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Timing the transition: gender diversity's role in family IPOs

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Abstract

Purpose – This study investigates the relationship between board gender diversity (BGD) and the time to Initial Public Offering (IPO), which stands as an entrepreneurially risky choice, particularly challenging in family firms. We also investigate the moderating role of family ownership dispersion (FOD).

Design/methodology/approach – We draw on an integrated theoretical framework bringing together the upper echelons theory and the socio-emotional wealth (SEW) perspective and on hand-collected data on a sample of Italian family IPOs that occurred in the period 2000–2020. We employ ordinary least squares (OLS) regression and alternative model estimations to test our hypotheses.

Findings – BGD positively affects the time to IPO, thus, it increases the time required to go public. FOD negatively moderates this relationship. Our findings remain robust with different measures for BGD, FOD, and family business definition as well as with different econometric models.

Originality/value – The article develops literature on family firms and IPO and it enriches the academic debate about gender and IPOs in family firms. It adds to studies addressing the determinants of the time to IPO by incorporating gender diversity and the FOD into the discussion. Finally, it contributes to research on women and outcomes in family firms.

Keywords Board gender diversity, Capital market, Family ownership, SEW, Time to IPO, Upper echelon theory

Paper type Original article

Introduction

The contribution that women in upper-echelon positions provide to business outcomes remains a hot topic, especially in research on family firms (Bauweraerts *et al.*, 2022). Indeed, women in top positions face unique challenges (e.g. invisibility; Martinez Jimenez, 2009; informal roles more related to the family than to the business; Eddleston and Sabil, 2019) and opportunities (e.g. flexible schedules or access to sectors traditionally considered masculine; Martinez Jimenez, 2009; more employment opportunities, Samara and Lapeira, 2023) in family businesses, which emphasizes the need to shed light on the role of women in such companies. In particular, as one of the main sources of board heterogeneity (Simpson *et al.*, 2010), female directors, thanks to their unique personal characteristics (e.g. participative leadership style; Bettinelli *et al.*, 2019), influence entrepreneurial choices and strategic business outcomes (e.g. innovation; Foss *et al.*, 2021).

Based on this evidence, recent scholars have focused on the role played by women during the challenging process of going public via an Initial Public Offering (IPO) (e.g. Nadeem, 2020). In particular, previous literature has reported that female representation in upper echelons affects IPO features (Nadeem, 2020) and their outcomes (e.g. McGuinness, 2018) by influencing the IPO firm's reputation among investors (Rau *et al.*, 2023) and, broadly speaking, by positively shaping board functioning (Nadeem, 2020). However, despite the

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growing attention to the topic, the implications of gender diversity in the context of family IPOs remain unresolved (Nadeem, 2020).

The IPO undoubtedly represents a strategic milestone in the growth trajectory of all types of firms (Ritter and Welch, 2002; Mazzola and Marchisio, 2002) and is an entrepreneurial choice (Lester *et al.*, 2006) surrounded by uncertainty (Certo *et al.*, 2009). Understanding the determinants of the decision to undertake this process is critical for the survival of IPO firms. While it offers several advantages (e.g. enhanced reputation; Ravasi and Marchisio, 2003; improved cost of capital, Bancel and Mittoo, 2009), it also presents numerous challenges (e.g. market pressure and legitimacy issues; Certo *et al.*, 2009). For family firms, it represents a double-edged sword: while aiding in achieving business (and family) objectives (e.g. sustaining growth; Mazzola and Marchisio, 2002), it also inevitably compels them to make certain compromises in terms of independence and control over the company (Helwege and Packer, 2009).

So far, research efforts have been devoted to exploring the consequences of an IPO in the family business domain, with a strong emphasis on the success of the listing in terms of IPO valuation (Kotlar *et al.*, 2018), long-term performance (Jaskiewicz *et al.*, 2005), or survivability (Cirillo *et al.*, 2017). However, we still know little about what happens before the quotation and the factors that influence the IPO decision and its characteristics (Carbone *et al.*, 2022). In particular, the decision of when to undertake this process, known as the time to IPO (Yang *et al.*, 2011), appears to be particularly critical for family firms. The timing of the IPO, which refers to the time elapsed between the establishment of a company and its listing (Yang *et al.*, 2011), is crucial for the success of the process and for the firm's chance of survival in the equity market (Chang, 2004; Romano *et al.*, 2019). It reflects a firm's performance before the IPO (Teng and Li, 2020), demonstrates that the firm is ready to grow and determines a firm's ability to raise funds from the market in the post-IPO phase (Chang, 2004). Given that family IPOs are particularly concerned with the long-term survival of the firm (Cirillo *et al.*, 2017) and the success of the IPO (Leitterstorf and Rau, 2014), as the future of the family is closely intertwined with that of the business (Jain and Shao, 2014), this choice is especially worthy of attention for family business scholars. More intriguingly, board gender diversity (BGD) has the potential to influence the time to IPO in family firms, not only because women have been found to impact IPO outcomes (McGuinness, 2018), but also because the time to IPO configures as an entrepreneurial choice (Lester *et al.*, 2006). As such, it may be influenced by directors' characteristics (Quigley and Hambrick, 2015), particularly those related to gender diversity (Calabrò *et al.*, 2019).

However, to date, despite recent attention paid to the gender role as antecedents of the quotation (Frii *et al.*, 2023), there is a lack of understanding about the factors affecting the IPO timing in family firms and, more importantly, about the gender role in such a crucial choice.

This research gap appears significant for several reasons. Firstly, family firms offer more effective opportunities for women to reach apical positions in business (Martinez Jimenez, 2009). A deeper understanding of their role in family IPOs can enrich our knowledge about the female impact on entrepreneurial behaviors in family firms, a topic that still stimulates the academic debate (Campopiano *et al.*, 2017; Xu *et al.*, 2023). This is considering the different perspectives, attitudes and experiences of women in apical positions (Campbell and Mínguez-Vera, 2008; Faccio *et al.*, 2016; Sila *et al.*, 2016), with a significant impact on the decision-making process (Maseda *et al.*, 2022). Second, since the IPO represents one of the most effective and controversial ways to foster growth for family firms (Mazzola and Marchisio, 2002), shedding light on factors that affect how they approach this challenge seems timely, especially considering the economic contributions of family firms worldwide (Ernst & Young, 2019), particularly in the post-COVID era (KPMG, 2021). Finally, since the speed of going public significantly affects the survivability of the company in the capital markets and its ability to achieve desired objectives (Chang, 2004), understanding factors that boost or inhibit

the time to IPO may contribute to antecedents and process topics, two research areas that are underdeveloped in family firms' research (Carbone *et al.*, 2022).

Based on these arguments, our work aims to examine the relationship between BGD and time to IPO in family firms, drawing on the upper-echelon perspective. Specifically, in line with the most recent literature within the theoretical framework (e.g. Bauweraerts *et al.*, 2022), which emphasizes the need to open the so-called "black box" of upper echelons, we propose that it is crucial to delve into the inquiry on contextual characteristics, in our case, familial ones, that shape the influence of women directors on entrepreneurial choices (Maseda *et al.*, 2022). Thus, we point out that the effect of BGD on time to IPO will be influenced by the socio-emotional wealth (SEW) considerations, which, in family firms, considerably shape entrepreneurial behaviors (Hernández-Perlines *et al.*, 2019), firms outcomes (e.g. Hsueh *et al.*, 2023) and the women role in the firm (García-Meca and Santana Martin, 2023; Liao *et al.*, 2021). In particular, we consider the family ownership dispersion (FOD) (Campopiano *et al.*, 2014) as an expression of decreasing family owners' attention towards SEW considerations (Miller *et al.*, 2022). Indeed, previous studies reported that whether shares are in the hands of one or multiple family members matters in shaping the family inclination towards SEW goals and priorities (De Massis *et al.*, 2013; Bacci *et al.*, 2018; Van Doorn *et al.*, 2022). Since, even during the IPO, SEW attention influences family behaviors and choices (Jain and Shao, 2014, 2015; Kotlar *et al.*, 2018), and family owners are likely to consider the time to IPO as a strategic choice in light of its potential impact on SEW preservation (e.g. impact on the reputation of both the family and the firm), we propose that the FOD influences the relationship between the BGD and the time to IPO.

Drawing on a sample of 148 Italian family IPOs that occurred in the period 2000–2020, we intend to answer the following research questions:

RQ1. What is the relationship between BGD and the time to IPO in family firms?

RQ2. What is the role of FOD in shaping the effect of the BGD on the time to IPO?.

