



# Unveiling new opportunities: A mixed gamble approach to external search breadth within family firms

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## ABSTRACT

This study introduces the idea that external search breadth constitutes a 'mixed gamble' where family firms face a unique trade-off between financial and socioemotional wealth (SEW) gains and losses. Considering the peculiarities of family firms, we examine the distinctive influence that two sources of family firm heterogeneity, namely family management and family generational stage, have on the mixed gamble of external search breadth. In addition, we also investigate export propensity as a contingent factor with the potential to alter the manners in which family management and family generational stage affect the external search breadth mixed gamble. Using a longitudinal sample of 1240 Spanish family firms, we empirically find that family firms with greater family management and in first-generation attach more importance to current SEW losses than to potential financial and SEW gains, resulting in lower external search breadth. Furthermore, we find that export propensity alters family managers' mixed gamble of external search breadth, so that current SEW losses become less pronounced in the financial and SEW trade-off, which leads to a higher external search breadth.

## 1. Introduction

In today's highly competitive world, external search breadth – the variety of external knowledge sources that a firm relies on to boost its innovation activities (Laursen and Salter, 2006) - has become an indispensable imperative for firms seeking not only to survive but also to thrive (Ardito and Messeni Petruzzelli, 2017; Cruz-González et al., 2015). It is not wonder, therefore, that leading scholars from different mainstream disciplines have extensively studied the antecedents, such as collaborative networks or specific CEO characteristics (Ahn et al., 2016; Dahlander et al., 2016), and the implications, in terms of innovation outcomes and knowledge transfer (Ardito and Messeni Petruzzelli, 2017; Leiponen and Helfat, 2010), of external search breadth (Bigliardi et al., 2020; Greco et al., 2022).

Notwithstanding this increasing trend, very little is still known about the external search breadth behaviour of family firms, even though they form the backbone of economies worldwide (Martínez-Alonso et al., 2022a). The relevance of studying external search breadth in family firms lies in their distinctive idiosyncrasies, such as long-term orientation, commitment to the family legacy, and emotional attachment to the firm, which influence their innovation strategies and outcomes (Gómez-Mejía et al., 2014; Magistretti et al., 2019). Family firms may

exhibit limited openness to external search breadth due to concerns about control, confidentiality, and reputation (Alberti et al., 2014; Feranita et al., 2017). However, their social capital and family networks may provide valuable opportunities to access external knowledge and resources, thereby facilitating innovation (Amato et al., 2022; Casprini et al., 2017). In view of the above, external search breadth might be complex and paradoxical in family firms.

External search breadth, as with other strategic choices, has both benefits and challenges. On one hand, family firms may engage in external search breadth because it enhances their technological knowledge, capabilities and innovation productivity (Martínez-Alonso et al., 2022b; Röd, 2019). On the other hand, family firms may be reluctant to external search breadth due to potential drawbacks such as unwanted knowledge spill-overs, the risk of opportunistic behaviour or the absorptive capacity problem (Brinkerink, 2018; Pellegrini and Lazzarotti, 2019). Consequently, external search breadth can be regarded as a mixed gamble, where mixed gamble is understood as a choice that implies the likelihood of both winning and losing (Bromiley, 2009). Adopting the mixed gamble approach allows to address the paradox surrounding family firms' external search breadth. Moreover, when making strategic choices, family firms pursue not only financial but also socioemotional wealth (SEW) goals (Chrisman and Patel, 2012; Classen

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et al., 2012). SEW refers to the non-financial aspects of the firm that satisfy the family's social and affective needs (Gómez-Mejía et al., 2007). In this regard, we contend that family firms weigh potential financial and SEW gains versus financial and SEW losses when pursuing external search breadth (Gómez-Mejía et al., 2018).

Concerning prior research on family firms' external search breadth, most studies have primarily focused on comparing family to non-family firms, overlooking the idea that family firms are a heterogeneous group and that external search breadth may therefore vary distinctively within this type of firms (Lambrechts et al., 2023; Rondi et al., 2021). The heterogeneity observed among family firms may explain the contradictory or inconclusive findings in studies examining the impact of family influence on external search breadth (Brinkerink, 2018; Gjergji et al., 2019). Consequently, it is essential to integrate family-related aspects into management research to elucidate their distinct behaviours in strategic decision making (Alayo et al., 2022a). In an effort to further explore this relatively nascent but growing phenomenon, we attempt to build a conceptual model aimed at explaining why certain family firms exhibit a reluctance toward external search breadth while others embrace it. Specifically, we focus on two family-specific characteristics: family management and family firm generational stage (Gjergji et al., 2019; Röd, 2019). On the one hand, family management, with its decision-making power and strategic goal-setting authority (Fries et al., 2021), plays a vital role in making decisions that directly affect the pursuit of both SEW preservation and financial objectives (e.g., Martínez-Romero et al., 2023). Recognising family management as a source of heterogeneity highlights the influence of the family in shaping firms' behaviour and goals (Rovelli et al., 2020; Sánchez-Famoso et al., 2017), including external search breadth. On the other hand, the family firm generational stage is another important source of heterogeneity that can influence family firms' preferences for SEW and financial goals (e.g., Chirico and Kellermanns, 2022). As family firms transition across generations, they face different challenges and opportunities. Each family generational stage is characterized by distinct elements, such as resources, attributes, and values (Capolupo et al., 2022; Diéguez-Soto et al., 2022), all of which contribute to shaping the firm's behaviours and choices regarding external search breadth. Therefore, we contend that the external search breadth mixed gamble may vary in family firms depending on family management and family generational stage, as the weight that family firms place on potential SEW and financial gains and losses arising from search breadth is expected to be altered.

Furthermore, recent research emphasizes the importance of investigating boundary conditions that influence the effects of 'mixed gamble' strategies, such as external search breadth, within family firms (Cruz and Justo, 2017; Gómez-Mejía et al., 2014; Kim et al., 2023; Peláez-León and Sanchez-Marín, 2023). In this context, previous studies have pointed out that family firms often adopt internationalization strategies to expand their knowledge search channels and improve their innovative performance (Boellis et al., 2016; Sánchez-Marín et al., 2020). Among these strategies, export propensity has received considerable attention due to its low risk, high flexibility, low resource commitment and its potential to facilitate learning from diverse search channels (Alayo et al., 2022a; Cirillo et al., 2022). Particularly, there is evidence that the impact of family managers and generations on family firms' strategic choices, such as innovation, may depend on family firms' trading activities (Freixenet et al., 2018; Sánchez-Marín et al., 2020). Therefore, we adopt a mixed gamble framework to examine the manner in which export propensity may alter how different family management configurations and family generational stages prioritize SEW or financial gains and losses, influencing family firms' external search breadth.

Using a unique sample of Spanish family firms, we test our hypotheses on the relationships of family management and family generational stage with external search breadth and the moderating influence of export propensity. Our study offers several contributions to the literature. First, it contributes to the research on knowledge search in family firms (Ardito and Capolupo, 2023; Gusenbauer et al., 2023) by

responding to the calls for research on the antecedents of external search breadth in such firms (Bigliardi and Galati, 2018; Gjergji et al., 2019). In this regard, our study demonstrates that both, family management and family generational stage, distinctively influence external search breadth. Second, by focusing on a longitudinal sample composed of exclusively family firms, our study also contributes to the analysis of family firm heterogeneity with respect to external search breadth (Gjergji et al., 2022; Pellegrini and Lazzarotti, 2019). Third, to the best of the authors' knowledge, this is the first study applying the mixed gamble approach (Gómez-Mejía et al., 2014) to elucidate the family firm search breadth. In doing so, we also contribute to the stream of research that seeks to advance the SEW literature (Gu et al., 2019) by investigating how different SEW gains and losses influence such a unique family firm strategic behaviour. Finally, our study also adds to family firm internationalization literature (Arregle et al., 2021) by considering export propensity as a moderating variable that alters family managers' mixed gamble of external search breadth.

