies. While family branding matters for family firm success (Rovelli et al., 2021; Santiago, Pandey & Manalac, 2019; Van Gils et al., 2019; Zanon et al., 2019), the family image or brand is but *one* type of marketing resource (its reputation resource). Other notable marketing resources include market knowledge, relational, and technological resources (e.g., Hughes & Morgan, 2007; Kyriakopoulos, Hughes & Hughes, 2016; Morgan, Vorhies & Schlegelmilch, 2006), collectively known as “market-based assets” (Srivastava, Shervani & Fahey, 1998). These marketing resources can create a unique bundle that competitors cannot easily imitate or substitute (Morgan et al., 2006). However, overlooking the stock of marketing resources is dangerous because marketing resources can reduce novel innovation activity (Kyriakopoulos et al., 2016) and create little shareholder value (Hughes et al., 2019) without accounting for other resources held by the firm or external contingency conditions. For family business research, the rush to extol the benefits of family branding as one marketing resource risks premature conclusions for theory and practice about the value of marketing resources for the family firm and the boundary conditions of their usefulness. We address this theoretical and empirical problem and evaluate the power and limits of marketing resources, focusing on family firms’ willingness to innovate radically.

The innovation implications of marketing resources are a special point of concern. Defined as the commercialization of an entirely novel idea (Chandy & Tellis, 1998), radical innovation is the lifeblood of firms (Slater, Mohr & Sengupta, 2014) crucial to (a) maintaining competitive advantage (Bouncken, Fredrich, Ritala & Kraus, 2018; de Groote, Conrad & Hack, 2021; Domínguez Escrig et al., 2020; König, Kammerlander & Enders, 2013), (b) offering higher customer benefits (Hu & Hughes, 2020), and (c) renewing the family business (Calabrò et al., 2018). However, family firms typically prioritize incremental innovation strategies only (Scholes et al., 2021). Innovation behavior “depends on the firm’s resource endowment... [and] family firms are more likely to achieve incremental innovations than radical innovations” (Nieto,

Santamaria & Fernandez, 2015, p.382). We argue that an emphasis on innovation as an outcome overlooks how resources shape the *willingness* to innovate radically in the first instance (Chrisman et al., 2015b). Family business research suggests that marketing-related resources place different enablers and constraints around radical innovation activity (Covin et al., 2016). Marketing studies explain that marketing resources have attention-directing properties. For instance, marketing resources can reduce radical innovation activity (Kyriakopoulos et al., 2016) by activating risk aversion (Cooper & Smith, 1992; Levinthal & Myatt, 1994), resistance to cannibalizing existing products and technologies (Hamel & Prahalad, 1994), and biasing managers against emerging fields and new market segments (Tripsas & Gavetti, 2000). However, other studies suggest that market-based assets provide knowledge on future needs and trends (Zhou, Yim & Tse, 2005) that foster a willingness to radically innovate, especially when technological resources are present (Chandy & Tellis, 1998). Meanwhile, among family firm innovation studies, family affective value also guides innovation behavior (Calabrò et al., 2018; Filser et al., 2018). Marketing resources, then, are likely to provide an only partial understanding of family firms' (un)willingness to radically innovate unless family-specific resources are accounted for (e.g., Carnes & Ireland, 2013; Sirmon & Hitt, 2003). Given these discrepancies, we ask: *In what ways do marketing resources influence family owners' willingness to pursue radical innovation? What are some of the boundary conditions to the usefulness of marketing resources?*

Drawing on the attention-based view of the firm (Ocasio, 1997), we bridge the theoretical gap between the ownership of resources and strategic action in family firms. The attention-based view provides a theoretical basis to consider how managers' willingness to implement certain strategic activities are directed by the information contained in resources, ultimately driving or constraining the activities of owners and managers (Joseph & Ocasio, 2012). Without a willingness to absorb the risk and uncertainty inherent in radical innovation, family owners will *not* adopt a radical innovation strategy even if, *prima facie*, they have sufficient resources to do so (De Massis et al., 2014; Scholes et al., 2021). Combining the attention-based view with consideration of resource types provides the missing theoretical logic needed to explain why some family firms are (un)willing to radically innovate, even when they appear to possess sufficient resources. We predict that marketing resources constrain family owners' willingness to pursue radical innovation. However, we predict that family-unique resources (specifically family patient and family social

capital as inimitable and non-substitutable family resources bearing their attention-guiding properties) and external environmental conditions positively moderate this relationship.

We use a two-phased, multi-respondent, matched survey method to collect data at two different points in time from private, small-to-medium-sized family manufacturing enterprises in Chongqing region, China, to test our model. We make three contributions to family business research. First, we contribute to an attention-based theory of family firm innovativeness and bring greater completeness to arguments concerning marketing resources and their consequences for family firm innovation. Our attention-based logic allows scholars to predict better which family firms will innovate and the innovation type (De Massis et al., 2016). Marketing and family resources act as attention-guiding mechanisms to explain why strategic decisions result from where managerial attention is directed. Second, while existing studies emphasize family affective value in guiding family owners' willingness to pursue innovation activities (Chrisman et al., 2015a; De Massis et al., 2014; Kotlar et al., 2020), the importance of marketing resources, family-unique resources, and their contingent effects are largely overlooked. We provide theory and evidence for how family-unique resources can reshape the negative consequences of marketing resources for family owners' willingness to pursue radical innovation. These insights advance our stagnant understanding of resource orchestration in the family firm (Sirmon & Hitt, 2003) by relating the bundling of resources to attention-based logic. Third, we contribute empirical evidence validating the predictive accuracy of our theory and shed light on new boundary conditions to family firms' willingness to innovate. We identify family patient capital and family social capital as resource-based contingencies easing the negative impact of marketing resources on family owners' willingness to pursue radical innovation. We also reveal environmental dynamism as an externally-focused boundary condition increasing the utility of marketing resources. We provide implications for family business leaders, highlighting the urgency of auditing their resources to evaluate how these resources might inadvertently constrain innovation strategy. Our contributions explain why resource ownership or the primacy of affective endowments only partially explain family firms' innovation behavior (e.g., Chrisman et al., 2016; Chua et al., 2018; De Massis et al., 2014).

2. Theoretical foundations

2.1. Resources and the Attention-Based view

Family firms possess unique resources compared to their non-family counterparts (Chirico & Salvato, 2014; Chua et al., 2018; Covin et al., 2016). The two distinguishing resources are family patient capital (Habbershon & Williams, 1999; Hoffman, Hoelscher & Sorenson, 2006; Hu & Hughes, 2020; Ray et al., 2018) and family social capital (Arregle et al., 2007; Herrero, 2018; Herrero & Hughes, 2019; Herrero et al., 2021; Salvato & Melin, 2008). The uniqueness of these resources lies first in the financial and relational advantages they provide family firms over and above non-family firms (Sirmon & Hitt, 2003). For family patient capital, family firms can invest with a longer-term time horizon owing to their tendency to accumulate, hold, or access family financial reserves over debt financing (Hoffman et al., 2006). This advantage originates from the unification of ownership and control (Carney, 2005), where the family has control and discretion over resource accumulation, use, and disposal while being able to tap pools of financial resources deep within the family (Anderson & Reeb, 2003; De Massis et al., 2014). A non-family firm relies more on external debt or equity financing, which carries interest or dividend costs (Habbershon & Williams, 1999). Family firms can access family patient capital at little to no cost and with longer investment horizons (Sirmon & Hitt, 2003). For family social capital, the family firm is differentiated by unique family ties that bear considerable trust (Cesinger et al., 2016) and an expectation of action without any requirement for reciprocity or recompense for that action to occur (Herrero & Hughes, 2019). Because of this, family social capital cannot be imitated, and non-family firms can, at best, only synthesize a crude alternative (Herrero, 2018). Marketing resources, however, are distinctive only insofar that they require investment (Hughes et al., 2019) and form path dependently to a firm. Marketing resources, also referred to as market-based assets, encompass the legacy of a firm's investments in or accumulation of market knowledge, reputation, relational (channel), and technological resources necessary for the commercialization of its products and services (Kyriakopoulos et al. 2016; Morgan et al., 2006; Srivastava et al., 1998).