Our findings reveal that women on board positively affect the time to IPO in family firms. Our results rest on two main theoretical assumptions: the risk aversion propensity of female directors and the complexity they lead to the board decision-making process due to the different perspectives they provide to the boardroom. Our analyses also demonstrate that the FOD negatively moderates this relationship in such a way that in the presence of more family shareholders, thus when owners are less concerned about SEW priorities, women on board push family firms to go public faster. Lastly, our post-hoc analyses reveal that BGD also matters in shaping post-IPO short-term performance. However, such an effect is conditioned by the performance measure we considered.

Stemming from these results, the study offers important contributions and fills relevant research gaps in the literature. First, by grounding our arguments in the latest upper-echelon theorizations (e.g. Maseda *et al.*, 2022), it develops literature on family firms and the IPO (Carbone *et al.*, 2022). In this regard, it is not only the first to elucidate the impact of female involvement in terms of IPO timing and performance but it is also the first to introduce the upper-echelon perspective in family and IPO literature, so far dominated by finance theories (Carbone *et al.*, 2022). That is, we extend an underdeveloped but promising research area – that of the pre-IPO phase – from a nuanced – for field – theoretical perspective, and we focus on addressing the effects of female involvement for IPO outcomes in family firms. Certainly, broadening our understanding of family IPO antecedents holds also practical significance: it can help identify both facilitating factors and obstacles in the listing process of family businesses being potentially useful for practitioners, managers and investors involved in the delicate going public process of such companies. Second, the paper adds to the literature on IPO timing antecedents which, until now, has focused on contextual factors (e.g. Teng and Li, 2020) or on CEO's characteristics (e.g. Romano *et al.*, 2019). Differently, our

manuscript pays attention to the composition of the board (in terms of gender diversity) and the ownership structure (in terms of the dispersion of family ownership). Finally, our work contributes to the latest academic debate on gender issues in family firms by contributing to both the upper echelon and the SEW streams of research. Indeed, by answering the call for more academic effort to unpack the black box of upper echelons (Hambrick, 2007; Hambrick and Mason, 1984), we enhance the knowledge of contingency factors that can explain the influence of female directors on firm outcomes (Maseda *et al.*, 2022). In this sense, FOD helps us to understand the socio-emotional aspects that contribute to shaping the cognition and behavior of family firms (Bauweraerts *et al.*, 2022). By looking at it as a contingent factor and unraveling its complex role when combined with gender characteristics, the paper also adds to research investigating the effect of FOD within the theoretical framework of the SEW perspective (Bacci *et al.*, 2018).

Overall, from the practical standpoint, the paper informs practitioners and institutions about the right interventions to undertake to exploit the gender influence on family firms' boards. Indeed, since we demonstrate that family factors may have a role in determining gender effect on a firm's outcomes, we draw the regulators' attention to the importance of focusing on the environment in which women work more than just on the board's gender quota.

The remaining of the paper is organized as follow: we present the theoretical background and hypotheses, we then describe the methodology used and findings, we finally conclude with discussion and with contributions and future research questions.

Theoretical background and hypotheses development

Time to IPO in the family business context

An IPO represents a strategic milestone in the growth trajectory of companies (Ritter and Welch, 2002). Simultaneously, since the IPO exposes firms to several risks (e.g. the declining survival rate of newly listed firms; Fama and French, 2004) and challenges (e.g. new governance and disclosure standards; Pagano *et al.*, 1998), undertaking the process of going public can undoubtedly be considered an entrepreneurial (risky) choice rather than a physiological step in the life cycle of firms (Lester *et al.*, 2006; Romano *et al.*, 2019). In this context, the time to IPO, measured as the time elapsed from a firm's foundation to its IPO, is a critical factor for both the firm and the market (Chang, 2004; Yang *et al.*, 2011; Romano *et al.*, 2019). Indeed, it can determine the success of the listing as well as the survivability of the firm in the equity market (Yang *et al.*, 2011). The speed of going public influences the ability of newly established firms to acquire resources for growth (Chang, 2004) and can be used as a measure of firm performance (Chang, 2004), particularly when conventional measures (e.g. sales, profit) are less informative, considering factors such as firm age, size and industry (Deeds *et al.*, 1997). Considering the investors' perspective, time is regarded as a critical variable when evaluating investment attractiveness and value (Douglas, 1992; Zacharakis and Shepherd, 2001). Therefore, the time to IPO has the potential to impact IPO performance (Clark, 2002). In this sense, IPO timing is also significant for owners' considerations regarding control and firm value. The trade-off here is crucial: while going public too early may undermine the firm's ability to attract partners, remaining private reduces external interference in control (Field and Karpoff, 2002). However, waiting too long to go public may result in missed growth opportunities (Pagano *et al.*, 1998).

These considerations take on new and interesting nuances in the context of family businesses. While such companies could be considered more entrepreneurial than others (Craig *et al.*, 2014), they are often resistant to strategic, organizational and governance changes, such as those associated with the listing process (Helwege and Packer, 2009; Giovannini, 2010). Although previous scholars have presented conflicting evidence regarding family firms facing IPOs, it is evident that each IPO phase is surrounded by different

intricacies in the context of family firms (Carbone *et al.*, 2022), and IPO timing is no exception. Besides corporate reputation, family firms also need to safeguard the family's reputation (Leitterstorf and Rau, 2014); they must coordinate the IPO timing with generational succession, which often coincides with the IPO (Poutziouris and Wang, 2004); they strive to maintain the SEW (Leitterstorf and Rau, 2014); they must acquire proper managerial skills (Mazzola and Marchisio, 2002) to establish their legitimacy in the market (Ding and Pukthuanthong, 2013). However, despite these peculiarities making the issue particularly noteworthy in the context of family businesses, IPO timing has not received attention from IPO and family business scholars. Furthermore, the literature on the speed of going public has analyzed contextual factors (e.g. Teng and Li, 2020) and individual factors (e.g. Romano *et al.*, 2019), leaving the board composition and, in particular, the BGD out of the debate. However, this critical decision may be influenced by directors' characteristics (Quigley and Hambrick, 2015), particularly those related to gender diversity (Calabrò *et al.*, 2019): the differing propensity to risk of women directors (Faccio *et al.*, 2016), their distinct perspectives and experiences (Post and Byron, 2015), as well as the contributions they provide to the functioning of the boardroom (Bettinelli *et al.*, 2019) are factors that can affect an entrepreneurial choice such as the timing of an IPO. Recently, scholars have begun to pay attention to the role played by women in top positions and their impact on IPOs as an entrepreneurial and risky choice (Frii *et al.*, 2023). Moreover, considering the particular role that women exert in family firms (Martinez Jimenez, 2009) and the potentially critical role played by IPO timing in such companies, these arguments assume even greater relevance.

BGD and the time to IPO

The previous literature on gender diversity and the listing process has reported contrasting evidence. On one hand, females in top positions strengthen the reputation and standing of IPO firms, with a positive effect on IPO performance. In this regard, McGuinness (2019) found that increased gender diversity in senior management teams promotes a higher initial valuation and attracts higher-quality underwriters, as female managers are perceived by the market as a signal of quality and reliability. On the other hand, several scholars have reported a negative (Rau *et al.*, 2023) or insignificant effect of women on IPO outcomes (Handa and Singh, 2015). Rau *et al.* (2023), for example, claimed that, despite investors' demand for a more diverse board, IPO firms are not able to incorporate such investor appreciation into the IPO price, resulting in women on the board leading to greater underpricing. Similarly, Reutzel and Belsito (2015) empirically demonstrated that female stereotypes may lead investors to consider women as less capable than male directors, thereby reducing IPO performance.

In the family business context, it is evident that the positive effect of women on IPO outcomes is influenced by the family's impact. Indeed, the presence of women on the board results in a positive effect on IPO firm outcomes in terms of Intellectual Capital disclosure (Nadeem, 2020). However, female directors may not adequately fulfill their monitoring and advisory roles in family-owned firms. Similarly, while BGD acts as a beneficial factor for post-listing stock returns and IPO subscriptions, this is only true when the presence of female directors is not constrained by family connections between board members (McGuinness, 2018). This evidence clearly demonstrates the necessity to better understand the influence of women in the IPO process of family firms. In particular, among the critical decisions firms face during the going public process, IPO timing, as an entrepreneurial risky decision (Lester *et al.*, 2006), can be significantly affected by the representation of women in the boardrooms.

Building upon the previous literature on women's influence on family business outcomes, the capacity of female board members to shape family business strategic and entrepreneurial behaviors is widely recognized by scholars who have reported the effects of women directors (both positive and negative) on various firm outcomes, such as internationalization (Wang *et al.*,

2022), innovation (Hernández-Lara and Gonzales-Bustos, 2020), performance (Jouber, 2022) and strategic choices in general (Bettinelli *et al.*, 2019). The theoretical underpinnings of such effects lie in different perspectives (e.g. the critical mass theory; García-Meca *et al.*, 2022). Among these, the upper echelons theory represents one of the most reasonable (Bauweraerts *et al.*, 2022) and has garnered considerable scholarly attention in recent years (Maseda *et al.*, 2022).