## 2. Theoretical background

### 2.1. Family firms and external knowledge search

Firms often lack the necessary technological resources and capabilities within their boundaries (Ardito and Messeni Petruzzelli, 2017; Ferreras-Méndez et al., 2015). Therefore, they need to rely on external sources of knowledge and technologies to facilitate the development of innovation activities (Chesbrough, 2003; West and Bogers, 2014). Previous research has often revolved around two external knowledge search strategies (Gusenbauer et al., 2023; Laursen and Salter, 2006): external search breadth (number of external sources/actors used, e.g., suppliers, customers, etc) and external search depth (intensity of collaboration with each source/actor). Both knowledge search strategies, i.e., breadth and depth, have aroused considerable interest in the family firm research field. This increased awareness among family firm scholars has been motivated primarily, but not exclusively, by the fact that family involvement in the firm may have a distinctive influence on the breadth and depth of firms' search behaviour, due to, among other reasons, their unique ownership structure, long-term orientation, and emphasis on social capital (Brinkerink, 2018; Magistretti et al., 2019). Consequently, the involvement of family members in the firm may have a unique impact on external knowledge search and on the ability to foster innovation (Casprini et al., 2017; Gjergji et al., 2022).

While some studies investigate external search depth (e.g., Lazzarotti et al., 2017), others take the external search breadth perspective to explore how family-specific characteristics shape open innovation strategies (Alberti et al., 2014; Classen et al., 2012). The remainder of our paper follows the latter perspective to provide a more comprehensive overview of the existing differences in external search breadth, a key factor for successful innovation performance in family firms (Alberti et al., 2014; Nieto and Santamaría, 2007; Röd, 2019). However, and surprisingly, research on external search breadth strategies undertaken by family firms remains scarce (Casprini et al., 2017; Feranita et al., 2017; Gjergji et al., 2019). Indeed, scholars are still divided between those who suggest that family firms are profoundly averse to external search breadth (Alberti et al., 2014; Classen et al., 2012; Lazzarotti et al., 2017) and those who point out that such firms pose a promising arena for external search breadth (De Massis et al., 2015; Llach and Nordqvist, 2010; Röd, 2019). This heated debate has prompted us to come up with a theoretical framework to help elucidate why some family firms are mainly concerned with the potential costs of external search breadth, while others focus more on its benefits. To do so, we will blend arguments from the socioemotional wealth (SEW) perspective (Gómez-Mejía et al., 2007) and the mixed gamble approach (Gómez-Mejía et al., 2018).

## 2.2. External search breadth as mixed gamble

The SEW perspective, which has its roots in the behavioural agency model (Wiseman and Gómez-Mejía, 1998), argues that family firms' strategic behaviour is highly motivated by loss aversion relative to their stock of SEW (Gómez-Mejía et al., 2007). This includes non-economic family-centred goals, such as family's social status in the community, family members' identification with the firm, and perpetuation of the family dynasty (Berrone et al., 2012; Chrisman et al., 2012). According to this perspective, family firms are loss averse when it comes to their SEW and will therefore act to preserve or enhance SEW at any opportunity (Martin and Gómez-Mejía, 2016; Martínez-Romero and Rojo-Ramírez, 2016). Despite its popularity, this perspective mostly focuses on the potential SEW losses that might arise from making risky strategic decisions, such as external search breadth, while neglecting the potential SEW and financial gains that could result from such strategies (Bromiley, 2009, 2010). To address these limitations, literature has begun to draw on the mixed gamble approach, as it offers the opportunity to evaluate not only the potential SEW losses, but also the potential SEW and financial gains of family firms' strategic decisions (Bauweraerts et al., 2020a; Gómez-Mejía et al., 2018). In other words, family firms confront the quandary of making strategic choices by weighing anticipated losses and gains in both SEW and financial terms, which is crucial to explain decision-makers' behaviour and related outcomes.

Existing studies indicate that external search breadth is expected to result in both positive and negative returns for the firm (e.g., Cruz-González et al., 2015; Martínez-Alonso et al., 2022a). Consequently, external search breadth itself can be regarded as a mixed gamble, where future financial gains from successful external search breadth are weighed versus the prospective financial losses related to failed search breadth. In this sense, external search breadth is likely to be associated with desirable outcomes, such as greater diversity of knowledge, skills and expertise and higher innovation productivity, which is conducive to increased financial gains (Ferras-Méndez et al., 2015; Sisodiya et al., 2013). Nevertheless, external search breadth is not a panacea and may also entail certain challenges, such as unwanted knowledge spill-overs, the risk of opportunistic behaviour or the absorptive capacity or timing problems, that may threaten future financial gains (Fu et al., 2019; Hsieh et al., 2018).

At the family firm level, family business members can also see both beneficial and detrimental impacts of external search breadth on the SEW endowment. On the one hand, family firms may perceive that external search breadth can involve prospective SEW gains, as search breadth may provide greater opportunities to have strong social ties and be more visible to key stakeholders, such as suppliers and customers, thus increasing the likelihood of long-term survival (Mazzelli et al., 2018; Miller and Le-Breton-Miller, 2005). On the other hand, family firms seem to be reluctant to external search breadth, as it means letting new players (e.g., suppliers) from outside the firm's sphere gain the ability to exert some control over innovation strategies (De Massis et al., 2015; Pellegrini and Lazzarotti, 2019). Family firms may then perceive external search breadth as a potential disruption to their current SEW. Therefore, external search breadth would imply a difficult trade-off or "mixed gamble" for family firms involving financial and SEW losses and gains (Gómez-Mejía et al., 2018; Kotlar et al., 2018).

Furthermore, scholarly research suggest that family firm heterogeneity plays a critical role in explaining disparities in strategic choices (Alessandri et al., 2018; Bauweraerts et al., 2020b; Cambrea et al., 2022), including external search breadth (Gjergji et al., 2019; Rondi et al., 2021). Specifically, the family management and the family generational stage appear to be two heterogeneous aspects of family firms with substantial repercussions on SEW risk perceptions and/or the pursuance of family priorities (Alessandri et al., 2018; Bauweraerts et al., 2020b; Chirico and Kellermanns, 2022; Martínez-Romero et al., 2023). Put differently, each of the above family firm heterogeneity

sources is likely to have an impact on the prioritisation of SEW over financial gains or losses and also on the family's commitment to SEW preservation when making strategic choices. Hence, this paper draws on the mixed gamble approach to investigate how family firm heterogeneity, via family management and family generational stage, can lead to variations in external search breadth.