All resources bear information and incentivizing properties because their magnitude, legacy, and longevity incentivize or dissuade strategic choice (Joseph & Ocasio, 2012). This is an observation inherent in the resource-based view assumption that resource use (and their orchestration) matters to wealth creation above resource ownership alone (Barney et al., 2011; Sirmon et al., 2011; see also Chirico et al., 2011). However, the resource-based view does not explain the consequences of this assumption for managers' actions. The attention-based view of

the firm (Ocasio, 1997, 2011) can, because of how resources focus managerial attention, incentivize what managers will notice and interpret, and focus their time and effort.

Attention represents how managers notice, encode, interpret, and focus their time and effort on strategic issues (Ocasio, 1997). Studies find that high stocks of marketing resources can diminish managers' beliefs about the power of competitors' innovations and exaggerate managers' confidence in their ability to respond to competitors' maneuvers (Debruyne, Frambach & Moenaert, 2010). Moreover, Kyriakopoulos et al. (2016) show that marketing resources can reduce radical innovation activity. Marketing resources grounded in knowledge of existing product-market activities and long-established and much-invested brands incentivize managerial attention towards incremental, cautious innovation initiatives than truly novel ones. These works illustrate how resources bear informational properties that can steer managers' attention and shape a firm's strategic decisions. Large stocks of marketing resources incentivize incremental gains because most of a firm's market knowledge, reputational, relational, and technological resources captured in its market-based assets are tied to existing products and product-market activities. We argue that these resources will act as a lens focusing and incentivizing managerial attention accordingly.

The context in which managers' choices and actions are situated determines which opportunities managers attend to (Ocasio, 1997; Ocasio & Joseph, 2005). Thus, even when family firms exhibit the resources seemingly needed to innovate (De Massis et al., 2016), and bear enough excess capacity to grow, how managerial attention is allocated and incentivized can explain variations in what opportunities are pursued or ignored (Salvato, 2009). Because family firms are not homogeneous (Pittino et al., 2018; Rovelli et al., 2021; Stanley et al., 2017), differences in resource stocks and the properties of those resources might explain heterogeneity in family firm's innovation behaviors.

The predictive apparatus within the attention-based view correlates around three fundamental principles (Ocasio, 1997): the principle of focus of attention (what resources and opportunities are incentivized), the principle of situated attention (how resources condition opportunity interpretation), and the principle of structural distribution of attention (who, and how many individuals, might input into a strategic choice). While marketing resources risk incentivizing incremental gains by "sticking to the knitting", family patient capital potentially re-situates managerial attention into the long term. Family social capital can enable more individuals to benefit from family power to feed new information into strategic decision-making. We predict

these family-unique resources will destabilize the short-term focus of strong marketing resources on the incremental gain with a willingness to consider longer-term innovation investments.

2.2. Attention-Based view, marketing resources, and family owners' willingness to pursue radical innovation

Radical innovations depart from existing practice and disrupt daily operations (Hu & Hughes, 2020). Consequently, radical innovation activities contain risks and uncertainties with unpredictable success and high failure rates that disincentivize family owners' willingness to pursue this innovation type (König et al., 2013). Existing studies acknowledge that deficiencies in resources to engage in radical innovation activities (Kyriakopoulos et al., 2016; Morgan et al., 2006), diminish managers' willingness to pursue radical innovation. However, many family firms continue to innovate (Scholes et al., 2021), suggesting that it is how resources steer and incentivize attention towards new or old courses of action that may explain differences in innovation behavior.

Our expectations about the effects of marketing resources on family owners' willingness to pursue radical innovation are based on the principles of focus of attention and situated attention. The attention-based view considers managers as agents interpreting their firm's ability to act in particular ways based on assets, constraints, and circumstances and making commensurate strategic choices based on these factors (Joseph & Ocasio, 2012; Ocasio, 1997). The attention-based view reveals that the firm's resource stocks draw family owners' attention to certain organizational activities and away from others (Joseph & Ocasio, 2012) (e.g., away from radical innovation and towards cautions, security-blanket innovation). Marketing resources encompass tangible and intangible properties about market knowledge, the firm's image and brand reputation, channel networks, and rigidity of its technological resources (Davicik & Sharma, 2016; Kyriakopoulos et al., 2016; Morgan et al., 2006). Marketing resources create a 'sticky' bundle of firm-specific resources (Hu & Hughes, 2020; Morgan et al., 2006; Srivastava et al., 1998). For instance, relational and technological resources (Covin et al., 2016; König et al., 2013) leverage a family firm's knowledge to better sense market opportunities (Chirico & Salvato, 2014). However, market knowledge resources also steer attention to predefined and preexisting markets, reducing radical innovation activity (Kyriakopoulos et al., 2016).

Marketing resources require ongoing investments to maintain their value (Covin et al., 2016; Hughes et al., 2019). Radical innovation activities also require high investment in research and

development (R&D) (Hu & Hughes, 2020). Family owners' parsimonious mindset drives them to minimize risks and allocate resources towards activities that are less likely to jeopardize or risk the family's wealth (Carney, 2005). When marketing resources are especially strong, managers are incentivized to maintain those resources because of the greater certainty of returns from incremental gains. Family owners are then more likely to maintain the status-quo (Kotlar et al., 2020) and embrace innovation activities that typically bear more reliable performance returns (e.g., incremental, not radical) (Patel & Chrisman, 2014).

Marketing resources entail the experience of running a business in a market, the firm's reputation in that market, relationships with existing customers and channel partners, and technological resources tied to existing products and services (Kyriakopoulos et al., 2016). It takes a long time for some family firms to accumulate a strong bundle of marketing resources while operating the business (De Massis et al., 2016). Family owners favor these marketing resources because benefits such as accessing information and customer data help family firms quickly target customers with reliable offerings (Chirico & Salvato, 2014; De Massis et al., 2016). Substantial market resources align with goals focused on short-term, reliable benefits (De Massis, Frattini & Lichtenthaler, 2013). Similarly, family brand and image as reputational marketing resources build alongside family history, investments in communicating that history and heritage (as well as its product-market offerings), and pervade business practices (Astrachan et al., 2018; Zellweger, Eddleston & Kellermanns, 2010). Sometimes, a strong family brand and image can increase family owners' willingness to search for innovation activities (Rondi et al., 2018). However, brands and images are part of the family tradition that can steer family owners' attention away from radical innovation activities (De Massis et al., 2016). Radical innovation can jeopardize family firms' brand assets because of the material probability of associating failure with these brands should a radical innovation miss the mark (Kyriakopoulos et al., 2016). This fear will likely reinforce historical rather than forward-looking decisions (Habbershon & Williams, 1999).

In these circumstances, we expect marketing resources to weaken family owners' willingness to pursue radical innovation as this stock of resources grows. Strong marketing resources will incentivize family owners' and managers' attention toward serving the needs of existing customers first, such that visions of new markets fail to emerge. These resources should strengthen family owners' myopic view on acquiring short-term benefits. Thus:

H1. Marketing resources negatively affect family owners' willingness to pursue radical innovation.