Two main interconnected concepts lie at the core of the upper echelons theory: (1) executives behave according to their interpretation of a specific strategic situation they are in, and (2) this interpretation arises from executives' experiences, values and personal traits (Hambrick, 2007). In other words, complex and uncertain situations, such as the IPO, are subject to interpretation rather than being fully "knowable": to understand why organizations do certain things, we must consider the disposition of their top executives (Hambrick and Mason, 1984). Specifically, focusing on directors' characteristics leads to more robust explanations of organizational decisions and outcomes (Bauweraerts *et al.*, 2022). Thus, the differences between female and male directors can indeed impact a strategic decision such as the IPO from an upper echelons perspective. In this context, previous scholars have reported conflicting evidence. Greater gender diversity is associated with high levels of creativity and innovation (Warren *et al.*, 2019). It also improves the key corporate governance mechanisms (Dimungu-Hewage and Poletti-Hughes, 2023; Guizani and Abdalkrim, 2023) by introducing new perspectives, values and diverse knowledge (Post and Byron, 2015), by enhancing the quality of brainstorming (Erhardt *et al.*, 2003) and by fostering collaboration among board members (Bettinelli *et al.*, 2019). Such characteristics demonstrate the potential to promote entrepreneurial choices such as the IPO within a shorter timeframe.

At the same time, greater gender diversity can slow down the decision-making process precisely because it involves multiple perspectives and points of view. Indeed, heightened gender diversity, coupled with more opinions within a group, and thus more conflicts, can make the decision-making process more time-consuming and less effective (Lau and Murnighan, 1998). This can be particularly true in family firms, where the interplay of family and business systems adds greater complexity to the decision-making process, characterized by unique sources of conflict (Kellermanns and Eddleston, 2004).

Moreover, an IPO is commonly recognized as a risky choice (Lester *et al.*, 2006), and, in this sense, women's risk aversion may act as an opposing factor in the board's decision-making process regarding the going public process, especially in the early stages of the firm's life cycle. Female directors often exhibit greater consideration and conservatism in the decision-making process (Faccio *et al.*, 2016; Sila *et al.*, 2016), which may increase the inclination to carefully plan a complex decision like the IPO. This, in turn, presents a concrete possibility of lengthening the decision-making process of the board (Hambrick *et al.*, 1996) and postponing the decision to go public. These theoretical assumptions are empirically corroborated by recent literature in the IPO field. Indeed, as reported by Frii *et al.* (2023), gender matters in the decision to go public: female CEOs, being more risk-averse than their male counterparts, are likely to decrease the probability of companies going public. In family firms, such behaviors may be even more pronounced, as the traditional responsibility assigned to women is often to protect the family from external circumstances and SEW damages (Kariv *et al.*, 2023).

Thus, while female directors may potentially have positive effects on board functions, influencing strategic and performance outcomes, we propose that in a complex and uncertain decision like the timing of an IPO, especially considering the implications for family firms, greater BGD will compel family firms to meticulously consider the decision to go public. This is done in order to identify the right and optimal period for the quotation, thereby reducing the risk of failure. Formally:

H1. BGD positively affects the time to IPO.

The moderating role of FOD

Recent literature has called for the integration of different theoretical perspectives that may contribute to understanding the socio-emotional aspects forming the black box of upper echelons research (Hambrick, 2007; Neely *et al.*, 2020), especially in family firms where socio-emotional considerations arise from the intrinsic relationship between the family and the company, significantly influencing strategic behaviors and outcomes (Maseda *et al.*, 2022).

Gómez-Mejía *et al.* (2007) demonstrated that the SEW, which is the socio-emotional endowment associated with family influence over the business, serves as the primary reference point for family owners. Moreover, the cognitive perspectives of boards in family firms are influenced by considerations about how a given decision might impact this socio-emotional endowment (Bauweraerts *et al.*, 2022). When considering the choice of the time to IPO, the board's appraisal of family owners' concerns related to SEW has the potential to influence the contributions that BGD brings to the board decision-making process and, consequently, the choice of the time to IPO. Indeed, the IPO is a complex process that can significantly impact the preservation of SEW over time (Boers *et al.*, 2017; Leitterstorf and Rau, 2014): since the timing of the IPO can concretely determine the success of the process, with a real risk of undermining the preservation of SEW, it is likely that the greater the attention family owners manifest towards SEW, the longer the time they will require to the board to frame the decision about when to go public.

Stemming on such theoretical assumptions, we suggest that the importance attributed by family owners to SEW preservation may influence the relationship between BGD and the time to IPO. We focus on FOD which can be an effective expression of family owners' attention towards SEW (De Massis *et al.*, 2013). Indeed, while in presence of more family ownership concentration there exists a stronger connection between owners' wealth and that of the firm that increases the desire to preserve SEW (Bacci *et al.*, 2018), greater FOD reduces the intensity of family ties and lessens the concern of the family to retain family control and power (Wiklund *et al.*, 2013) while, in contrast, higher is the focus on short-term returns (Van Doorn *et al.*, 2022). The FOD thus contributes to reducing the focus on SEW objectives that lose their centrality (Le Breton-Miller and Miller, 2013). As we proposed before, greater BGD may hamper board's ability to reach effective decisions and slow down the decision-making process (Carter *et al.*, 2010) by increasing the time to IPO. The coexistence of financial and socio-emotional goals may exacerbate the complexity and dysfunction in the board decision-making process, as to conflicts related with different gender perspectives (Campbell and Mínguez-Vera, 2008) are added those arising from the interplay between family and business priorities (Lee and Rogoff, 1996). That is, as the SEW consideration decreases, the reconciliation of financial and non-financial goals will become less challenging, the board decision-making process less time demanding, by attenuating, if not eliminating, the positive effect of BGD on the time to IPO, and, thus, increasing the speed to go public. Again, the family consideration for SEW introduces a higher level of risk aversion to a firm's decision-making process: prioritizing non-financial goals discourages risky projects (Berrone *et al.*, 2012). That is, less attention to SEW would push family owners to be more impulsive in searching for the immediate benefits of going public rather than to take care of possible future SEW losses. Such behavior may turn into greater pressures to go public earlier by affecting the board decision-making process and by negatively moderating the positive relationship between BGD and the time to IPO.

Taking together these arguments, we propose that the positive effect of BGD on the time to IPO will be attenuated, or will even become negative, when the family consideration towards SEW will be lower, thus when the FOD will be higher. Formally:

H2. FOD negatively moderates the relationship between BGD and the time to IPO.

Methodology

Sample and data collection

We used hand-collected data of family firms that went public via IPO in Italy from 2000 to 2020. The starting year of data collection takes into account regulatory interventions (e.g. the Draghi Law – D.Lgs. N.58/1998 – which offered higher protection to investors; Cattaneo *et al.*, 2015). The choice of Italy as the geographical context holds significance on multiple levels. First, family firms play a crucial role in the national economy, constituting the backbone of Italian business (AIDAF, 2022). Indeed, if we focus on family businesses with a turnover exceeding 20 million euros, they represent more than 65% of all Italian companies and provide employment to more than 2 million workers. Second, for the purpose of this study, the fact that more than 70% of the Italian stock market comprises family firms is particularly pertinent (AIDAF, 2022). There is an ongoing trend in Italy for family businesses to go public, driven by various industry and policy interventions (Finaldi Russo *et al.*, 2020). Despite this trend, the Italian stock market remains less developed compared to its European counterparts, adding urgency to a closer examination of this context (Finaldi Russo *et al.*, 2020). Moreover, the gender issue gains specific relevance within the Italian context. In 2011, the Golfo-Mosca law (Law 120/2011) introduced board gender quotas in Italian-listed and state-owned companies (Rigolini and Huse, 2017). However, despite these legal measures, Italy still faces challenges in addressing gender gaps, both in society and within the business realm (De Arcangelis *et al.*, 2019). Again, a closer look at the Italian context spotting light on the female role in society is still required.