## 3. Hypotheses development

### 3.1. Family management and the external search breadth mixed gamble

A distinctive trait of family firms is the involvement of family members in management, i.e., family management, as it enables the owning family to play a significant role in the firm's decision-making processes, and ensures that the family's interests and values are represented in the firm's strategic direction (D'Allura, 2019; Martínez-Alonso et al., 2022c). Indeed, very recent studies are revealing that family management has significant implications for the perceived risk to SEW and financial gains, as well as for the family's ability to guide operational and strategic choices to preserve SEW and family interests (Bauweraerts et al., 2020a; Martínez-Romero et al., 2023). For example, family firms with more family members in management are expected to take more actions that favour their interests, such as strengthening the family's influence on day-to-day operations, resource allocation decisions, and preserving the firm for future generations (Matzler et al., 2015; Sánchez-Famoso et al., 2017), resulting in more SEW protection (Migliori et al., 2020). In this light, family managers face a mixed gamble, whereby they trade-off financial and SEW gains versus financial and SEW losses. Thus, in line with the above reasoning, the mixed gamble of external search breadth may vary within family firms depending on the number of family managers and, consequently, lead to heterogeneity in family firms' search breadth. Accordingly, clarifying how the presence of family managers may influence the weighting of SEW and financial gains in the decision-making can help us to better understand the role of family managers in fostering or limiting external search breadth.

Family managers are inclined to exhibit a rather conservative behaviour with respect to external search breadth (Gjergji et al., 2019), suggesting that they choose to be risk-averse by adopting decisions that entail lower as opposed to higher search breadth (Alberti et al., 2014; Bigliardi and Galati, 2018; Classen et al., 2012; Feranita et al., 2017). As family management increases, family managers might pursue more family-centred strategies as a result of their mixed gamble (Martínez-Romero et al., 2023), where they prioritize keeping family control and influence and altruistic behaviours through, for example, nepotistic hiring (Block et al., 2013; Jain et al., 2021), over preferences that could bring prospective SEW and financial gains, such as creating successful and long-standing ties with distinct stakeholders (De Massis et al., 2015; Miller and Le-Breton-Miller, 2005). In such a case, safeguarding family influence plays a crucial role in the decision-making process, and potential SEW losses from reduced family control may be magnified (Berrone et al., 2012). This greater concern for preserving family control and influence can potentially clash with external search breadth, which requires much more external resources (e.g., human capital), and involves ceding part of the product's technological path to external actors (Gómez-Mejía et al., 2014; Pellegrini and Lazzarotti, 2019), forcing family managers to step out of their 'comfort zone' (Brinkerink and Bammens, 2018; Guenther et al., 2023).

An increase in the number of family managers may also lead family firms to be more cautious about external search breadth due to the potential knowledge leakage (Feranita et al., 2017). In this sense, family managers would be forced to disclose confidential firm-specific information such as know-how and technologies (Cassia et al., 2012), putting pressure on firm survival and family harmony (Berrone et al., 2012; Le Breton-Miller and Miller, 2013). Similarly, family managers' command may be threatened when confronting external search breadth

(Vandekerckhof et al., 2015), as the latter requires the empowerment of qualified experts (usually not available within the family) with the technical training to handle these strategic choices (Cassia et al., 2012; Kotlar et al., 2014). In this respect, the common lack of technical competencies in family firms, such as absorptive capacity (Brinkerink et al., 2017; Zahra, 2012), may amplify the cognitive limitations of family managers to acquire and recombine knowledge from different external sources. This, coupled with the fact that many innovative ideas may come at the wrong time (timing problem) or receive insufficient attention (attention allocation problem) (Ardito and Messeni Petruzzelli, 2017; Laursen and Salter, 2006), compounds the challenge for family managers to extract innovation value from external search breadth (Nieto et al., 2015; Pellegrini and Lazzarotti, 2019).

In addition, the not-invented-here syndrome (Katz and Allen, 1982), a negative attitude towards new ideas or inventions (Antons and Piller, 2015), which is prevalent in family firms due to family managers' psychological biases towards external knowledge inputs (König et al., 2013), may be exacerbated when engaging in search breadth. The foundations of the family's SEW identity may also be at risk when expanding knowledge sources, as the association of the family name with the firm's products may potentially be blurred by allowing other actors to take control of the innovation process (Kotlar et al., 2013). In family managers' eyes, this action may be perceived as a loss of SEW due to the dilution of the family domain (Martínez-Alonso et al., 2022a), possibly increasing their reluctance to search breadth.

Taking all these arguments into account, we argue that greater family management implies that family firms are more risk averse and thus tend to "harvest rather than build" (Gómez-Mejía et al., 2022). As such, family firms with a higher number of family managers are more likely to sacrifice potential financial and SEW gains of external search breadth due to the potential loss of their current SEW (i.e., diluted family control), leading to lower external search breadth. Thus, we postulate the following hypothesis:

**H1.** Family firms with greater family management have a lower external search breadth

### 3.2. Family firm generational stage and the external search breadth mixed gamble

In a similar fashion, the family firm generational stage, understood as the generation that control and manages the firm (Chirico and Kellermanns, 2022; Diéguez-Soto et al., 2022), represents another family-specific characteristic that could potentially influence the mixed gamble of external search breadth within family firms. In this sense, the generational stage is conceived as a relevant influencer on the needs of family firms with respect to their strategic decisions (Sánchez-Marín et al., 2020; Sciascia et al., 2014), mainly due to the particular knowledge endowments and the patterns of emotional relationships that characterize family members across generations (Alayo et al., 2022a; Gersick et al., 1997). Accordingly, family firms in different generational stages have distinct priorities in terms of SEW and financial goals (Le Breton-Miller and Miller, 2013). Specifically, family firms' preferences usually change as they evolve from first-generation, when they prioritize SEW preferences, such as strong sense of identification and emotional attachment (Gómez-Mejía et al., 2011; Sciascia et al., 2014), to later generations, when financial considerations tend to move to the forefront (Chirico and Kellermanns, 2022; Gersick et al., 1997). In this regard, family firms at different generational stages face a mixed gamble in which they have to counterbalance SEW and financial gains and losses (Bauweraerts et al., 2020a; Diéguez-Soto et al., 2022). Therefore, based on the mixed gamble approach, we stated that the generational stage influences the weighting that family firms attach to potential SEW and financial gains and losses derived from external search breadth.

On the one hand, first-generation family firms are characterized by avoiding risky and hazardous decisions (Gómez-Mejía et al., 2007,

Gómez-Mejía et al., 2011), such as those related to external search breadth, as they normally adopt conservative strategies that prioritize non-financial outcomes over financial gains, to preserve the family SEW (Chirico and Kellermanns, 2022; Martínez-Romero and Rojo-Ramírez, 2017). Maintaining family control and influence, is a main concern for first-generation family firms (Gómez-Mejía et al., 2007; Muñoz-Bullón et al., 2018), which usually have a long-term orientation and wish to transfer a robust business to subsequent generations (Le Breton-Miller and Miller, 2013; Martin and Gómez-Mejía, 2016; Michiels et al., 2015). This emphasis on SEW priorities might collide with the engagement in external search breadth, as it may imply, for example, ceding part of innovation processes to be led by external partners (e.g., research centres) or being economically or technologically dependent on such partners (Cassia et al., 2012; Pellegrini and Lazzarotti, 2019), aggravating the not-invented-here syndrome (Katz and Allen, 1982) of first-generation family firms, which in turn, will be detrimental to family control and influence. Moreover, first-generation family firms are known for exhibiting a high degree of identification to their businesses (Berrone et al., 2012; Sciascia et al., 2014), evidenced for example, through a shared name between the family and the firm (Berrone et al., 2012; Zellweger and Dehlen, 2012). The higher the family members' identification with the firm, the greater the importance of SEW priorities in strategic decisions (Cabrera-Suárez et al., 2014; Martínez-Romero and Rojo-Ramírez, 2016). Therefore, first-generation family firms will avoid the interference of external innovation partners, which, although could bring prospective financial gains, undermine the association of the family name with the firm's products (Kotlar et al., 2013). Furthermore, the relevant emotional attachment of first-generation family firms is related to a high degree of authority and direct supervision (Sonfield and Lussier, 2004), being external partners perceived as a threat (Muñoz-Bullón et al., 2018). Besides, timing or attention allocation problems (Ardito and Messeni Petruzzelli, 2017; Laursen and Salter, 2006) arising from the dependence on external innovation partners, may also be considered as potential hazards for the emotional attachment of first-generation family firms. As a result, first-generation family firms will avoid external search breadth, which may ultimately imply higher potential SEW losses from reduced family control and influence, identification and emotional attachment, than potential financial gains.