2.3. The moderating effects of family patient capital and family social capital

Our expectations about the moderating effects of family resources on the relationship between marketing resources and family owners' willingness to pursue radical innovation are based on the principles of focus of attention (that resources incentivize some opportunities over others), situated attention (how different resources condition opportunity interpretation), and the structural distribution of attention (by including family in strategic decision-making). Family patient capital and family social capital are family-unique resources (e.g., Danes et al., 2009; Habbershon & Williams, 1999; Herrero, 2018; Herrero & Hughes, 2019; Sirmon & Hitt, 2003; Zellweger et al., 2010) capable of changing the priorities set by family owners in noticing, encoding, interpreting, and focusing time and effort—that is, they possess attention-incentivizing properties (Joseph & Wilson, 2018; Ocasio, 1997). Family patient capital orients towards longer-term investments with longer investment horizons, and family social capital orients around involving the family in strategic decision processes.

Family patient capital is conceptualized as financial resources accumulated from internal financing activities offered by only family members aiming to receive economic or noneconomic benefits from a long-term investment (Habbershon & Williams, 1999). Family patient capital has a non-specified date of return (Sirmon & Hitt, 2003). Because of this, family firms do not necessarily borrow debt-based financial resources (e.g., loans) from a bank with a three- to five-year return enforcement period when planning to embrace more radical innovation activities (Deeg & Hardie, 2016). First, with high patient capital, family owners avoid acquiring external financial support to prevent sharing equity with other firms and financial institutions (Habbershon & Williams, 1999; Miller et al., 2015). Second, external financial institutions restrict private firms' access to debt (loan) finance according to the small-and-medium-sized family firm's asset size (Deeg & Hardie, 2016; Girma, Gong & Görg, 2008). Larger stocks of family patient capital can remedy this problem. Hence, family patient capital can steer family owners' attention to a longer investment horizon from short to long term (Girma et al., 2008).

While marketing resources may reduce family owners' willingness to pursue radical innovation. Because family patient capital lasts longer (more than five years) and can provide a cushion or insurance to support riskier activities, we expect those family firms with larger stocks of patient capital will be incentivized to consider radical innovation because of the greater tolerance for longer-term payoff. Family owners in possession of patient capital can tolerate short-term losses

and act more patiently to see benefits return from a long-term investment (Hoffman et al., 2006; Sirmon & Hitt, 2003). Because patient capital focuses on longer-term strategy and gain, we expect family owners to be more willing to pursue radical innovation activities by reconfiguring marketing resources towards these opportunities as incremental gains are less attractive.

We expect an increase in family patient capital to ease the negative impact of marketing resources on family owners' willingness to pursue radical innovation because it resets the attention of family owners and managers away from short-term reliable returns, and defense of its marketing resource stock, and towards a longer-term perspective on family wealth and organizational wellbeing. Therefore:

H2. Family patient capital positively moderates the relationship between marketing resources and family owners' willingness to pursue radical innovation. The higher the family patient capital, the stronger the relationship between marketing resources and family owners' willingness to pursue radical innovation.

From an attention-based view, family social capital can potentially change the structural distribution of attention by including family in strategic decision-making (e.g., Ocasio, 1997). Family social capital is conceptualized as the potential resources embedded in relationships among family members (Hoffman et al., 2006), typically inside the boundaries of the family firm (Herrero & Hughes, 2019; Herrero et al., 2021), but may include extended family (for resource access but without explicit decision rights). It is a moral resource that contains trust, reciprocity, and interactions among family members (Herrero, 2018; Sirmon & Hitt, 2003). Family social capital is composed of strong ties, which are more intense and enduring relationships (among family members) than typically encountered in traditional social relationships (Chirico & Salvato, 2014; Herrero & Hughes, 2019). Traditional social relationships require investments in time and effort to build trust. In family social capital, trust is more readily available, and expectations about reciprocity are substituted for expectations of support regardless of any recompense or reciprocation. Family social capital is closely knit and can facilitate fast knowledge internalization, rapid information sharing, and reinforce the flow of information across family members in the business (Arregle et al., 2007; Chirico & Salvato, 2014; König et al., 2013).

By involving more family members in the firm through stronger family social capital, familiness grows, increasing the flow of information (Herrero & Hughes, 2019) and enabling better

knowledge recombination (Patel & Fiet, 2011). A higher degree of family social capital structurally redistributes the focus of attention and can potentially change where attention is situated. For example, family owners could be steered to embrace riskier decisions when internal effectiveness is supported by strong family social capital (Covin et al., 2016). First, family members share the same background and possess similar tacit knowledge regarding their firm's operations (Hu & Hughes, 2020). These conditions create close interactions among family members and facilitate higher opportunity recognition, knowledge assimilation, and faster value transformation (Patel & Fiet, 2011). Second, family firms with deep family social capital will exhibit norms containing the common meaning of languages and behaviors that allow family members to quickly understand, interpret and act on new information and knowledge (Herrero & Hughes, 2019). Third, strong shared values among family members establish mutual trust and respect, and ideas are more openly shared (Arregle et al., 2007). Strong family social capital should then affect strategic choices by enabling more novel and more effective decision-making, faster convergence of individual goals to collective goals, and galvanizing family support for new initiatives (Hoffman et al., 2006).

Consequently then, if marketing resources steer family owners' behavior towards more stable development and incremental gains (Kyriakopoulos et al., 2016), family social capital may redistribute managerial attention toward radical innovation activities because family members have deep tacit knowledge that allows them to commit highly to new courses of action (König et al., 2013; Salvato, Chirico & Sharma, 2010). For example, with substantial family social capital, the shared trust among family members can increase the belief of family owners in pursuing radical innovation activities when marketing resources pull the firm towards their existing served markets, knowing that any success or failure will ultimately have the commitment and backing of the family. Therefore, family social capital is expected to diminish the negative impact of marketing resources on family owners' willingness to pursue radical innovation, positively moderating this relationship:

H3. Family social capital positively moderates the relationship between marketing resources and family owners' willingness to pursue radical innovation. The higher the family social capital, the stronger the relationship between marketing resources and family owners' willingness to pursue radical innovation.

2.4. The moderating effect of environmental dynamism

The focus of decision-makers on a particular situation can vary depending on changes in the firm's external environment (Koryak et al., 2018; Ocasio, 1997). Environmental dynamism reflects the extent of changes in customer preferences and whether competitor actions are unpredictable (Wang & Chen, 2010; Fang, 2008). Generally, a stable environment means that firms have little incentive to channel their marketing resources to anything other than serving their core customers' stable and ongoing needs. This stability incentivizes managers to go for incremental gains, diminishing any opposing incentive shifting attention toward radical innovation. However, changing customer preferences gradually decreases customer interest in existing products and services in a dynamic environment. Older products become mundane more quickly in dynamic environments, creating an incentive to consider radical innovation activity to best use the family firm's marketing resources. Insofar as attention represents the noticing, encoding, interpreting, and focusing of time and effort by managers on strategic issues (Ocasio, 1997), environmental dynamism defines an altogether different context for managers' choices and actions (Ocasio, 1997; Ocasio & Joseph, 2005). Those family firms situated in more dynamic environments focus on what opportunities exist and what opportunities managers should attend to. Because of this, family firms' revenue can decrease if their products and services fail to engage with changes in customers' preferences. Unpredictable actions of competitors, including innovation, then further risk family firms' survival (Wang & Chen, 2010). Strong environmental dynamism shortens the lifecycle of products and services and enhances the volatility of customers' demands for those products and services (Wang & Chen, 2010; Fang, 2008; Prajogo, 2016).

In a highly dynamic environment, family owners are incentivized to alleviate their reliance on existing products and services, shifting attention towards channeling their (marketing) resources to yield breakthroughs in new products and services. Therefore, environmental dynamism is expected to diminish the negative impact of marketing resources on family owners' willingness to pursue radical innovation and positively moderate this relationship:

H4. Environmental dynamism positively moderates the relationship between marketing resources and family owners' willingness to pursue radical innovation. The higher the environmental dynamism, the stronger the relationship between marketing resources and family owners' willingness to pursue radical innovation.