Family IPOs are defined by imposing two simultaneous criteria (Cirillo *et al.*, 2017): first, family members (i.e. persons related by blood or marriage ties) must control the firm via equity capital (with a threshold of 30%) [1] and second, the family must be actively involved in the governance through at least one family member who is involved in the governance but is different from the owner. Building on previous studies (Minichilli *et al.*, 2016), we established familial affiliations of company owners and directors by cross-referencing shared surnames within the controlling family, as indicated in company reports (Miller *et al.*, 2013; Minichilli *et al.*, 2016) and the IPO prospectus. Simultaneously, publicly available information sourced from company websites, executive and director profiles on their respective web pages, social platforms (such as LinkedIn), and specialized press articles was utilized. This method was adopted to minimize potential inaccuracies that might arise when the owner's name differs from the owning family due to, for instance, marital relationships. From the complete dataset of IPOs occurring in Italy between 2000 and 2020 (amounting to 380), we excluded firms in the financial sector (totaling 77) due to the distinct operational nature of these entities (e.g. Chahine and Filatotchev, 2008). Further exclusions were applied to firms from which we couldn't retrieve data (11 firms) and upon applying our family firm criteria, the final sample comprised 148 family IPOs.

Following previous literature (Chandler *et al.*, 2019; Romano *et al.*, 2019), we use the IPO prospectus of each firm as the principal source of data, complemented by multiple sources (e.g. finance newspapers, the Who's Who database, other Internet sources and social networks, such as LinkedIn). First, we searched each firm's IPO prospectus on the Italian Stock Exchange website. In cases where this document was missing, we conducted searches on the respective company websites. Often, the IPO prospectus provided a significant portion of the information required to establish our variables related to the company (e.g. age, equity track record and eco-financial details), IPO (e.g. type, timing and offer price), family (e.g. ownership, involvement) and directors (e.g. age, background and tenure). Yet, when necessary, we supplemented this information with searches on AIDA (for specific details on ownership and economic-financial data) or websites such as LinkedIn (for directors' previous work experiences).

Variables

Our *dependent variable* is the time to IPO (TIME_TO_IPO) which is defined as the logarithm of the length of time, measured in months, from the company's founding to its IPO (Chang, 2004; Lee and Lee, 2008; Romano *et al.*, 2019; Yang *et al.*, 2011; Zacharakis and Shepherd, 2001). This measure expresses the propensity toward the entrepreneurial risky choice to go public via IPO which is considered a crucial factor in entrepreneurial context (Lévesque *et al.*, 2009).

Our main *independent variable* is BGD (BLAU_INDEX). Following previous studies (Bruna *et al.*, 2019), we operationalized it through the Blau Heterogeneity index (Blau, 1977) which is an optimal measure of diversity capturing variation within a group of people (Harrison and Klein, 2007), diffusely used in studies on gender diversity (Laique *et al.*, 2023).

The Blau index is measured as follows:

$$1 - \sum_{i=1}^{n} p_i^2$$

where i(1,2) represents different gender categories available in the board (i.e. male and female) and p is the proportion of each category (male and female) on the board (Nadeem *et al.*, 2019).

The Blau Index ranges from 0 (when there are no female directors) to 0.50 (which occurs when a board involves an equal number of female and male directors).

Our *moderator* is FOD (FAM_OWN_DISP) measured as the number of family owners (Campopiano *et al.*, 2014) pre-IPO. A larger number of family owners, thus a greater FOD, indicates decreasing attention towards SEW considerations (Bacci *et al.*, 2018).

We employ several *control variables* at individual, family, firm and contextual level. First, CEO characteristics affect the time to IPO (Romano *et al.*, 2019; Yang *et al.*, 2011), the risk attitude of family firms (Zona *et al.*, 2023) and, generally speaking, IPO outcomes (Kallias *et al.*, 2023). Therefore, we control for CEO age (CEO_AGE), the difference between IPO year and CEO born date, CEO education (CEO_EDU), a dummy variable equal to one if the CEO has a degree, 0 otherwise, and for CEO family (CEO_FAM), a dummy variable equal to one if the CEO is a family member, 0 otherwise. Second, at the family level, we use family generational involvement (GEN_INV) which is an ordered variable that accounts for the number of generations simultaneously involved in the IPO, ranging from 1 to 3 (Sciascia *et al.*, 2013). We also control for family generational stage (FAM_STAGE), which is an ordered variable taking the value of one if the IPO is in its founding stage, the value of two if the business is in the second generation and so forth (Sciascia *et al.*, 2014). These variables are measured at the board level, consistently with the independent variable. Since scholars reported that family governance involvement and control significantly affects the decision-making process during the IPO time (Ding and Pukthuanthong, 2013), we control for the percentage of family board directors (FAM_BOARD) and for family ownership (FAM_OWN), expressed by the quota of shares held by the family over the total number of shares (pre-IPO). At the firm level, the analysis controls for institutional investors (INST_INV), a continuous variable indicating the quota of shares held by institutional investors over the total number of shares (pre-IPO), board size (BOARD_NUMB), the number of board directors in log form, and for profitability, measured as the ratio of price on equity per share (PR_EQ). Finally, we control for leverage (LEV), which is the ratio of the book value of non-equity liabilities to the book value of total assets, and for size (SIZE), expressed as market capitalization at the offer price (in log form). Moreover, in line with similar studies (Cirillo *et al.*, 2015), we accounted for the offer type (SELL). Italian firms typically go public by offering new shares (increasing the capital, initiating the "Offerta Pubblica di Sottoscrizione" (OPS)), by selling shares of existing shareholders (initiating the "Offerta Pubblica di Vendita" (OPV)), or through a combination of both ("Offerta Pubblica di Vendita e di Sottoscrizione" (OPVS)). To address this diversity, we defined a binary variable that equals 1 if the IPO is an OPS and 0 otherwise. As for the context, we control for crisis (CRISIS), a dummy

variable equal to one if the IPO took place during the financial crisis (i.e. from January 2007 to December 2011) and zero otherwise (Cirillo *et al.*, 2015). Moreover, previous studies have recognized that the high-tech nature of firms influences their speed to go public (Li and Zhou, 2023; Shepherd and Zacharakis, 2001). Therefore, in line with previous scholars (e.g. Cirillo *et al.*, 2015; Kim *et al.*, 2008), the study employs SIC codes (283, 357, 366, 367, 318, 382, 384, 48, 737) to define the "technology sector". Subsequently, we use a high-tech dummy (HIGH_TECH) variable that equals 1 if the firm belongs to the technology sector and 0 other wise.

Following previous similar studies, both in the IPO (Romano *et al.*, 2019) and family firms (Baù *et al.*, 2019) literature, to demonstrate our hypotheses, we employed regression analyses. In particular, we used a standard model in the form:

$$yi = a\mathbb{i} + \beta_0 BLAU\_INDEX + \beta_1 FAM\_OWN\_DISP + \beta_2 INTERACTION + yX\mathbb{i} + \varepsilon_i$$

where i indexed IPOs; Y_i was the TIME TO IPO variable; BLAU_INDEX and FAM_OWN_DISP were the main regressors of interest; INTERACTION was the interaction term included to evaluate the moderating effect of FAM_OWN_DISP on the relationship between BLAU_INDEX and the firm's time to IPO; X_i was a vector of controls (and y was a vector of parameters) and ε_i represented stochastic errors.

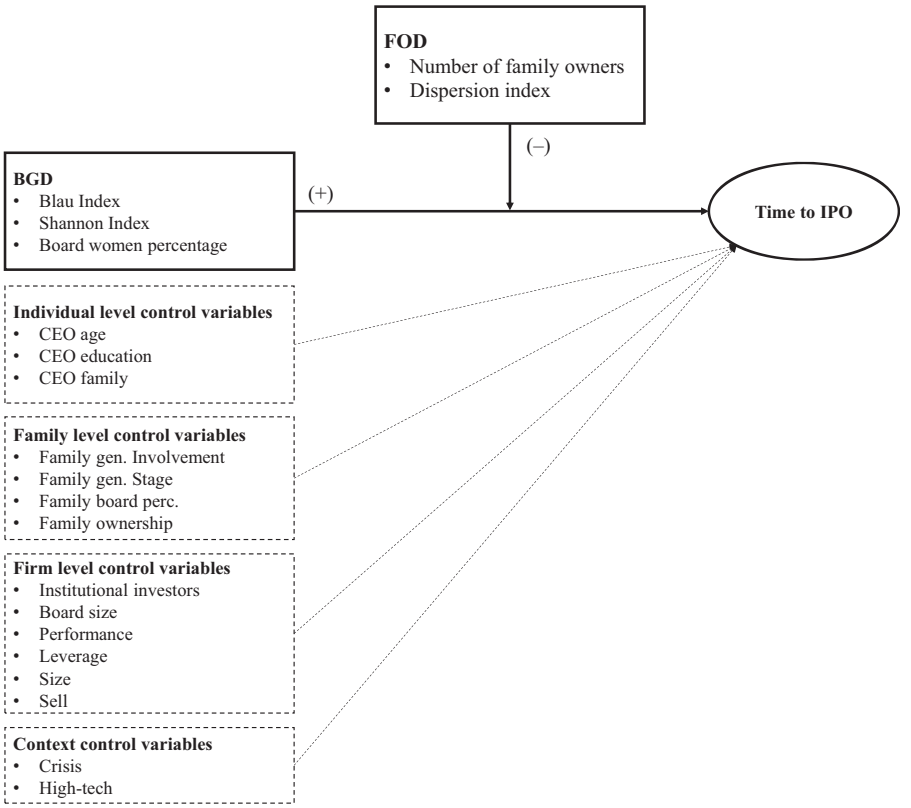
Figure 1 depicts the entire research model, encompassing both our main hypotheses and other explanatory variables.