On the contrary, later generation family firms have a more innovation-oriented culture (Casillas et al., 2010; Chirico and Kellermanns, 2022), to the extent that as firms advance through generations, the overlap between family wealth and firm equity get lowers, and the tendency for family loss aversion is likely to be weakened (Zellweger and Dehlen, 2012), giving rise to higher family firms' propensity to bear risky decisions, such as external search breadth. As family firms evolve from first to later generational stages, SEW concerns tend to weaken, while financial considerations acquire more relevance (Corbetta and Salvato, 2012; Gómez-Mejía et al., 2007). In this regard, in later generation family firms, family control and influence becomes more diluted (Voordeckers et al., 2007) due to the coexistence of multiple family branches (Le Breton-Miller and Miller, 2013), being family members more willing to develop external search breadth in order to obtain financial returns (Alberti et al., 2014; Martínez-Alonso et al., 2022b). Moreover, the identification of family members with the firm and the emotional attachment of later generation family firms also tend to diminish (Comino-Jurado et al., 2021), while there is an increasing necessity of ensuring a healthy and wealthy business to maintain the family dynasty and preserve its legacy (Muñoz-Bullón et al., 2018). Consequently, later generation family firms will be more open-minded towards innovation activities (Sánchez-Marín et al., 2020) and are expected to enhance their technical competencies, thereby developing higher absorptive capacity than first-generation family firms (Chirico and Salvato, 2016; Pütz and Werner, 2023). Therefore, later generation family firms will be more willing to engage in external search breadth to the extent that potential financial gains from such innovation strategies are likely to be more prevalent than potential derived SEW losses.

As such, first-generation family firms are more likely to sacrifice potential financial gains from external search breadth to avoid potential SEW losses, resulting in decreased search breadth. Thus, we postulate the following hypothesis:

**H2.** First-generation family firms have a lower external search breadth than later generation family firms.

### 3.3. *The moderating influence of export propensity*

The extant literature has increasingly stressed the need to explore the boundary conditions that can alter family firms' mixed gamble strategies (Cruz and Justo, 2017; Gómez-Mejía et al., 2014; Kim et al., 2023), such as external search breadth. There is evidence from the internationalization literature that export propensity can prompt family firms to shift their emphasis between SEW and financial gains (Alessandri et al., 2018; Miroshnychenko et al., 2023; Kraus et al., 2016). Thus, we examine export propensity as a moderating factor that will allow us to gain deeper insights into the specific circumstances under which family firms shape their external search breadth mixed gamble.

Export propensity, denoting a firm's willingness to sell its products or services in foreign markets, is crucial for international trade and economic growth (Alos-Simo et al., 2023). For family firms looking to expand into international markets, exporting is the primary strategic option due to its low risk, high flexibility and low resource commitment (Alayo et al., 2022a; Cirillo et al., 2022). By engaging in exporting, family firms can tap into foreign agents' market and technological knowledge, thereby enhancing their capacity to explore new ideas and expertise through various search channels (Monreal-Pérez et al., 2012; Smith, 2014). However, along with its benefits, export propensity also brings unique challenges such as global market expansion, cross-cultural complexity, and the need for strategic adaptability (Graves and Thomas, 2008; Herrera-Echeverri et al., 2016). Consequently, exporting creates a dynamic environment that requires new and diverse search strategies (Sánchez-Marín et al., 2020), which in turn, significantly influences family firms' perceptions about where to search for external knowledge.

Due to family dynamics, generational transitions, and managerial preferences (Kraus et al., 2016; Mitter et al., 2014), family firms face unique obstacles (e.g., reluctance to change) and opportunities (e.g., longer time horizons) in export markets that force them to rethink their knowledge search efforts. To succeed in new markets, family firms need to understand customer preferences, cultural nuances, and competitive dynamics (Alayo et al., 2022a; Zaefarian et al., 2016), which may lead them to expand their knowledge search channels. Accordingly, the pursuit of export opportunities acts as a driver of change that might (indirectly) influence family firms' search behaviour.

Existing research suggests that the ability of family actors to shape the firm's search behaviour may be contingent on trading activities (Freixenet et al., 2018; Sánchez-Marín et al., 2020). Indeed, export propensity may disrupt the traditional knowledge search patterns (Basly, 2007; Kraus et al., 2016) of family managers and of family members of different generational stages, influencing the manner in which they perceive the financial and SEW benefits and drawbacks of external search breadth. Therefore, by using the mixed gamble approach, an examination of the extent to which export propensity interacts with family management and family generational stage in relation to external search breadth can provide us with a more nuanced comprehension of the trade-offs between financial and SEW gains and losses in family firms.

In cases where family firms with greater family management encounter opportunities for external search breadth, they are likely to prioritize current SEW losses over potential financial and SEW gains, which may discourage search breadth. Nevertheless, when family firms with greater family management export, new dynamics are introduced into the business, implying that family managers have to adapt to new environments, understand different customer needs and navigate

unfamiliar business landscapes (Alayo et al., 2022a; Zaefarian et al., 2016). Exposure to international markets can foster a more open and global mindset within family firms (Basly, 2007; Monreal-Pérez et al., 2012), so family managers may be more likely to adapt their external search breadth strategies to reflect these changes. This exposure can also motivate family managers to acquire additional training and qualifications (Campos-García et al., 2022), enabling them to bring fresh ideas and insights to help their firms remain competitive in the global marketplace (Fernández and Nieto, 2006). In this regard, trained family managers are better prepared to assimilate external knowledge and resources from diverse partners, mitigating the challenges associated with limited absorptive capacity and the not-invented-here syndrome resulting from external search breadth (Brinkerink, 2018; Zahra, 2012). Consequently, family managers will be more inclined to proactively engage and cultivate lasting relationships with diverse external stakeholders, and explore innovative practices from various industries (De Massis et al., 2018; Fernández and Nieto, 2005; Miller and Le-Breton-Miller, 2005). Export propensity thus acts as a catalyst that encourages family managers to overcome their inherent conservatism and risk-aversion, fuelling a greater inclination to adopt search breadth behaviours. As a result, export propensity is expected to improve the potential SEW and financial gains in the family managers' external search breadth mixed gamble, while mitigating certain SEW losses. Our hypothesis is thus as follows:

**H3.** Export propensity weakens the negative relationship between family firms with greater family management and external search breadth.