[Insert Figure 1 here]

3. Method

3.1. Data collection procedures

We selected private manufacturing SMEs in the Chongqing region (Chongqing is a municipality sharing the same ruling power as a province and is directly controlled by the central government) as our target population for two reasons. First, private manufacturing SMEs are one of the largest groups compared to those from other industries in China. Second, Chongqing is one of the ten regions in China where manufacturing is most focused (National Bureau of Statistics of China, 2017). Chongqing private SME manufacturers (a total of 3568 private entities in 2017) exhibited a 10.32% annual growth rate in numbers from 2012 to 2017, which is broadly similar to (albeit slightly less than) the large manufacturing region (Jiangsu) (10.9%) and the national average (10.8%) (National Bureau of Statistics of China, 2020). Chongqing private manufacturing SMEs are reasonably representative of most private manufacturing SMEs in China, thus reasonably generalizing to that larger population.

From 2012 to 2017, private, small-to-medium-sized firms (SMEs) from the manufacturing industry in Chongqing, China, spent 23-billion-yuan yearly on R&D (National Bureau of Statistics of China, 2017). Since Chongqing provides a suitable environment for the study of family firm innovation, we target a sample of unlisted family manufacturing SMEs in Chongqing. We followed Cai, Hughes, and Yin (2014) and applied the Chinese definition of private manufacturing SMEs to specify the sample population correctly (National Bureau of Statistics of China, 2017). First, a small firm has a number of employees ranging between 20 and 300 and generates annual revenue ranging between 3,000,000 yuan and 20,000,000 yuan. Second, a medium-sized firm has a number of employees ranging between 300 and 1000 with annual revenue ranging between 20,000,000 yuan and 400,000,000 yuan. We identified 3568 private manufacturing SMEs in Chongqing through this selection process in the TianYanCha database.

The TianYanCha database contains business information on ownership and the names of shareholders. Using the TianYanCha database, we followed the ‘ultimate owner’ criteria to identify potential family firms (Cruz et al., 2014; Debicki et al., 2016) and applied our knowledge of the Chinese name culture. First, at least one shareholder (except the ultimate owner) must share the same family name *or* family name *and* generation name with the firm’s ultimate owner. Second,

at least one individual must share the family name with the ultimate owner and sit on the board of directors. Third, the ultimate owner and shareholder(s) who share the same family name should own at least 50% of the firm's total shares. *Generation name* is derived from Chinese culture regarding siblings and cousins in one generation and shares a *generation name* as the start of the given name. For example, with two family members named Qingdong Meng, and Qingguang Meng, Qing is a shared generation name, and Meng is a shared family name. These two individuals can be identified as siblings or cousins whose fathers are brothers from the same family.

Since a female spouse does not usually absorb the husband's family name upon marrying in China, we applied two additional criteria to identify familial relationships between the ultimate owner and shareholder(s) for firms that have two owners sharing different family names and have a shareholder sharing different family names with the ultimate owner. First, a private firm has only two owners (one female and one male) at the same age level (age difference within ten years), but the two owners hold different family names (a husband and wife potentially manage this firm). Second, supposing the ultimate owner is female, and her family name is different from the rest of the shareholders, at least two shareholders must share the same family name or family and generation names. After applying these two criteria, we manually inspected local business reports and company websites to confirm the relationships among the owners and shareholders. Notably, we paid attention to family owners' succession events and succession intentions while viewing company histories. Finally, all selected potential family firms must have contact details with email addresses and telephone numbers, allowing us to contact them further. Through this process, we identified a sample of 1413 family manufacturing SMEs in Chongqing, China.

The 1413 private family firms were contacted via emails and telephone: 290 firms were reached and confirmed to participate in our data collection activities. The survey targeted the family owners and family owner-managers, and we requested two respondents to complete surveys per firm. To decrease the chance of receiving incomplete surveys, we used a face-to-face surveying approach to ensure respondents completed every survey question. To ensure the accuracy of responses, we informed the respondents of the definition of radical innovation with relevant examples. We emphasized that there were no right or wrong answers in completing the survey. Also, we guaranteed the confidentiality of the gathered responses before respondents began filling in the survey. During the survey administration, we acted to ensure respondents' understanding of all the survey questions but without leading or implying any answer. The objective was to ensure the

acquired data's reliability, consistency, and accuracy. In return for completing the survey, participating respondents who completed every survey question received a 200-yuan gift card. At the same time, we offered a benchmarking report and a data analysis report for firms that participated in completing the survey. To prevent participants guessing or assuming any relationships among the items, items for measuring the independent and dependent constructs were separated into two different phases of data collection. Because of the face-to-face surveying approach, we ensured these two parts were filled by the same respondent at two different points in time with a minimum of seven days in between.

We created four additional self-evaluation questions to validate a family firm's identification within the survey: (1) 'is this company family-owned?', (2) 'are you a family member?' (3) 'have the family owner(s) decided to pass the ownership and control to the next generation?', (4) 'is the family owner looking to sell the firm currently?', and (5) 'does the family owner wish/expect the future successor to be a family member?'. A total of 207 firms classified themselves as family-owned and showed the intention to hand the current business to the next generation leader. Within the 207 family firms showing in Table 1, 98% of them are small firms. Seven firms provided only a single response (N=7), and 200 firms provided double responses (N=400) (totaling 407 responses). Family firms producing metal products occupy 28.7% of the 207 firms. Table 1 contains further information on the characteristics of respondent firms.

[Insert Table 1 here]

Non-response bias. Analysis of early and late respondent groups (each group contains 50 responses from 50 firms) was used to examine non-response bias. Specifically, *t*-tests were used based on firm size (total number of full-time employees) ($t=.839, p=.403$) and the number of family employees ($t=1.144, p=.256$). Based on the *t*-test results, there were no significant differences between early responding and late responding firms on these variables. Thus, we anticipate that non-response bias is unlikely to be of concern in this study.

3.2. Measures

Table 2 shows the items for the dependent and independent variables and moderators. All the factor loadings of the items are above .7, demonstrating that all the constructs have well-defined structures (Hair, Black, Anderson & Burke, 2006).

[Insert Table 2 here]

Family owners' willingness to pursue radical innovation. There are few measures for family owners' willingness to pursue radical innovation in existing family firm innovation studies. We conducted procedures proposed by Liu, Wang, Bamberger, Shi and Bacharach (2015) to develop a new set of items, measuring family owners' willingness to pursue radical innovation. We followed the definitions of "willingness to pursue innovation activities" from De Massis et al. (2014) and Chrisman et al. (2016) and definitions of "willingness in planning to invest in a business project" from (Alexander, Lynch & Wang, 2008). We acknowledged that the family owners' willingness to plan for investment is based on the investment indicators' results, including the potential benefits from an investment, its costs, and trade-offs. We then built a set of items measuring family owners' willingness to pursue radical innovation based on the existing items of measuring 'willingness to invest in a business project' from Alexander et al. (2008). The set of items relies on the 7-point Likert scale ranging from 1 for "strongly disagree" to 7 for "strongly agree". We examined the content validity of the set of items through two focus groups (one containing experts from entrepreneurship, marketing, and management; the other including ten owners from four family firms, and these firms are not included in the pool of final responses).

Marketing resources. Marketing resource items were sourced from Kyriakopoulos et al. (2016). These items encompassed market knowledge, reputation resources, relational resources, and technological resources. These items requested the opinion of family owners about the degree of these resources held by the firm. The lead-in leading question read as: "With respect to your current understanding of your firm, how would you rate the level of resources held by your firm on the following?". The survey items were anchored to a 7-point Likert scale ranging from 1 for "low degree" to 7 for "high degree".