Findings

Descriptive statistics and the correlation matrix can be found in Table 1. In the sample under investigation, family firms go public, on average, with more than two family shareholders involved in the ownership (*FAM_OWN_DISP*) and with family members occupying more than one-third of the board seats (*FAM_BOARD*). Additionally, family firms embark on an IPO by holding, pre-IPO, more than 70% of shares (*FAM*_OWN) and, on average, with more than one family generation involved in the business (*FAM_GEN_INV*).

The results of the empirical specifications are presented in Table 2. The variance inflation factor (VIF), calculated for each model and whose mean is reported at the end of Table 2, shows that multicollinearity is not a concern (Kennedy, 2008). In model 1, we entered only control variables, then we introduced the Blau index (model 2), FOD (model 3), and the interaction term (model 4) [2].

Model 1 shows that IPO firms with a family CEO (*CEO_FAM*, −0.347, $p < 0.05$), with a high solid background (*CEO_EDU*, −0.294, $p < 0.10$) and those that went public during a crisis period (*CRISIS*, −0.570, $p < 0.01$) go public at an earlier stage. These results are in line with previous literature asserting that family CEOs boost family entrepreneurial outcomes (Pongelli *et al.*, 2023), that CEO educational level prompts the risk token by firms (Farag and Mallin, 2018) and that firms reduce the delay to go public in uncertainty period (Lévesque *et al.*, 2009), like that of crisis. Differently, the age of the CEO (*CEO_AGE*, 0.018, $p < 0.05$) and the generational stage (*GEN_STAGE*, 0.220, $p < 0.10$) increase the time at which firms go public. Indeed, on the one hand, older CEOs are more cautious and less prone to organizational changes, such as those related to the IPO; on the other hand, literature reports that family descendants may exhibit less entrepreneurial spirit than founders (Bettinelli *et al.*, 2017). Model 2 adds the predictor variable, Blau Index, to test our first hypothesis which predicts a positive relationship between the BGD and the firm's time to IPO. Our results confirm the hypothesis and reveal a positive relationship (*BLAU_INDEX*, 0.997, $p < 0.01$) with the dependent variable. Greater representation of women on the board tends to increase the debate within the board and, by slowing down the decision-making process, it takes longer the time to undertake the IPO. In the next step, Model 3, we included the moderating variable (*FAM_OWN_DISP*). It is, *per se*, not statistically significantly related to the firm's time to IPO. Finally, when we focus on the interaction between BGD and



Source(s): Figure by authors

Figure 1.
Research model

FOD (Model 4), we find that our empirical results support Hypothesis 2. Indeed, the interaction is negative and statistically significant (*INTERACTION*, −0.911, $p < 0.001$), demonstrating that FOD negatively moderates the relationship between BGD and the time to IPO. This result confirms our theoretical predictions: the diminishing attention of family members towards the preservation of SEW, which is more likely to occur with an increasing number of family members sharing ownership (i.e. increasing FOD), reduces the inclination towards long-term objectives. This, in turn, prompts the family to exert pressure on the board to go public, aiming to reap the benefits of the IPO at an earlier stage. As depicted in Figure 2, FOD reverses the relationship between BGD and the time to IPO. As FOD increases, BGD decreases the time it takes for family firms to go public.

Figure 3 reports our research model with coefficients for significant relationships. With regard to explanatory variables, for a matter of clarity, we reported only the coefficients of the main variables (Blau index for BGD and the number of family owners for FOD).

Robustness check

We performed four robustness tests. First, we replicated our analysis with two alternative proxies for BGD: (1) the Shannon index (*SHANNON_INDEX*) (Shannon, 1948; Campbell and Mínguez-Vera, 2008; Singh *et al.*, 2023) and (2) the proportion of female directors on the board (*WOM_BOARD_P*) (Nadeem *et al.*, 2019; Bauweraerts *et al.*, 2022).

Table 1.
Descriptive statistics and correlation matrix

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
1) *TIME_TO_IPO*	5.22	0.95	1																	
2) *BLAU_INDEX*	0.18	0.19	0.21*	1																
3) *FAM_OWN_DISP*	2.68	1.57	0.08*	−0.09*	1															
4) *CEO_AGE*	50.84	9.66	0.22*	0.03	0.15*	1														
5) *CEO_EDU*	0.66	0.48	−0.10*	−0.14*	0.08*	−0.06	1													
6) *CEO_FAM*	0.68	0.47	−0.16*	0.16*	−0.13*	0.03	−0.28*	1												
7) *FAM_GEN_INV*	1.55	0.53	0.10*	0.11*	0.27*	0.12*	−0.03	0.10*	1											
8) *FAM_GEN_STAGE*	1.57	0.71	0.19*	0.00	0.29*	0.09*	0.07*	−0.10*	0.34*	1										
9) *FAM_BOARD*	0.34	0.16	0.02	0.23*	0.25*	0.22*	−0.09*	0.21*	0.35*	0.13*	1									
10) *FAM_OWN*	0.76	0.23	0.07*	0.15*	0.07*	0.01	−0.11*	0.17*	0.13*	0.08*	0.44*	1								
11) *INST_INV*	0.03	0.07	−0.07*	0.05	−0.05	−0.13*	−0.09*	−0.00	0.01	−0.08*	−0.11*	−0.30*	1							
12) *BOARD_NUMB*	1.86	0.35	0.13*	−0.06*	0.21*	0.02	0.01	−0.20*	0.04	0.18*	−0.46*	−0.27*	0.15*	1						
13) *PR_EQ*	72.24	246	−0.03	0.03	0.04	0.10*	−0.05	0.13*	0.04	0.04	−0.02	−0.02	−0.01	0.05	1					
14) *CRISIS*	0.15	0.36	−0.18*	−0.09*	0.22*	−0.05	0.02	0.04	0.07*	0.17*	−0.04	−0.02	−0.06*	0.06*	−0.09*	1				
15) *LEV*	0.67	0.20	0.10*	0.00	−0.01	−0.05	−0.13*	0.02	−0.05	−0.04	−0.07*	0.05	0.03	−0.05	0.03	0.05	1			
16) *SIZE*	18.4	1.48	0.08*	−0.15*	0.16*	0.04	0.06*	−0.15*	0.19*	0.33*	−0.24*	−0.02	0.03	0.58*	0.13*	0.11*	−0.07*	1		
17) *SELL*	0.52	0.50	0.05	−0.10*	0.14*	0.12*	0.16*	−0.05	0.03	0.15*	−0.12*	−0.15*	0.15*	0.26*	0.02*	0.16*	0.01	0.48*	1	
18) *HI-TECH*	0.45	0.49	−0.10*	−0.23*	−0.04	−0.06*	−0.13*	0.02	0.02	−0.02	−0.17*	−0.14*	0.06*	0.04	0.11*	0.07*	0.16*	0.20*	0.09	1