We now turn our attention to examine the moderating influence of export propensity on the relationship between family firm generational stage and external search breadth. As previously hypothesized, first-generation family firms may have a lower external search breadth than later generation family firms, to the extent that they often prioritize protecting current SEW losses over potential financial and SEW gains. However, when export propensity comes into play, such a negative influence needs to be nuanced. Exporting makes first-generation family firms to be exposed to different markets and environments, expanding their knowledge and networks, and potentially reducing their absorptive capacity and not-invented-here syndrome constraints (Alayo et al., 2022b; Sánchez-Marín et al., 2020). By gaining new and diverse knowledge and accessing additional resources through exporting, first-generation family firms may exhibit a more external approach (Cruz and Nordqvist, 2012) and mitigate some of the SEW losses associated with external search breadth. In this regard, first-generation family firms are expected to be less afraid of losing family control and influence as a result of ceding part of the innovation processes to external partners, because they may be more receptive to the potential benefits of external search breadth activities (Bigliardi and Galati, 2018; Brinkerink et al., 2017). Moreover, the identification of family members with the firm will also be less impaired when first-generation family firms export (Alayo et al., 2022b), as there will be a greater international recognition of such firms, manifested through their sustained family's image and reputation (Arregle et al., 2021; Naldi et al., 2013), which in turn, will favour collaborations with external innovation partners. On the other hand, export propensity may also help to overcome the timing problem that first-generation family firms often encounter when developing external search breadth strategies, as a result of a more open and global mindset, higher training and qualification (Campos-García et al., 2022), and the development of fresh ideas required to remain competitive in the global marketplace (Fernández and Nieto, 2006), diminishing the potential hazards for their emotional attachment. Accordingly, exporting may provide a natural opportunity for these firms to engage in search breadth, as they may need to adapt to the demands of new markets and customers.

Therefore, while first-generation family firms may face initial challenges with external search breadth, such as limited absorptive capacity,

timing problems, and SEW related concerns, export propensity may facilitate overcoming these obstacles by providing the necessary exposure, networks, and motivation to engage in more external search breadth. Consequently, export propensity can unlock the potential financial and SEW gains of external search breadth, while mitigating certain SEW losses, encouraging first-generation family firms to use a wider variety of external knowledge sources. Thus, our hypothesis is:

**H4.** Export propensity weakens the negative relationship between first-generation family firms and external search breadth.

The research model and hypotheses underlying the present study are shown in Fig. 1.

## 4. Research methodology

### 4.1. Research context

Spain provides an ideal context to explore the relationships between family firm heterogeneity, external search breadth and export propensity. In Spain, around 90% of all firms are family firms, generating approximately 70% of private employment and 60% of national gross added value (Instituto de la Empresa Familiar, 2020). Furthermore, such firms have a significant presence in the Spanish manufacturing industry, accounting for around 83% of all firms (Instituto de la Empresa Familiar, 2015).

### 4.2. Data collection and sample selection

To test our hypotheses, we used data from the Survey on Business Strategies (ESEE). Sponsored by the SEPI Foundation with the support of the Spanish Ministry of Finance and Civil Service, the ESEE is designed to be representative of the population of Spanish manufacturing firms with ten or more employees in one of the two-digit manufacturing subsectors in NACE Rev. 2. The ESEE is an unbalanced panel, as each year some firms stop providing information (due to mergers, takeovers, spin-offs or activity cessation) and new firms are incorporated into the survey to maintain representativeness. The ESEE is a frequently used dataset for the analysis of innovation and internationalization issues (e. g., Campos-García et al., 2022; Martínez-Alonso et al., 2023). Notably, all the information contained in the ESEE is subject to strict validity and consistency checks, thus making it appropriate for our empirical analysis.

After removing observations with missing data for the analysed variables, our final sample consists of a longitudinal panel of 1240 family firms operating in twenty different manufacturing industries (7124 firm-year observations) over an eleven-year period (2007–2017). Consistent with previous research (Gjergji et al., 2020; Sánchez-Marín et al., 2020), we identify family firms considering a self-identification criterion. In particular, we use the ESEE question that directly asks the respondent whether a family group is actively involved in the control or management of the firm.

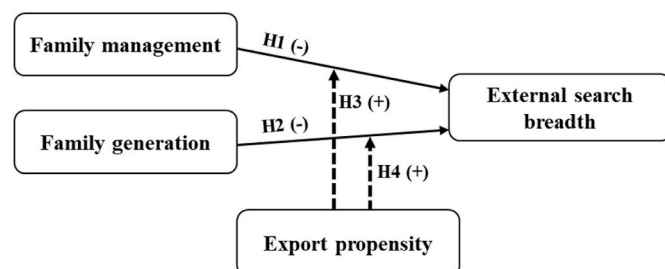


Fig. 1. Research model and hypotheses.

### 4.3. Variables

#### 4.3.1. Dependent variable

**External search breadth:** Following previous studies (Amato et al., 2022; Classen et al., 2012; Ferreras-Méndez et al., 2015), this variable is calculated as the combination of five potential sources of knowledge: suppliers, customers, competitors, universities and/or technological centres, and joint ventures. Each of the five sources is measured with a dichotomous variable, taking the value 1 if the firm employs external sources for innovation activities and 0 otherwise. The five sources are then summed, so that *external search breadth* ranges from 0 if the firm does not use external search channels, to 5 if it relies on all the aforementioned channels. The Cronbach's alpha reliability coefficient was 0.72.

#### 4.3.2. Independent variables

**Family management:** for all family firms, the ESEE reports the number of owners and owners' relatives occupying management positions. With this information, family management is calculated using a variable that counts the number of family members in the firm's management (Manzanaque et al., 2020; Martínez-Alonso et al., 2022c).

**Family generation:** since the ESEE does not provide a direct measure on the family firm generational stage, we follow extant family firm studies and identify first-generation family firms based on firm age (Fernández and Nieto, 2005; Sánchez-Marín et al., 2020). In particular, we employ a cut-off point of 30 years to capture generational effects (Comino-Jurado et al., 2021; Muñoz-Bullón et al., 2018). Thus, to measure family generation, we split family firms according to a dummy variable, taking the value 1 if the firm is in first-generation (less than 30 years old) and taking the value 0 if it is in a later generation (otherwise).

#### 4.3.3. Moderating variable

**Export propensity:** this study, similar to prior research, uses export propensity as an indicator of internationalization (Saridakis et al., 2019). Export propensity is measured as a dummy variable which gets the value 1 whether a firm exports to a foreign market and 0 otherwise.

#### 4.3.4. Control variables

**Firm size:** firm size has been shown to influence external search breadth (Alberti et al., 2014). Indeed, larger firms tend to innovate more openly than smaller firms, due to richer resource endowments to engage in R&D partnerships, privileged stakeholder relationships and better access to markets (García-Martínez et al., 2019). Therefore, we control for firm size expressed as a logarithmic transformation of total sales.

**Innovation subsidies:** innovation subsidies are one of the main instruments to stimulate industrial R&D, and have been actively used to achieve the goal of promoting search breadth (Greco et al., 2017). Therefore, we control for innovation subsidies using a categorical variable which takes the value 1 when the firm has received subsidies for innovation and 0 otherwise.

**R&D staff recruitment:** hiring R&D personnel contributes to enhancing firms' ability to capture and implement new knowledge in innovation processes (Rothwell and Dodgson, 1991) and facilitates knowledge sharing within firms themselves (García-Martínez et al., 2017). Therefore, we control for R&D staff recruitment measured as a categorical variable which gets the value 1 when the firm hires people with corporate experience in R&D and 0 otherwise.