Family patient capital. The importance of family patient capital is widely recognized in many family firm resource studies (e.g., Habbershon & Williams, 1999; Hoffman et al., 2006; Sirmon & Hitt, 2003). In particular, the ability to hold and use long-term patient capital is commonly used to distinguish between family and non-family firms (e.g., Habbershon & Williams, 1999; Hoffman et al., 2006; Hu & Hughes, 2020; Ray et al., 2018; Sirmon & Hitt, 2008). However, family patient capital is rarely measured or treated empirically despite its regular conceptual use. Measurement items for family patient capital among existing studies are limited then. To resolve this matter, we undertook three steps set out by Liu et al. (2015) to develop measures for family patient capital

and followed the process detailed by Heggstad et al. (2019) to ensure its construct validity. We established items for family patient capital based on the definition of family patient capital and its characteristics from three patient capital studies. One focuses on family firms (Sirmon & Hitt, 2003), and the other focuses on traditional/non-family firms (Bicen & Johnson, 2015; Deeg & Hardie, 2016). These survey items were then handed to a group containing an expert in accounting and finance, an expert from entrepreneurship, and an expert from the family business sphere. Then, we held a focus group and asked the three experts to identify family patient capital in family firms. We improved the items by following the experts' feedback and suggestions. After this step, we organized a second focus group containing ten family owners from four family firms (these firms are not included in the pool of final responses) to validate the items. These family owners were asked to judge whether the items captured the family patient capital construct as defined to them. The family owners within this second focus group provided a high content validity rating about the items. Overall, we are confident in the rigor and accuracy of our family patient capital measure and its items.

Family social capital. The items used to measure family social capital originate from the work of Chirico and Salvato (2014). They are anchored against a 7-point Likert scale ranging from 1 for 'strongly disagree' to 7 for 'strongly agree'.

Environmental dynamism. The items used to measure environmental dynamism originate from Fang (2008). They are anchored against a 7-point Likert scale ranging from 1 for 'strongly disagree' to 7 for 'strongly agree'.

Control variables. First, former researchers suggest firm age can impact firms' innovativeness. The older the firm is, the less liability of newness the firm would have, which brings the potential for firms to pursue innovation (Jürgensen & Guesalaga, 2018). Firm age is measured by the number of years since the firm was formally established (Czarnitzki & Delanote, 2013). Second, firm size can indicate a larger pool of resources (e.g., financial resources and human resources) available to a family firm, increasing its ability to innovate (Chrisman et al., 2016). Thus, firm size might influence family owners' willingness to pursue radical innovation (Covin et al., 2016). Firm size is measured by the total number of full-time employees within a firm. We further controlled the age of the family owners. According to Hu and Hughes' (2020) review, older family owners have more experience than young family owners and may vary their willingness to pursue radical innovation. We also controlled firm past performance as a proxy of resource availability because

strong resource slack might support the ability of firms to engage in more radical innovation activities (Troilo, De Luca & Atuahene-Gima, 2014). The measurement items for firm past performance were sourced from Santos and Brito (2012). Based on Santos and Brito (2012), profitability is a common factor to measure firm past performance. As such, we created measurement items requesting the information from family owners on their agreement with statements focused on profitability and revenue growth over the previous two years (Table 2). The items were anchored to a 7-point Likert scale ranging from 1 “strongly disagree” to 7 “strongly agree”. From an attention-based view, high firm past performance may reflect an intransigence towards radical innovation by incentivizing the family firm to “stick to their knitting” when past performance is high. In such cases, marketing resources will likely have contributed to that profitability (Hughes et al., 2019; Kyriakopoulos et al., 2016), commensurate with a disincentive to steer attention towards radical innovation.

[Insert Table 3 here]

Table 3 shows the composite reliabilities (CR) of all constructs exceed the threshold of .7 (Hair et al., 2006), indicating high internal consistency for each construct. The square root of the average variance extracted (AVE) values of the constructs are higher than the value of correlations, demonstrating that discriminant validity is achieved in each instance.

Common Method Variance (CMV) Tests. CMV was tested in two ways: the confirmatory factor analysis (CFA) marker analytic technique (Lindell & Whitney, 2001) and the Harman one-factor test (Podsakoff et al., 2003). The selected marker variable is radical innovation education (RIE), theoretically unrelated to the model constructs. RIE is a latent variable with a similar structure (measured by 7-point Likert scale items) to other focal independent variables. CMV associates with consistency motif and is unlikely to affect data when there is no statistically significant relationship between the marker variable and other focus variables in the current model (Lindell & Whitney, 2001). The result shows that the relationship between the marker variable and the focus variables was entirely insignificant ($-.008 < b < .046, p > .353$). This validates our expectation that the independent variable constructs and dependent variable construct are not present and confirms the absence of a consistency motif. To further confirm the findings of the marker variable test, a Harman one-factor analysis shows that the variance of the first component is 41.190%, below the threshold level of 50% of the total variance (Podsakoff et al., 2003). Therefore, CMV is

not a concern in the current study. These results affirm that our two-phased, multi-respondent, matched survey method correctly minimized the potential for CMV.

4. Results

4.1 Structural equation modeling

We used SPSS 25 and AMOS 25 to estimate the structural equation model in the current study. The testing model involves all constructs regarding dependent, independent, moderators, and controls. Marketing resources are treated as a higher-order factor consisting of market knowledge, reputational resources, relational resources, and technological resources. We drew covariance paths and ensured modification indices values were less than 20. The maximum likelihood estimation of the final model shows that: CMIN=1669.69 (CMIN/DF=2.553), $p<.001$, NFI=.902, CFI=.938, RMSEA=.062, PCLOSE<.001, 95% CI (.058, .066), Standardized RMR = .073. These statistics demonstrate that the final model exhibits a good model fit.

[Insert Table 4 here]

Based on the results in Table 4, marketing resources are negatively and significantly related to family owners' willingness to pursue radical innovation ($-.427, p<.001$), supporting H1. Family patient capital positively moderates the relationship between marketing resources and family owners' willingness to pursue radical innovation ($.522, p<.001$), supporting H2. When family patient capital increases, the negative impacts of marketing resources on family owners' willingness to pursue radical innovation decreases. The moderation effects of family social capital on the relationship between marketing resources and family owners' willingness to pursue radical innovation is also positive and significant ($.254, p=.006<.01$), supporting H3. Increasing family social capital can ease the negative impact of marketing resources on family owners' willingness to pursue radical innovation. Finally, environmental dynamism positively and significantly impacts the relationship between marketing resources and family owners' willingness to pursue radical innovation ($.386, p<.001$). Thus, H4 is supported.

4.2 Robustness test

We replaced the dependent variable (family owners' willingness to pursue radical innovation) with innovativeness as a robustness check. Innovativeness measures the degree to which family

firm owners develop the ability or capacity to innovate (Filser et al., 2018). If family owners are willing to pursue radical innovation, family firms could act intensively to develop firms' ability to innovate. We re-ran the model using the innovativeness construct from Filser et al. (2018) as an alternative dependent variable for family owners' willingness to pursue radical innovation. The results are similar to those of the main model, and the significant effects still hold and are consistent with the original results: model fit: CMIN=1509.81 (CMIN/DF=2.451), $p < .001$, NFI=.908, CFI=.943, RMSEA=.060, PCLOSE<.001, 95% CI (.056, .064), Standardized RMR = .071; marketing resources (-.164, $p = .003 < .01$), family patient capital as a moderator (.292, $p = .002 < .01$), family social capital as a moderator (.293, $p = .001 < .01$), and environmental dynamism as a moderator (.20, $p = .004 < .01$).¹

5. Discussion

Interest in the family–marketing interface has snowballed (e.g., Astrachan et al., 2018; Beck, Prügl & Walter, 2019; Astrachan & Botero, 2018; Botero, Astrachan & Calabrò, 2018; Lude & Prügl, 2018; Schellong et al., 2019), with particular attention given to family branding (Van Gils et al., 2019; Zanon et al., 2019). However, the rush to extol the benefits of the family–marketing interface has come at a cost its theoretical and conceptual development since the benefits of relying deeply on marketing resources to drive business activity are not clear, especially for innovation activity (e.g., Hamel & Prahalad 1994; Hughes et al., 2019; Kyriakopoulos et al., 2016; Tripsas & Gavetti 2000). Innovation is a special cause for concern since family firms often rely more on marginal gains from incremental innovation, “sticking to the knitting” rather than innovating radically and exploratively (Nieto et al., 2015; Hu & Hughes, 2020; Scholes et al., 2021). We investigated a broader categorization of marketing resources available to family businesses. We considered the impact of these resources on family owners' willingness to pursue radical innovation, depicting family-unique resources (i.e., family patient capital and family social capital) as boundary conditions altering a deleterious effect on the willingness to innovate radically. Our findings answer the conundrum of why family owners *do not* adopt a radical innovation strategy even when, *prima facie*, they appear to have sufficient resources to do so (De Massis et al., 2016; Scholes et al., 2021).