Note(s): *Statistically significant at the 5% level
Source(s): Table by authors

Variables	Model 1	Model 2	Model 3	Model 4
BLAU_INDEX(a)		0.997**	1.023**	2.040***
		(0.382)	(0.396)	(0.462)
FAM_OWN_DISP(b)			0.022	0.021
			(0.055)	(0.055)
*INTERACTION(a*b)*				−0.911***
				(0.264)
CEO_AGE(d)	0.018*	0.018*	0.018*	0.017*
	(0.008)	(0.008)	(0.008)	(0.007)
CEO_EDU(e)	−0.294†	−0.252†	−0.255†	−0.258†
	(0.160)	(0.157)	(0.158)	(0.154)
CEO_FAM(f)	−0.347*	−0.380*	−0.369*	−0.348*
	(0.159)	(0.155)	(0.157)	(0.150)
FAM_GEN_INV(g)	0.139	0.113	0.105	0.096
	(0.179)	(0.175)	(0.172)	(0.170)
FAM_GEN_STAGE(h)	0.220†	0.218†	0.213†	0.286*
	(0.142)	(0.131)	(0.131)	(0.113)
FAM_BOARD(i)	−0.305	−0.469	−0.558	−0.546
	(0.608)	(0.596)	(0.674)	(0.654)
FAM_OWN(l)	0.308	0.250	0.247	0.165
	(0.384)	(0.370)	(0.369)	(0.348)
INST_INV(m)	−0.864	−1.031	−1.016	−0.813
	(0.963)	(1.028)	(1.044)	(1.018)
BOARD_NUM(n)	0.292	0.231	0.193	0.154
	(0.338)	(0.332)	(0.362)	(0.349)
PR_EQ(o)	−0.000	−0.000	−0.000270	−0.000
	(0.000)	(0.000)	(0.000330)	(0.000)
CRISIS(p)	−0.570**	−0.538*	−0.557**	−0.523*
	(0.212)	(0.211)	(0.210)	(0.203)
LEV(q)	0.629	0.603	0.596	0.473
	(0.486)	(0.471)	(0.468)	(0.487)
SIZE(r)	−0.036	−0.018	−0.0156	−0.00937
	(0.099)	(0.099)	(0.102)	(0.0977)
SELL(s)	0.134	0.132	0.127	0.100
	(0.208)	(0.211)	(0.217)	(0.207)
HIGH_TECH(t)	−0.186	−0.111	−0.109	−0.0706
	(0.159)	(0.158)	(0.158)	(0.150)
_cons	3.878*	3.748*	3.803*	3.803*
	(1.685)	(1.695)	(1.685)	(1.655)
N	148	148	148	148
R-squared	0.207	0.240	0.241	0.296
Adjusted R-squared	0.117	0.148	0.142	0.197
Prob > F	0.000	0.000	0.000	0.000
VIF	1.41	1.41	1.45	1.52

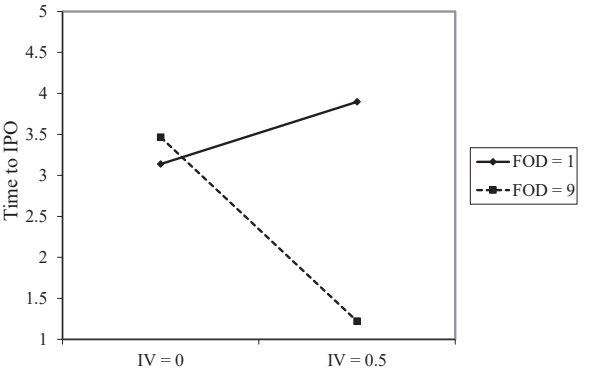
Note(s): Robust standard errors in parentheses: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$ and †$p < 0.1$
Source(s): Table by authors

Table 2. Regression estimates of the relationship between BGD and time to IPO

The Shannon index was calculated as:

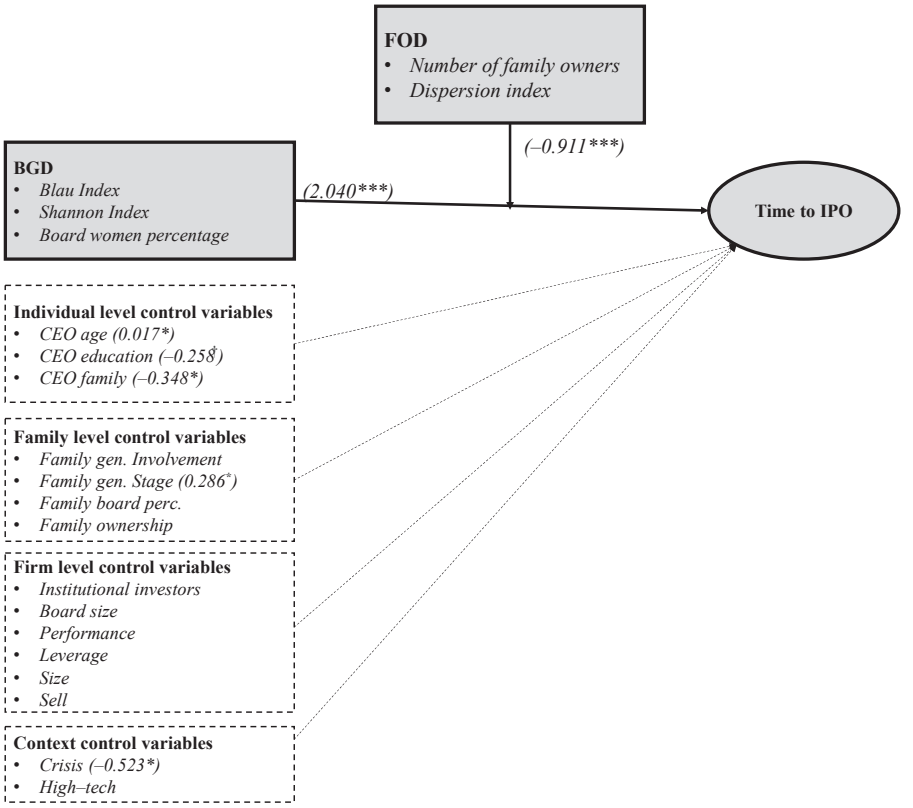
$$-\sum_{i=1}^{n} p_i Logpi,$$

where I is the gender category (n is equal to 2, male and female) and p is the percentage of directors in each category (Campbell and Mínguez-Vera, 2008). Our results remain consistence with these two alternative measures.



Source(s): Figure by authors

Figure 2.
BGD and the time to IPO: the moderating role of FOD



Note(s): Significant levels: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, †$p < 0.1$

Source(s): Figure by authors

Figure 3.
Research model with coefficients

Second, we used an alternative operationalization of FOD. Following previous scholars (Bacci *et al.*, 2018; De Massis *et al.*, 2013; Miller *et al.*, 2022), we calculate it as the complement to one of the Herfindahl index which, originally, represented a concentration measure. Thus, we define our alternative proxy of FOD (*ALT_FAM_OWN_DISP*) as follows:

$$1 - \sum_{i=1}^{n} Oi^2,$$

where n is the number of family shareholders and Oi is the fraction of equity held by the ith family shareholders. *ALT_FAM_OWN_DISP* is a continuous variable assuming values between zero and one. In particular, a value close to zero indicates that the ownership is concentrated among family shareholders, while a value close to one indicates stronger ownership dispersion among different family members. Results remain robust also considering all three different BGD operationalizations (see Appendixes 1 and 2 for empirical specifications).

Third, we replicated our analyses by employing two alternative estimation models, the Tobit regression and the ordered probit regression, which have been successfully used in similar studies (e.g. Teng and Li, 2020) (see Appendix 3 for empirical specifications).

Finally, we employed two different thresholds of equity (i.e. 20 and 50%) to define an IPO as a family firm.

Results, which were omitted for a matter of space, remained consistent with our main analyses, considering different measures for BGD, the alternative FOD operationalization as well the two alternative econometric models.

Post-hoc analyses

The results so far unequivocally support our theoretical prediction that BGD increases the time to IPO in family firms. However, we delved further to explore the impact of BGD on the post-IPO short-term performance. In this vein, we considered two measures: Return on assets (ROA) and the market-to-book ratio. ROA is defined as the ratio of earnings before interest and taxes (EBIT) to the book value of total assets (Cirillo *et al.*, 2017). The market-to-book ratio (M/B) is computed as the ratio of market capitalization (the number of post-IPO shares multiplied by the closing price on the first trading day) to the equity book value (the sum of primary offering proceeds and the book value of equity from the last audited pre-IPO financial statement) (Cirillo *et al.*, 2015). While ROA is accounting-based and does not necessarily reflect the evaluation made by external investors, the M/B ratio is a market measure of performance and captures the relative value perceived by investors (Roosenboom and Van Der Goot, 2003).

To explore the impact of BGD, we defined BGD_dum as equal to one if the Blau index [3] was above the mean and zero otherwise. Table 3 panel A shows results obtained by comparing the mean of both samples.

We only found statistically significant differences for the M/B value. In panel B, we regressed the post-IPO performance measures on BGD. Once again, BGD seems to have no impact on ROA. However, BGD (-6.819, $p < 0.001$) is significantly and negatively related to M/B (which we transformed into log form for ease of interpretation). Our results align with previous studies that highlight the negative effects (e.g. Reutzel and Belsito, 2015) or insignificance (Arora and Singh, 2023; Singh *et al.*, 2023) of gender on IPO performance.

Discussion

Utilizing a uniquely hand-collected dataset, we infer from 148 IPOs that occurred in Italy between 2000 and 2020. Within the Upper Echelon framework, complemented by the SEW perspective, we strive to unravel two distinct issues.