**Technology protection:** patents constitute important legal mechanisms to protect proprietary knowledge (Beneito, 2006). Patents not only prevent imitation or misappropriation of technologies, but also strengthen defences against unintended knowledge spill-over and opportunistic behaviour that may arise in external search breadth (Kotlar et al., 2013; Martínez-Alonso et al., 2022b). Therefore, we control for technology protection using a variable that counts the number of patents filed during the year.

**Financial slack:** slack resources represent surplus and uncommitted

liquid resources, which are likely to positively buffer the additional cost of external search breadth, promote risk-taking behaviour and relax management controls (Bigliardi and Galati, 2018; Sisodiya et al., 2013). Therefore, we control for financial slack using the ratio of working capital to total assets.

*Industry, Territory, and Time:* to control for whether external search breadth is influenced by unobserved heterogeneity across industries and regions, we use dummy variables representative of each two-digit manufacturing subsector<sup>1</sup> and territorial subdivision<sup>2</sup> to which firms belong. Furthermore, to account for the time trend, we also included dummy variables for each year of observation.

#### 4.4. Analytical procedure

Multiple regression models have been applied to test our hypotheses. Since external search breadth is defined on an ordinal scale (it can include any integer value from 0 to 5), the appropriate regression technique is ordered logistic regression (Classen et al., 2012; Woolldridge, 2002). Although when dealing with panel data it is common to use the Hausman test to distinguish between random and fixed effects, we opted for employing random effects ordered logistic models because some key control variables in our models, such as the industry and territorial dummies, are time-invariant in nature (Diéguez-Soto and López-Delgado, 2019). We also implemented one-year lags between the dependent variable and the rest of variables to control for endogeneity and to minimize reverse causality concerns. This reduced our sample to an unbalanced panel of 6176 observations. Moreover, to avoid possible multicollinearity problems arising from the moderation hypotheses, we mean-centred the continuous variables (Aiken and West, 1991).

### 5. Results

This section presents the results of the analyses, carried out with STATA. Table 1 shows the correlations, means, and standard deviations of all variables. Correlations between the independent and the control variables are modest and do not exhibit serious multicollinearity concerns. The highest coefficient is 0.46 (positive) between export propensity and firm size, and there are only two other coefficients higher than 0.30. Moreover, as the highest value of the variance inflation factors (VIFs) is 1.62, well below the suggested threshold of 10 (Neter et al., 1989), we find no evidence of multicollinearity.

Table 2 reports the results of the random effects ordered logistic regressions. In Table 2, Model 1 contains only the control variables. Firm size, innovation subsidies, R&D staff recruitment, technology protection, and financial slack significantly and positively affect external search breadth. Thus, larger family firms that receive financial support for innovation, hire R&D-skilled employees, file patents, and have potential slack resources are more likely to implement external search breadth strategies.

Hypothesis 1 posits that family firms with greater family management are negatively associated with external search breadth. Results in Models 2–6 of Table 2 show that higher family management is

<sup>1</sup> The manufacturing industries are: 1. Meat industry; 2. Foodstuffs and snuff; 3. Drinks; 4. Textiles and clothing; 5. Leather and footwear; 6. Timber industry; 7. Paper Industry; 8. Graphics; 9. Chemical and pharmaceutical products; 10. Rubber and plastic; 11. Non-metallic mineral products; 12. Ferrous and nonferrous metals; 13. Metal products; 14. Agricultural and industrial machinery; 15. Computer, electronic and optical products; 16. Electrical machinery and material; 17. Motor vehicles; 18. Other transport equipment; 19. Furniture industry; and 20. Other manufacturing.

<sup>2</sup> The territorial subdivisions are depicted according to the Nomenclature of Territorial Units for Statistics (NUTS1) and a total of 7 areas are distinguished: 1. Northwest; 2. Northeast; 3. Madrid; 4. Centre; 5. East; 6. South; and 7. Canarias.

significantly and negatively related to external search breadth ( $\beta = -0.109, p < 0.05$ ). These results support Hypothesis 1 and reveal that family firms are heterogeneous in their external search breadth. Particularly, when more family members are involved in the management, family firms have significantly lower external search breadth. As expected, our findings suggest that concerns about current SEW losses stemming from external search breadth outweigh the potential financial and SEW gains resulting from increased family management.

Hypothesis 2 states that first-generation family firms are negatively linked to external search breadth. We confirm Hypothesis 2 in Models 2–6 of Table 2, as it is found that when the firm belongs to the first-generation, external search breadth is significantly lower ( $\beta = -0.538, p < 0.01$ ). These results suggest that family firms differ in external search breadth depending on the generational stage. Consistent with Hypothesis 2, we conclude that first-generation family firms have significantly less external search breadth than later generation family firms.

Hypothesis 3 predicts that the negative effect of family firms with higher family management on external search breadth is weakened by export propensity. In Model 4 of Table 2, the interaction term between family management and export propensity is positive and significant for external search breadth ( $\beta = 0.394, p < 0.01$ ). This result lends support to Hypothesis 3, and shows that when export propensity is undertaken, family managers seem to take more risks and then engage in external search breadth, as the gain-loss weighting improves due to lower SEW losses. In addition, to provide a more fine-grained picture of such a significant moderating effect, Fig. 2 plots the predicted values of external search breadth for low and high values of family management and for 0 and 1 values of export propensity. Fig. 2 confirms that the relationship between family management and external search breadth benefits more from the presence of export propensity.

Hypothesis 4 states that the negative incidence of first-generation family firms on external search breadth is weakened by export propensity. Contrary to our conjecture, the results in Model 5 of Table 2 reveal that export propensity has no significant moderating effect for the family generation-external search breadth relationship ( $\beta = 0.236, n.s.$ ), thereby failing to provide support for Hypothesis 4. In this regard, export propensity apparently does not alter the weighting of financial and SEW gains and losses when it comes to the generation controlling the firm and their association with external search breadth.

Last, a full model (Model 6 of Table 2) in which both interaction terms are introduced simultaneously, corroborates the obtained results.

An additional analysis was conducted to check the robustness of our results utilising an alternative definition for the external search breadth variable: it takes the value 0 when the firm has no relationship with any partner, 1 when the firm engages in collaborative innovation activities with one partner, or 2 when the collaboration takes place with at least two partners (Aiello et al., 2021). The results (see Table 3, Models 7–9) confirm our hypotheses (except for hypothesis H4), although H3 was somewhat less significant. Second, we use alternative measures for our independent variables. For family management, we construct a dummy variable which gets value 1 whether one or more members of an owning family are involved in management positions, and 0 otherwise. For family generation, we first used a cut-off point of 25 years to distinguish between first-generation family firms vs. later generation family firms (Arrodo-García et al., 2016; Gersick et al., 1997). Then, we also performed an additional test by using a cut-off point of 30 years to divide the firms into three groups: first-generation family firms (less than 30 years), second-generation family firms (between 30 and 60 years) and third and later generation family firms (more than 60 years). Accordingly, three dummy variables were constructed. The results (available on author's request) were comparable to those presented in Table 2.