¹ Results available on request from the authors

We provide a model grounded in attention-based view logic that anticipates a constraining effect from marketing resources on family owners' willingness to pursue radical innovation. Leveraging the principles of focus of attention, situated attention, and structural distribution of attention, we propose boundary conditions grounded in family-unique resources and greater degrees of environmental dynamism that positively moderate this relationship. Three critical findings emerge. First, as feared, large stocks of marketing resources diminish family owners' willingness to pursue radical innovation. Second, as hoped, both family patient capital and family social capital ease the negative impact of marketing resources on family owners' willingness to pursue radical innovation. Third, family firms operating in more dynamic environments are incentivized to channel their marketing resources towards radical innovation rather than incremental gains.

Possessing large stocks of marketing resources diminishes the incentive for family firms to radically innovate, reaffirming concerns attributed to their non-family counterparts (Debruyne et al., 2010; Kyriakopoulos et al., 2016). Resources contain information that steers managerial attention (Joseph & Ocasio, 2012). Marketing resources are traditionally invested in and developed against legacy products and services that focus managerial attention on incremental gains. Because of this legacy of prior investment and the attachment present marketing resources have to current products and services, managers have little reason or willingness to absorb the risk and uncertainty inherent in a radical innovation strategy (De Massis et al., 2016; Scholes et al., 2021). Prior studies primarily focus on innovation as an outcome (Hu & Hughes, 2020), but doing so overlooks how resources shape the willingness to innovate radically in the first instance (Chrisman et al., 2015b).

Our findings challenge the rush to extol the benefits of investing heavily in marketing resources without understanding the broader system of effects. For instance, family branding matters for family firm success (Santiago et al., 2019; Van Gils et al., 2019; Zanon et al., 2019). However, when we refocus the dependent variable away from firm performance onto innovation, questions emerge about the utility of this strategy *in isolation*. At this point, we reveal a variety of nuances. First, family patient capital (Habbershon & Williams, 1999; Hoffman et al., 2006) and family social capital (Arregle et al., 2007; Herrero, 2018; Herrero & Hughes, 2019) represent two unique family business resources (Sirmon & Hitt, 2003) that incentivize shifts in managerial attention. Family patient capital orients family owners to invest in the long term. Those family firms bearing larger stocks of patient capital will be less concerned with short-term losses normally expected of

radical innovation. This speaks to the principle of focus of attention, moving from short-term (due to marketing resources) to the longer term (due to patient capital). Family social capital speaks to the principle of the structural distribution of attention as family businesses with larger stocks of family social capital will see family members share more knowledge and ideas among each other in the business and be better able to combine and use new knowledge productively. This, too, reorients managerial attention towards radical innovation. Second, greater degrees of environmental dynamism provide a family business with new information. Managerial attention represents noticing, encoding, interpreting, and focusing time and effort on strategic issues (Ocasio, 1997). Environmental dynamism defines an altogether different context for managers' choices and actions (Ocasio & Joseph, 2005). Relatively static environments offer little new information and thus have little impact on shifting managerial attention. Dynamic environments where the risks of obsolescence, changing customer perceptions, and competitor innovation are high, incentivize and compel a shift in managerial attention. We find this is to the benefit of a radical innovation strategy against a status quo of marginal gains.

5.1. Theoretical contributions

Our first contribution advances an attention-based theory of family firm innovativeness bringing theoretical completeness to arguments regarding marketing resources and their effects on family owners' willingness to pursue radical innovation. Scholars have long been puzzled by the circumstances surrounding why some family firms demonstrate a greater willingness to innovate than others and innovate in more high-risk and high-rewarded ways. Previous studies oftentimes have privileged explanations with family owners' desire to preserve non-financial wealth constraining family owners' desire to pursue innovation activities (e.g., Chrisman et al., 2016; Chua et al., 2018; De Massis et al., 2014). However, firm resources are ultimately the basis for innovation activities (Colombo, Franzoni & Veugelers, 2015). Scholars have realized that many family firms are still unwilling to radically innovate even when they seemingly possess the resources they appear to need for such endeavors (De Massis et al., 2016; Scholes et al., 2021). We provide this missing theory and offer a model accompanied by logic grounded in the attention-based view that predicts why marketing resources will diminish, rather than increase, family owners' willingness to pursue radical innovation. Our new theory resolves questions raised among family brand/image studies about its effects on strategic initiatives (e.g., Astrachan et al., 2018;

Botero et al., 2018). For instance, family image is cultivated within the family tradition, customer orientation, and family culture (Botero et al., 2018). Family owners are willing to rely on that family image to acquire benefits but avoid those activities that could harm the family image (Astrachan et al., 2018). Thus, family image reduces family owners' proactiveness in engaging with risk-taking (Astrachan et al., 2018). We contribute a new theory to explain that marketing and family resources act as attention-guiding mechanisms to explain why strategic decisions are a product of where managerial attention is directed.

Our second contribution reveals that family-unique resources can reshape the negative consequences of marketing resources for family owners' willingness to pursue radical innovation. Departing from convention, we account for resource ownership in our theory and model, identifying how family-unique resources redirect attention towards pursuing radical innovation. Family patient capital and social capital are two crucial family-unique resources (Habbershon & Williams, 1999), yet rarely are both resources evaluated for their potential impact on family firms' innovation strategy. Our theory draws out the attention-steering features of these family-unique resources and provides the missing theoretical rationale needed to interpret prior findings. This includes those positively relating family patient capital to family owners' risk-taking behavior (Hoffman et al., 2006; Sirmon & Hitt, 2003) and those associating family social capital with a higher flow of knowledge sharing and its use (Chirico & Nordqvist, 2010; Patel & Fiet, 2011) to behave entrepreneurially (Salvato et al., 2010). Moreover, our theory and model highlight the critical importance of considering these resources *concurrently* with other resources held by the firm to accurately predict family firms' (innovation) behavior. In isolation, any resource may exhibit attention-steering properties, but their concurrent effects matter to understanding heterogeneity among family firms in terms of their behaviors and outcomes. In sum, we provide theory and evidence for how family-unique resources can reshape the negative consequences of marketing resources for family owners' willingness to pursue radical innovation. These insights advance our stagnant understanding of resource orchestration in the family firm (Sirmon & Hitt, 2003) by relating the bundling of resources to attention-based logic.

We provide a test of our theory and model for our final contribution. By validating our theoretical model, we provide scholars with confidence in using attention-based logic to form predictions about family firm behavior (or lack thereof). By scrutinizing the potential for resources owned by the firm to steer the attention of family leaders to or from specific initiatives, we

highlight the urgency of auditing family business resources to evaluate how these resources might inadvertently constrain innovation strategy. Concurrently, we reveal an additional, externally-focused boundary condition, environmental dynamism, that further incentivizes a shift in family owners' attention and behavior and increases the utility of marketing resources. Therefore, we contribute new knowledge to explain family firm heterogeneity by understanding nuances beyond resource ownership. Our contributions explain why resource ownership or the primacy of affective endowments only partially explain family firms' innovation behavior (e.g., Chrisman et al., 2016; Chua et al., 2018; De Massis et al., 2014).