Panel A

	BGD = 1 (75) mean	BGD = 0 (73) mean	Difference (mean) *T*-test
ROA	0.152	1.0499	0.9647
M/B	1257.03	3001.57	3.3020***

Panel B

Dependent variable→	ROA	M/B
Costant	0.993	6.209***
BGD	−2.237	−6.819***
N	148	148
R-squared	0.0055	0.0944
Adjusted *R*-squared	−0.0013	0.0882

Source(s): Table by authors

Table 3.
Post-hoc analyses: board gender diversity and IPO performance in family firms

First, we examine the impact of BGD on the time to IPO in family firms. Our findings indicate that BGD prolongs the time to go public in family firms. Specifically, Hypothesis 1 is anchored in the upper echelon theory, stating that different decision-makers characteristics, in our case gender, shape the interpretation that people have about a specific strategic situation they face (Hambrick, 2007) and, consequently, business outcomes (Bauweraerts *et al.*, 2022). In particular, within the risky choice of an IPO, we find that female directors lengthen the time necessary to go public. Indeed, diverse gender perspectives within the boardroom can significantly impact the decision-making process and ultimately contribute to a lengthened IPO timing in family firms: female directors can lead to a more thorough and time-consuming evaluation of strategic choices (Lau and Murnighan, 1998), including the decision to go public through an IPO. This phenomenon is further influenced by the aversion of female directors towards risk (Yarram and Adapa, 2022), especially in family firms. Their cautious approach, driven by a tendency to prioritize family interests over business objectives (Kariv *et al.*, 2023), can introduce complexities in the decision-making process, thus contributing to delays in critical strategic moves like the IPO. This emphasis on the need to balance family and business considerations echoes the intricacies inherent in managing family firms, where the interplay between family dynamics and business strategies often adds layers of complexity to decision-making processes (Kellermanns and Eddleston, 2004). Albeit considered in a very strategic context – that of the IPO -, our findings are in line with those of previous scholars in the upper-echelon theory realm, claiming for a differentiated effect of gender on business outcomes (Bettinelli *et al.*, 2019). In particular, although the presence of female directors may lead to a reduction in risk-taking behavior (Yarram and Adapa, 2022) and the entrepreneurial spirit of firms (Wang *et al.*, 2022), it does not necessarily imply a negative impact. Instead, in line with previous scholars (Wang *et al.*, 2022), we demonstrate that female directors cautious approach can lead to more thoughtful and high-quality decisions, even if it means a prolonged decision-making process.

Moreover, rather than merely corroborating previous findings, we took a step forward by delving into the most recent literature on the topic to investigate factors that influence the gender role in family firms (Bauweraerts *et al.*, 2022; Maseda *et al.*, 2022).

That is, our second aim is to focus on the role of FOD in shaping the impact of BGD on the IPO timing. Indeed, we go beyond simply understanding the gender impact on IPO outcomes (e.g. McGuinness, 2018) by responding to the call for more research investigating factors that either boost or hinder women's contributions to business (Maseda *et al.*, 2022). In this line of inquiry, our findings reveal that FOD negatively alters the relationship between BGD and

IPO timing. Hypothesis 2 explores the mechanism behind this phenomenon. Drawing on the SEW perspective, we shed light on notable differences according to the varying attention of family owners towards SEW. Specifically, we discover that in the presence of diminished attention towards SEW preservation (higher FOD), BGD adversely influences the time to IPO by expediting the process. This acceleration can be attributed, on one hand, to the reduced focus on SEW that accompanies FOD. Under this perspective, our results confirm those of previous scholars who ascertain that the ties between the family and the business tend to weaken when control is distributed among multiple family members (Miller *et al.*, 2022). In our case, such a scenario also increases the family owners' inclination towards short-term objectives (Van Doorn *et al.*, 2022), such as maximizing IPO returns. On the other hand, the reduced complexity experienced by the board when family priorities do not significantly interfere with the decision-making process streamlines the time required to go public.

Our findings demonstrate robustness across all the thresholds (20%, 30% and 50%) of family ownership that we consider, as well as across various BGD definitions and measures (Blau Index, Shannon Index and the percentage of women on the board) we employed. Additionally, the results remain consistent across all the methods utilized (OLS regression and Tobit model).

Alongside this empirical evidence, we take a further step by addressing the relationship between BGD and IPO performance in post-hoc analyses. In this regard, our results align with the academic debate on the topic, presenting contrasting evidence about the effect of gender diversity on performance (Kiefer *et al.*, 2022; Martinez-Jimenez *et al.*, 2020). Indeed, our findings warrant a separate discussion, distinguishing the insignificant effect of BGD on ROA from the negative and statistically significant effect of BGD on the market-to-book ratio.

Regarding the former, previous scholars have demonstrated that the so-called "tokenism" can hinder the ability of women in leadership roles to fully utilize their potential and make a meaningful impact on organizational performance. This limitation arises from the perception that the presence of women in these positions may be merely symbolic, lacking genuine empowerment and influence within the decision-making process. (Campbell and Minguez Vera, 2010; Lawrence and Raithatha, 2023). In a context such as Italy, where the appointment of women on boards is mandatory by law, the possibility of firms having female directors due to social and regulatory pressures is even more likely. Consequently, this may diminish the effectiveness of female contributions to the decision-making process and firms' outcomes (Ahern and Dittmar, 2012). Moreover, in family firms, where female directors may be appointed for reasons related to familial concerns (Bianco *et al.*, 2015), potentially at the expense of meritocracy, such arguments seem even more pertinent.

Considering the relationship between BGD and market-to-book, previous literature has provided several reasonable theoretical explanations to elucidate the adverse impact of women on performance (e.g. board gender heterogeneity may increase complexity and group conflicts, Lim *et al.*, 2019), one of these appears to be the most pertinent given both the nature of the outcome – a market-based measure – and the context in which the analyses were conducted—family firms listed on the Italian stock market. First, rather than reflecting the actual firm value, market performance measures discount investors' perceptions of the firms and their future expectations (Cirillo *et al.*, 2015). During the IPO, when newly established firms grapple with the so-called "liability of newness" (Certo *et al.*, 2009), investors' sentiments regarding the company become even more significant. Previous research has presented evidence that female directors may be perceived by investors as less capable than males in fulfilling the monitoring role of corporate boards and as more risk-averse (Reutzel and Belsito, 2015). This perception may be accompanied by a sense of incongruity towards women occupying top positions (Liu *et al.*, 2023; Wang *et al.*, 2023). Indeed, investors' unfulfilled expectations regarding who should typically occupy a given role (i.e. the director role) may lead them to react negatively to women on the board (Mukarram *et al.*, 2018), consequently

impacting market performance measures negatively. This circumstance is even more pronounced in a context like Italy, where despite the progress made in recent years, gender inequalities remain prominent in domains such as pay, power, time and knowledge, with Italy scoring the lowest in the European Union in terms of gender equality in the workplace (EIGE, 2023).

Taken together, these results on the BGD-performance relationship confirm those of a growing body of literature, suggesting the negative or insignificant effect of women on IPO performance (Handa and Singh, 2015; Rau *et al.*, 2023; Reutzel and Belsito, 2015).

Building upon these results, our paper provides several contributions to theory and practice, which are outlined in the following subsections.

Theoretical contributions

Our primary contribution adds to the existing literature on IPOs and family firms. We enrich the academic debate in at least three distinct ways. First, we position our work within the emerging yet underdeveloped academic discussion on the influence of gender on family IPOs (Carbone *et al.*, 2022; McGuinness, 2018; Nadeem, 2020). Specifically, by grounding our arguments in the latest upper-echelon theorizations (e.g. Maseda *et al.*, 2022) and by focusing on the unique decision-making processes of women, we elucidate the impact of female involvement in terms of IPO timing and performance. Regarding the time to IPO, as we investigate factors influencing the pre-IPO phase, we contribute to an underdeveloped area in the research field (Carbone *et al.*, 2022) by also introducing upper-echelon arguments into academic conversations, which have so far been polarized around theories grounded in the finance realm (Croci *et al.*, 2022). Our analyses reveal that, in addition to the non-family status of upper echelons (Sonfield and Lussier, 2009), IPO characteristics may be influenced by demographic factors, such as, in our case, the gender diversity of directors. From a theoretical perspective, broadening our understanding of family IPO antecedents holds significance as it can help identify both facilitating factors and obstacles in the listing process of family businesses that still remain hesitant towards the IPO (Croci *et al.*, 2022). Regarding studies on the short-term performance of family IPOs (e.g. Kotlar *et al.*, 2018), we, for the first time, introduce the gender issue into the discussion by addressing its role on two different performance metrics. Our study is also the first, to the best of our knowledge, to address the gender-IPO performance issue (e.g. Chen and Lai, 2023) in the context of family businesses, while also distinguishing the effect of BGD on both accounting and market-based performance outcomes. In this way, we respond to the call to not treat the effect of BGD on performance as straightforward (e.g. Abdullah *et al.*, 2016). We corroborate previous literature suggesting that, due to perceived role incongruity, women may wield less influence than male directors or may even have a negative effect on the firm's performance from a market standpoint (Mukarram *et al.*, 2018). Our results confirm the contrasting roles played by gender diversity in family firms (Maseda *et al.*, 2022), suggesting that several research avenues remain to be explored by scholars.