**Table 1**  
Correlations and summary statistics.

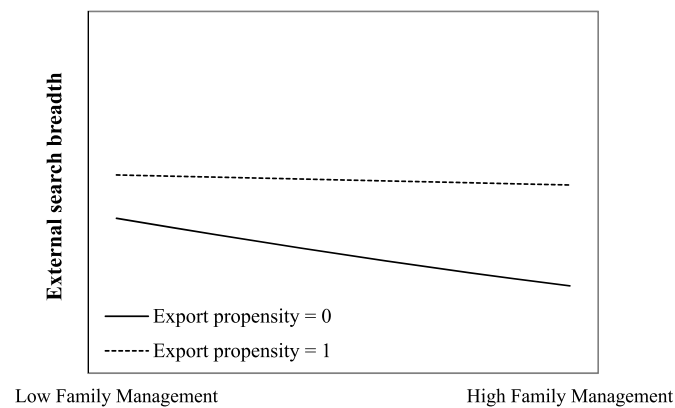
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)							
(1) External search breadth	1.00															
(2) Family management	0.04	**	1.00													
(3) Family generation	-0.17	***	-0.04	***	1.00											
(4) Export propensity	0.26	***	0.08	***	-0.18	***	1.00									
(5) Firm size	0.46	***	0.15	***	-0.24	***	0.46	***	1.00							
(6) Innovation subsidies	0.51	***	0.05	***	-0.12	***	0.17	***	0.34	***						
(7) R&D staff recruitment	0.35	***	0.03	*	-0.05	***	0.12	***	0.28	***	0.35	***				
(8) Technology protection	0.14	***	0.01	**	-0.04	**	0.05	***	0.11	***	0.10	***	0.11	***		
(9) Financial slack	0.04	**	0.04	**	-0.13	***	0.12	***	0.01		0.02		-0.01		0.01	1.00
<b>Summary statistics</b>																
Mean	0.41		1.56		0.61		0.64		15.26		0.07		0.04		0.13	0.39
Standard deviation	0.90		0.93		0.48		0.48		1.50		0.25		0.19		1.47	0.25

Note. \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001.

**Table 2**  
Random effects ordered logistic regression results (DV = external search breadth).

	Hypothesis	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)		Model (6)	
		Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Family management	H1 (-)			-0.109*	0.061	-0.107*	0.061	-0.459**	0.179	-0.108*	0.061	-0.463**	0.179
Family generation	H2 (-)			-0.538**	0.185	-0.531**	0.185	-0.535**	0.185	-0.729**	0.373	-0.752**	0.373
Export propensity						0.843***	0.214	0.227	0.358	0.713***	0.301	0.078	0.420
Family management x export propensity	H3 (+)							0.394**	0.188			0.399**	0.189
Family generation x export propensity	H4 (+)									0.236	0.387	0.260	0.366
Firm size		1.385***	0.084	1.362***	0.084	1.269***	0.087	1.281***	0.087	1.268***	0.087	1.280***	0.087
Innovation subsidies		1.277***	0.167	1.279***	0.167	1.258***	0.167	1.245***	0.167	1.261***	0.167	1.249***	0.167
R&D staff recruitment		0.370+	0.200	0.384+	0.199	0.376+	0.199	0.366+	0.199	0.376+	0.199	0.366+	0.199
Technology protection		0.060**	0.023	0.059**	0.023	0.059**	0.023	0.059**	0.023	0.059**	0.023	0.059**	0.023
Financial slack		0.582+	0.300	0.543+	0.300	0.511+	0.300	0.510+	0.300	0.505+	0.300	0.503+	0.301
Industry dummies	yes			yes		yes		yes		yes		yes	
Territorial dummies	yes			yes		yes		yes		yes		yes	
Year dummies	yes			yes		yes		yes		yes		yes	
Log likelihood		-3068.764		-3063.007		-3055.036		-3052.821		-3054.849		-3052.595	
Likelihood ratio test		564.94***		576.45***		592.39***		596.82***		592.76***		597.27***	

Note. + p < 0.10, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001. DV = Dependent variable.



**Fig. 2.** Visual representation of the moderating effect of export propensity on the family management – external search breadth relationship.

## 6. Discussion and conclusion

### 6.1. Contributions

The purpose of this study was to explore variations within family firms’ external search breadth by analysing how differences in two sources of family firm heterogeneity, namely family management and the family generational stage, affect perceptions of potential financial and SEW gains and losses. We also examine the moderating influence of export propensity. Thus, based on the mixed gamble approach, and considering family firm heterogeneity in terms of family and strategic factors, we find that disparities in family management, family generational stage and export propensity may explain why some family firms are reluctant to engage in external search breadth, while others embrace such strategies.

Our study makes important contributions to the literature. First, it advances and extends the ongoing and prominent debate on knowledge search in family firms (Ardito and Capolupo, 2023; Gusenbauer et al., 2023) by providing an empirical study that offers more nuanced explanations for the unusual family firms’ external search behaviour. In particular, this study responds to recent calls for more research on the antecedents of external search breadth in family firms (Bigliardi and Galati, 2018; Classen et al., 2012; Gjergji et al., 2019) by showing that



**Table 3**  
Robustness tests: an alternative measure of external search breadth.

	Hypothesis	Model (7)		Model (8)		Model (9)	
		Coeff.	SE	Coeff.	SE	Coeff.	SE
Family management	H1 (-)	-0.143*	0.067	-0.446*	0.183	-0.143*	0.067
Family generation	H2 (-)	-0.561**	0.200	-0.563**	0.200	-0.766**	0.386
Export propensity		0.910***	0.222	0.369	0.370	0.774***	0.309
Family management x export propensity	H3 (+)			0.347+	0.194		
Family generation x export propensity	H4 (+)					0.249	0.400
Firm size		1.294***	0.095	1.304***	0.095	1.293***	0.095
Innovation subsidies		1.349***	0.193	1.338***	0.193	1.353***	0.193
R&D staff recruitment		0.717**	0.250	0.708**	0.250	0.717+	0.250
Technology protection		0.058+	0.032	0.058+	0.032	0.059**	0.032
Financial slack		0.380	0.320	0.380	0.320	0.373+	0.320
Industry dummies		yes		yes		yes	
Territorial dummies		yes		yes		yes	
Year dummies		yes		yes		yes	
Log likelihood		-2412.967		-2411.360		-2412.772	
Likelihood ratio test		573.13***		576.34***		592.76***	

Note. +  $p < 0.10$ , \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

family management, as well as the generation controlling the firm, differentially affect search breadth. We also contribute to this contemporary debate by showing that external search breadth does not only depend on firms' internal capabilities or specific CEO characteristics (e. g., [Ahn et al., 2016](#)), but also on family firms' unique characteristics. Thus, we provide one of the few empirical attempts to shed light on the underlying dynamics of family involvement in terms of search breadth.

Second, this study also adds to the stream of research analysing the heterogeneity of family firms with respect to external search breadth ([Gjergji et al., 2022](#); [Pellegrini and Lazzarotti, 2019](#); [Rondi et al., 2021](#)). While previous literature has mainly focused on examining differences in external search breadth between family and non-family firms ([Alberti et al., 2014](#); [De Massis et al., 2015](#); [Nieto et al., 2015](#)), this study delves deeper into understanding family firm heterogeneity regarding search breadth and, in doing so, extends the mixed gamble perspective. In this regard, the mixed gamble approach has been applied to various strategic decisions, such as corporate acquisitions ([Hussinger and Issah, 2019](#)), tax aggressiveness ([Bauweraertset al., 2020b](#)), or R&D investments ([Gómez-Mejía et al., 2014](#)); however, it has not yet been applied to external search breadth. Therefore, accepting the idea that family firms should be regarded as a group of heterogeneous firms in order to develop a more detailed comprehension of their strategic choices ([Alessandri et al., 2018](#); [Bauweraerts et al., 2020b](#)), this research demonstrates that two sources of family firm heterogeneity, namely family management and family generational stage, alter the mixed gamble of external search breadth, which ultimately explains the existing divergences within family firm search breadth. In addition to contributing to the mixed gamble approach, this study also adds the family firm literature that seeks to advance the SEW theoretical lens ([Gu et al., 2019](#); [Miller and Le Breton-Miller, 2014](#)) addressing concerns about the oversimplified nature of the SEW construct ([Berrone et al., 2010](#); [Gómez-Mejía et al., 2007](#)). Accordingly, we contribute to this discourse by focusing on how the importance attached to SEW gains and losses might alter the influence of both family management and family generational stage on external search breadth.