5.2. Implications for family business leaders

Radical innovation is the lifeblood of firms and vital to longevity. We advise family business leaders to audit the resource base of their firms to understand the ownership and stock of resources available for strategizing. Family owners and managers should evaluate carefully whether an overreliance on those resources has led to the premature rejection of a new (and more innovative) course of action (e.g., a willingness to pursue radical innovation). With specific reference to marketing resources and the results of this study, it is apparent that such a situation can arise. Accepting that resources possess intangible attention-steering properties provides managers with new knowledge to evaluate past decisions and reconsider future courses of action. This evaluation process will be essential to consider where investments are needed to change and challenge constraints on the firm's willingness to innovate. Family business leaders are also advised to carefully consider their family-unique resources and draw on these as mechanisms to reset managerial attention and leverage them as a launchpad for a new innovation strategy.

Families are strongly advised to be patient concerning their companies and respect the longitudinal nature of returns from innovation. That patience can moderate the adverse effects of marketing resources on willingness to pursue radical innovation is essential in maintaining attention on future outcomes and not relenting to short-termism in strategic behavior. We advocate similar argumentation around family social capital. Developing family social capital once again induces attention towards the longer-term radical innovativeness of the firm to overcome the adverse effects of marketing resources.

Environmental dynamism can gradually decrease customer interest in existing products and services, increasing the risk of obsolescence and threats to the survival of the family firm (Wang

& Chen, 2010). In such circumstances, conservative behavior could arise. However, managerial attention to environmental dynamism seems to, once again, accelerate willingness toward radical innovation by overcoming the limiting nature of marketing resources. As such, we advocate bravery on the part of managers in family firms to embrace environmental dynamism and, with their attention focused on that, to fuel radical innovation behavior by exploring means to capitalize on marketing resource stocks for this endeavor.

5.3. Implications for policymakers

Policymakers in high-growth economies, such as China, are advised to encourage exploration and radical innovation among family firms by creating conditions for such firms to thrive and be focused on innovation strategies. Specifically, we find that patience, social capital endowments, and a robust external environment act as attention-based catalysts of radical innovation in conjunction with marketing resources. Policies that advocate a positive culture of long-termism and the development of social ties provide a positive backdrop for family firms to succeed through developing radical innovations. Policies working against this and towards conservatism, then, must be downplayed.

5.4. Limitations and directions for future research

We apply the definition of manufacturing SMEs set by the Chinese government to specify our sample population correctly. However, these SMEs are defined differently in terms of size (number of employees) and revenue (typically being much larger) than their European counterparts (defined as those firms with up to 249 employees with an annual turnover of less than €50m) (Department for International Trade, 2021). However, we do not believe this difference has much bearing on the generalizability of our results. Specifically, we controlled for firm size (number of employees) and firm past performance (financial performance including revenue), and neither had any statistically significant effect in our model. Therefore, we do not believe differences in the way SMEs are defined influence the generalizability of our results.

Second, we undertook several efforts to remedy the classic limitations of survey-based studies, including collecting data on independent and dependent variables in separate surveys at two different time points and collecting data from two respondents per firm. However, we recommend that scholars collect additional (including objective) data where possible and available and from different geographical regions in China, Asia, and elsewhere to validate our theoretical predictions

further. We do not anticipate that our theory is sensitive to regional differences per se because our theory is predominantly based on resources containing information and incentives that steer attention toward or away from particular strategic choices about innovation (e.g., Kyriakopoulos et al., 2016). However, different cultures exhibiting more (or less) environmental turbulence or institutional instability might yet favor allocating resources towards particulate types of innovation strategies or entrepreneurial behaviors. Because of this, we encourage scholars to include additional environmental moderators in future revisions of our theoretical framework and tests of its broader generalizability.

Third, our theory places a premium on marketing and family-unique resources. However, family goals can also bear on innovation activities (Hu & Hughes, 2020). Family governance can also affect the willingness to invest in explorative or exploitative innovation strategies (Scholes et al., 2021). A concurrent consideration of goals may help scholars understand the boundary conditions posed by resource stocks and their attention-guiding properties. Third, other resources or strategic capital (cf. Hughes & Morgan, 2008) could well be at play here. By extension, the role of marketing capabilities (and others) is worthy of further investigation, given that we do not consider capabilities in our model.

5.5. Conclusion

Our study brings greater completeness to existing arguments on family owners' willingness to pursue radical innovation and a cautionary note that our knowledge of the family–marketing interface, while burgeoning, is noticeably underdeveloped. We extend this literature by highlighting the need to understand the family firm's broader corpus of marketing resources and its interaction with family-unique resources to more accurately theorize when and why family firms may behave in particular ways. We offer three contributions to an attention-based theory of family firm radical innovation behavior and the family–marketing interface. We urge scholars to continue delving deeper into the attention steering, signaling the nature of resources and their consequences for family businesses.

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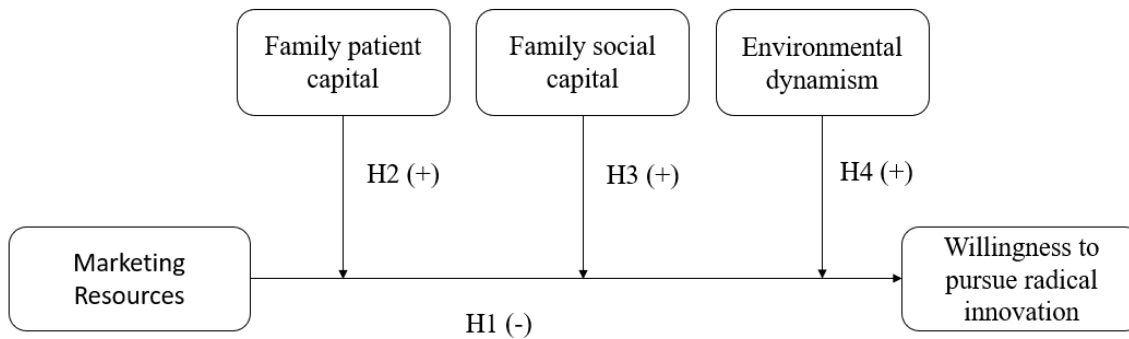
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Figure 1. Theoretical Framework and Hypotheses



Control: owners' age, firm age, firm size, firm past performance

Table 1 Description of the Sample

Firm Characteristics		Sample N=207
Firm size	Small firms between 20 and 300 (Annual total revenue is between 3,000,000 and 20,000,000 yuan in the past two years)	38.6%
	Medium firms between 300 and 1000 (Annual total revenue is between 20,000,000 and 40,000,000 in the past two years)	61.4%
Industry type	Food processing and food and beverage manufacturing	7.9%
	Clothing, shoes and hats, leather manufacturing	2.0%
	Wood processing and wood, bamboo, rattan, palm, grass products, furniture manufacturing	8.9%
	Paper and paper products, printing, culture, education and sports, office supplies manufacturing	1.0%
	Non-metallic mineral products industry (including cement, glass, ceramics, refractories, etc.)	9.4%
	Ferrous metal, non-ferrous metal smelting, and rolling processing industry	4.0%
	Metal products industry	28.7%
	Petroleum processing, coking processing industry	1.0%
	Chemical raw materials and chemical products manufacturing	4.0%
	Pharmaceutical manufacturing	1.0%
	Rubber products, plastic products industry	3.0%
	General equipment and special equipment manufacturing industry	6.4%
	Transportation equipment manufacturing industry	8.4%
	Electrical machinery and equipment, cable manufacturing	5.0%
Communications equipment, computers and other electronic equipment manufacturing	5.0%	
Instrumentation manufacturing	1.5%	
Handicrafts and other manufacturing	2.5%	

Table 2. Constructs, Measurement, and Factor Loadings

Construct	Measurement	Factor Loading
Marketing Resources		
Market Knowledge <i>Kyriakopoulos et al. (2016)</i>	I) Knowledge of competitors in this market.	.852
	II) Experience in doing business in this market.	.848
	III) Information and intelligence about the marketplace.	.903
	IV) Knowledge of customers in this market.	.864
	V) Knowledge of the channel in this market.	.884
Reputation Resources <i>Kyriakopoulos et al. (2016)</i>	I) Brand name awareness	.903
	II) Distinctive of our brand images	.937
	III) Appeal of our brand 'personality.'	.925
	IV) The strength of our brand image	.905
Relational Resources <i>Kyriakopoulos et al. (2016)</i>	I) The strength of existing customer/channel relationships	.891
	II) Quality of customer/channel relationships	.916
	III) Duration of relationships with current customers/channel	.921
	IV) The closeness of existing customer/channel relationships	.894
Technological Resources <i>Kyriakopoulos et al. (2016)</i>	I) Technical and scientific knowledge and information relevant to the industry	.806
	II) Patented knowledge relevant to the industry	.911
	III) New technical and scientific discoveries relevant to the industry	.910
	IV) Relevant discoveries by our technical and scientific personnel	.757
Family Resources		
Family Social Capital <i>Chirico and Salvato (2014)</i>	I) Family members spend time together on social occasions	.800
	II) Family members maintain close social relationships	.836
	III) Family members can rely on each other without any fear that some of them will take advantage even if the opportunity arises	.788
	IV) Family members always keep the promises they make to each other	.865
	V) Family members share the same ambitions and vision	.813
	VI) Family members are enthusiastic about pursuing the collective goals and missions of the whole organization	.767
Family Patient Capital <i>Liu et al. (2015); Sirmon and Hitt (2003); Bicen and Johnson (2015); Deeg and Hardie (2016)</i>	I) Among the number of previous investment cases, family investors had a strong desire to acquire high performance out of a venture investment within the first 5 years.	.757
	II) Among the number of previous investment cases, if the venture investment has been counted as promising in future, family investors are willing to accept financial losses within the first 5 years	.826
	III) Among the number of previous investment cases, family investors will exit if the benefits acquired from a venture investment did not meet their expectations (financial, marketing, and sales performance) within the first 5 years	.812
	IV) Among the number of previous investment cases, family investors can accept the intended holding period of an extended multi-year or indefinite duration	.846

	V) Among the number of previous investment cases, family investors prefer to invest in long-term projects (more than 5 years of return) than investing in short-term ones	.840
	VI) Among the number of previous investment cases, family investors were reluctant to exit an investment in spite of disagreement with the non-family shareholders	.808
Environmental Dynamism <i>Fang (2008)</i>	I) In your current market, customers' preferences change quickly over time	.898
	II) Market demand and consumer tastes in your market are unpredictable	.960
	III) Actions of competitors in the market have been highly unpredictable	.936
Family Owners' Willingness to Pursue Radical Innovation <i>Alexander et al. (2008)</i>	I) We feel quite certain of the benefits we could expect to get if we adopted a radical innovation	.862
	II) We are quite sure of what the relevant trade-offs are among the costs and benefits of launching a new product	.934
	III) We will have to change the firms' behavior significantly to attain the potential benefits of launching a new product	.940
	IV) Launching a new product would allow our firm to acquire the competitive advantage that our firm cannot easily get now	.918
Firm Past Performance <i>Santos and Brito (2012)</i>	I) Our firm has achieved firm profit goals over the past 2 years	.861
	II) Our firm has achieved a better return on investment over the past 2 years	.939
	IV) Our firm has increased annual turnover over the past 2 years	.961
	V) Our firm has increased total income over the past 2 years	.923
Items for Robustness Check Innovativeness <i>Filser et al. (2018)</i>	I) We consider ourselves an innovative company	.914
	II) Our business is often first to market with new products and services	.948
	III) Competitors in this market recognize us as leaders in innovation	.935

Note. Market resources items were measured by 7-point Likert scales ranging from low degree (1) to high degree (7). Family patient and social capital items are measured by 7-point Likert scales ranging from strongly disagree (1) to strongly agree (7).

Table 3. Composite Reliabilities (CR), Average Variance Extracted (AVE), Correlation Matrix, and Descriptive Statistics of Measures

	1	2	3	4	5	6	7	8	9	10	11	12
1. Market Knowledge	1											
2. Reputational Resources	.551**	1										
3. Relational Resources	.770**	.474**	1									
4. Technological Resources	.618**	.584**	.557**	1								
5. Family Patient Capital	.459**	.380**	.444**	.382**	1							
6. Family Social Capital	.473**	.361**	.461**	.306**	.649**	1						
7. Environmental Dynamism	.404**	.311**	.393**	.273**	.717**	.613**	1					
8. Willingness to Pursue Radical Innovation	.466**	.328**	.473**	.367**	.679**	.638**	.701**	1				
9. Owner Age	.174**	.186**	.121*	.146**	.103*	.108*	.076	.051	1			
10. Firm Age	.344**	.337**	.260**	.348**	.238**	.328**	.152**	.153**	.300**	1		
11. Firm Size	.186**	.146**	.153**	.206**	.126*	.140**	.082	.107*	.163**	.250**	1	
12. Firm Past Performance	.048	.070	.053	.104*	.055	-.011	.004	.038	.008	-.032	.259**	1

CR	.940	.955	.948	.911	.909	.912	.952	.953	N/A	N/A	N/A	.942
AVE	.871	.918	.906	.849	.817	.821	.868	.914	N/A	N/A	N/A	.767
Mean	5.802	5.133	5.861	5.242	5.096	5.220	5.069	5.515	45.660	19.700	72.870	3.926
SD	.974	1.375	.919	1.362	1.317	1.272	1.678	1.243	8.873	9.629	60.722	1.329

Note. * $p < .05$; ** $p < .01$. Figures on the diagonal are square roots of AVE, which indicate discriminant validity when greater than the individual correlations.

Table 4. SEM Results

Variable Relations	Hypothesis	Standardized Estimates	S. E	C.R	P
<i>Control variables</i>					
Owner Age → Willingness to Pursue Radical Innovation		-.036	.005	-.971	.331
Firm Age → Willingness to Pursue Radical Innovation		-.082	.005	-1.952	.051
Firm Size → Willingness to Pursue Radical Innovation		.002	.001	.040	.968
Firm Past Performance → Willingness to Pursue Radical Innovation		.004	.035	.099	.921
<i>Independent variable</i>					
Marketing Resources → Willingness to Pursue Radical Innovation	H1 (-)	-.427***	.064	-6.759	.000
<i>Moderator variables</i>					
Family Patient Capital → Willingness to Pursue Radical Innovation		-.084	.047	-1.833	.067
Family Social Capital → Willingness to Pursue Radical Innovation		.137**	.044	2.640	.008
Environmental Dynamism → Willingness to Pursue Radical Innovation		-.078	1.019	-1.691	.091
Marketing Resources * Family Patient Capital → Willingness to Pursue Radical Innovation	H2 (+)	.522***	.012	5.319	.000
Marketing Resources * Family Social Capital → Willingness to Pursue Radical Innovation	H3 (+)	.254**	.011	2.725	.006
Marketing Resources * Environmental Dynamism → Willingness to Pursue Radical Innovation	H4 (+)	.386***	.007	5.489	.000

Note. $N = 407$, * $p < .05$; ** $p < .01$, *** $p < .001$