Third, we also contribute to the family firm literature on internationalization by introducing export propensity as a moderating variable that allows for a more detailed explanation of the boundary conditions of the external search breadth mixed gamble within family firms. We elaborate on the reasons why export propensity might indirectly favour external search breadth in family firms with more family management and in first-generation, thus providing the owner-managers of such firms with the nuances to cope with the financial and SEW trade-offs. In doing so, we also contribute to the literature that examines exports and innovation as complementary strategies ([Alayo et al., 2022a](#); [Sánchez-Marín et al., 2020](#)) by showing that export propensity alters

family managers' mixed gamble of external search breadth. This is of great importance because, while studies using a mixed gamble approach have been limited to analysing how family variables influence strategic behaviours, such as growth ([Bauweraerts et al., 2020a](#); [Martínez-Romero et al., 2023](#)) or big data adoption ([Arzubiaga et al., 2021](#)), little or no attention has been paid to how family firms' strategic choices may influence other family firms' strategic behaviours ([Kim et al., 2023](#)). Therefore, this paper aims to fill this gap by using the mixed gamble approach to provide an explanation of how a strategic choice, i.e., export propensity, affects a subsequent strategic behaviour, i.e., external search breadth, within family firms.

Finally, from a methodological point of view, it is also important to highlight as a contribution, the longitudinal character of our sample, which might be considered a strength of our study. In this regard, longitudinal studies provide a comprehensive understanding of causal relationships, individual variability, and predictive modelling ([Rovelli et al., 2020](#); [Werner et al., 2018](#)), while minimizing bias and allowing for better control of confounding factors compared to cross-sectional studies.

## 6.2. Practical implications

In light of our findings, our study also highlights some practical implications that can provide actionable advice to family firm owner-managers seeking greater external search breadth and the resulting benefits. First, we recognize that family firms with greater family management tend to have lower external search breadth. To overcome this challenge, we recommend fostering a culture of openness to external knowledge and expertise ([Fey and Birkinshaw, 2005](#)). Family firm owner-managers should actively seek external perspectives and ideas to complement the internal capabilities of family managers. In this regard, strategies such as establishing cross-functional teams, engaging external advisors or consultants, and implementing performance metrics that incentivize external knowledge sourcing can facilitate a greater search breadth ([Adomako et al., 2021](#); [Mitter et al., 2014](#)).

Second, our study reveals that first-generation family firms tend to have a lower external search breadth compared to later generation family firms. To take advantage of generational differences, we suggest promoting knowledge transfer and collaboration between different generations within the family firm ([Fuetsch and Suess-Reyes, 2017](#)). Facilitating the exchange of ideas, experiences, and networks can foster a greater external search breadth. Implementing intergenerational initiatives can also facilitate knowledge sharing and encourage first-generation family members to further explore external opportunities and networks ([Cabrera-Suárez et al., 2014](#); [Hauck and Prügel, 2015](#)).

Last, we emphasise the role of export propensity in moderating the negative relationship between family firms with greater family management and external search breadth. To exploit this potential, family firms' owner-managers should consider export propensity as a means to enhance their external search efforts. In this regard, we suggest that owner-managers of these firms actively seek collaborations with foreign partners, participate in international trade events, and take advantage of export channels to access various sources of knowledge and opportunities (Debellis et al., 2021; Pisani et al., 2017).

Finally, we also advocate that policy makers and public authorities should play a key role in improving external search breadth for family firms. In this regard, they should provide guidance to family firms on market research and selection, appropriate partner identification, and entry modes to maximize the benefits of export propensity to enhance external search breadth strategies (Campos-García et al., 2022; Debellis et al., 2021). With these practical implications in mind, family firm owner-managers can navigate the challenges of family management, take advantage of generational differences, and leverage export propensity to achieve greater external search breadth.

### 6.3. Limitations and future research

Our paper is not without limitations, which in turn offer important directions for future research. First, our study relates to only one country and a specific industrial setting, which may restrict the generalisability of our findings. Given that national and industry context can have a significant impact on innovation-related aspects (Ahn et al., 2015), future studies using samples of firms from other national and industry environments may be beneficial to strengthen the external validity of this particular research.

Second, our study focuses purely on the 'breadth' of external search but does not include any information on the number of partners belonging to the same external source or on the intensity of collaboration with each of these sources, i.e., the 'depth' of external search. Indeed, it may be the case that family firms counterbalance a lower external search breadth through continued use of an external source or the additional benefits they derive from more intense linkages with the same source (e.g., Classen et al., 2012). Future studies should therefore combine 'breadth' and 'depth' aspects to gain deeper insights into family firms' external search behaviour.

Third, there are some limitations in the measurement of the variables used to assess the heterogeneity of family firms that need to be highlighted. In this regard, the absence of information on the total number of members composing the firms' management in the ESEE database prevented us from using the ratio of family managers to the total management size. However, other studies have shown that using the count measure of family management is equally suitable (Martínez-Alonso et al., 2023; Martínez-Romero et al., 2023; Sánchez-Marín et al., 2020). On the other hand, although having primary data about the family generation controlling the firm would be ideal, the ESEE dataset is built from an anonymous sample, and consequently, it is impossible to interrogate the sample firms with the purpose of including new questions that might complement the existing data. Nevertheless, the proxy of 30-years cut-off to measure the family generation continues being used in several studies (Comino-Jurado et al., 2021; Martínez-Alonso et al., 2023; Sánchez-Marín et al., 2020). This approach ensures consistency and comparability across different studies and allows longitudinal analysis of generational dynamics over time.

Fourth, it is important to note that our analysis has focused only on two aspects of family firm heterogeneity: family management and family generational stage. However, there are other dimensions worth investigating, such as the impact of gender, ethnicity, tenure, and educational diversity among family managers, as well as the joint involvement of multiple generations within the family firm. Exploring these variables could provide valuable insights into the nuanced effects on the family firms' external search breadth. To further explore this

research direction, the use of qualitative research methods such as multiple case studies or direct interviews with firm members would be highly beneficial.

Finally, future studies should investigate how alternative forms of internationalization, such as licensing or franchising, influence the gain-loss trade-offs of family firms' external search breadth.

### 6.4. Conclusion

In conclusion, our study has attempted to provide a theoretical foundation for a better understanding of how family firms differ in their external search breadth. Empirical evidence from a longitudinal sample of Spanish family firms confirms the mixed gamble predictions that family firms with greater family management and in first-generation are less likely to pursue external search breadth. This study also reveals a positive moderating impact of export propensity on the relationship between family management and external search breadth. Hence, by bringing together theory and empirical facts, our article answers the important question of why family firms engage in external search breadth despite their well-known aversion to SEW losses.

### Data availability

The authors do not have permission to share data.

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