Our second theoretical contribution is anchored in the literature on IPO timing (e.g. Romano *et al.*, 2019). Unlike previous scholars, who primarily focused on contextual factors (e.g. Teng and Li, 2020) and individual factors (e.g. Romano *et al.*, 2019), we shifted our focus to the composition of the board (in terms of gender diversity) and the ownership structure (in terms of the dispersion of family ownership), factors that scholars have found to influence entrepreneurial choices (Wang *et al.*, 2022), such as the decision to go public through an IPO.

Finally, our work contributes to the latest academic debate on gender issues in family firms by contributing to both the upper echelon and the SEW streams of research. Indeed, we support evidence indicating women's risk aversion (e.g. García-Meca *et al.*, 2022) and apply it to an underexplored entrepreneurial context: the IPO domain. Specifically, we respond to the

call for more research to unpack the black box of upper echelons (Hambrick, 2007; Hambrick and Mason, 1984) by enhancing the understanding of contingency factors that can explain the influence of female directors on firm outcomes (Maseda *et al.*, 2022). Building upon the significant contributions of previous scholars (e.g. Bauweraerts *et al.*, 2022), the novelty of our study lies in the decision to focus on FOD as the defining element that shapes the contribution of women in family firms. As the number of individuals sharing ownership in family firms impacts the emotional attachment of the family to their business (Bacci *et al.*, 2018; Campopiano *et al.*, 2014), it has the potential to significantly influence the cognitive framework of boards in family firms. FOD is particularly relevant as it not only helps us understand the socio-emotional aspects that contribute to shaping the cognition and behavior of family firms (Bauweraerts *et al.*, 2022) but also introduces the dimension of conflicts into the discussion (Bjuggren *et al.*, 2012; De Massis *et al.*, 2013) due to the complexity arising from the presence of multiple familial interests. At the same time, we contribute to studies that address the effect of FOD within the theoretical framework of the SEW perspective (Bacci *et al.*, 2018), by treating it as a contingent factor and unraveling its complex role when combined with gender characteristics, which, in themselves, carry distinct implications in terms of emotional attachment (Zona *et al.*, 2023). Certainly, our work represents only a starting point in investigating the intricate interrelations between gender, family ownership and their effects on SEW.

Alongside theoretical contributions, our study also offers insights for family firm managers and stakeholders, practitioners and policy makers, which we present in the next section.

Practical implications

The present study has also practical implications. In detail, while scholars recognized that family firms have the potential to boost women representation in apical positions (Campopiano *et al.*, 2017), the challenges women face to break the "glass ceiling" remain considerable, also in family firms (Eddleston and Sabil, 2019; Martinez Jimenez, 2009). In this sense, the potential beneficial role of female directors is undermined by firm, family, and contextual factors surrounding female works in the business (Maseda *et al.*, 2022). By disentangling the interactive effect of BGD and FOD, we offer evidence on factors that may shape the female influence in family firms. Such evidence may be of practical utility in several ways.

First, our study demonstrates that, rather than focusing only on increasing the gender quota within the business, practitioners and institutions should pay more attention to the contextual factors that affect the female contribution to the business. Consistency, the right interventions to undertake to exploit the gender influence on board and to reduce the loss of adequate talent and resources should try to shape the environment in which the women's decision-making process occurs. Indeed, our results show that, while gender diversity lengthens the time to go public, the presence of multiple family owners turns negative this relationship, as it reduces the time to go public. Thus, where female in board act in limiting risks related to the IPO – even more challenging in family firms – as they prompt decision-makers to carefully ponder the decision to go public, family characteristics abate such influence.

Investigating such issue in the chosen geographical and institutional context appears even more significant. Indeed, the necessity to boost the scholarly and policy-makers' attention on the gender issue in family businesses in Italy has, at its core, twofold root. First, in this country family firms represent the majority of listed companies (AIDAF, 2022) and, as we stated previously in the manuscript, constitute the backbone of the national economy. That is, understanding what happens in such firms means, easily, that we reach a better

comprehension of a certain phenomenon – the female contribution to business outcomes and factors inhibiting or boosting such contribution–- in the specific context under investigation. Second, despite the regulatory effort to promote the gender quota in business as a tool to reduce gender inequality in Italy, such a country remains, in some way, patriarchal and gender-biased, with several stereotypes about women and their role still to be overcoming (De Arcangelis *et al.*, 2019; Istat, 2018). In this sense, the negative effect of BGD on short-term IPO performance supports the necessity to put the policymakers attention on gender bias which, despite the regulatory interventions, still shapes the investor's perception in the Italian market by significantly lowering, if not eliminating, the beneficial effect of BGD on firm's outcomes. Indeed, policy makers interventions in the vein to shape society perception and belief, especially of young generations, are therefore urgent.

Second, our attempt to shed light on factors affecting the time to IPO in family firms may be particularly useful for family firm investors, especially considering the relationship between the time to IPO and the long-term survival of IPOs (Yang *et al.*, 2011). Indeed, based on our results, investors interested in family IPOs can gain a broader perspective on elements that influence the behaviors of such firms in the market. Our analyses suggest that, in addition to contextual factors (e.g. Teng and Li, 2020) and CEO characteristics (e.g. Romano *et al.*, 2019), when evaluating family IPOs, investors should also consider the gender diversity of directors and the FOD, as these factors can impact IPO features. Particularly, investors who aim to finance family activities but are concerned about the inherent risk of a newly listed company, especially when the family nature is a consideration (Chandler *et al.*, 2019), may find reassurance in gender representation in top positions, as it implies, as we have demonstrated, careful consideration in the decision to go public.

Third, from a managerial perspective, gaining a better understanding of the effect of family owners on gender roles can assist managers in family firms in reducing conflicts and finding solutions to enhance female contributions to the business.

Finally, considering the contributions to society and the potential economic impact of our study on companies, we have to say that the IPO significantly contributes to the growth of companies (Ritter and Welch, 2002) and, for consequence, to that of countries in which they operate. Understanding factors inhibiting or prompting IPO, thus, may increase our awareness of such a complex phenomenon by boosting, in such a way, business growth. As family firms represent the majority of firms around the world (Ernst & Young, 2019), addressing such issue in the family context appears particularly urgent as such companies significantly contribute to the national wealth of countries in which they are present, especially in time of crisis (KPMG, 2021).

Conclusions and future research questions

In the listing process of family firms, the effect of female directors on the time to IPO remains an unexplored yet intriguing topic due to its potential impact on IPO success and long-term firm perspectives (Romano *et al.*, 2019). Recognizing this research gap, we investigated the influence of BGD on IPO timing and the moderating role of FOD. As detailed in the previous section, our study contributes to the literature on family firms and IPO (e.g. Leitterstorf and Rau, 2014), expands our understanding of IPO timing determinants (e.g. Teng and Li, 2020), augments recent empirical insights into the gender's role in IPO performance (e.g. Chen and Lai, 2023) within the family context and supports previous literature concerning female directors and outcomes in family firms (Bauweraerts *et al.*, 2022).

Overall, our study emphasizes the need to consider the complex interplay between gender perspectives and the prioritization of family interests when analyzing the implications of gender diversity on strategic decisions within family firms, especially in complex and risky decisions such as those related to the IPO.

Despite such contributions, our study, like any other, is not without limitations. However, these limitations represent an interesting starting point for the future development of the topic.

First, previous studies have demonstrated that the time to IPO (Teng and Li, 2020), as well as the influence of women on firm outcomes (Jha and Alam, 2021), are contingent on external factors. Future research could investigate the moderating role of contextual forces, such as the institutional environment. A cross-analysis may be beneficial in this sense. Moreover, we approached the SEW construct as a theoretical umbrella, without delving into its multidimensional nature (Swab *et al.*, 2020). Future research could enrich the literature by disentangling the effect of different dimensions of SEW on the relationship between BGD and the time to IPO. Finally, while we also tested the BGD effect on IPO short-term performance, we did not verify whether the decision to lengthen the listing time, determined by the presence of more women on the board, can be considered, ex-post, right or wrong from the specific family point of view. This question, relevant and challenging in itself, could be addressed by future studies from a behavioral perspective through research methodologies such as surveys or qualitative approaches, which are most suitable for investigating the relationship between the family as an entity and financial decisions (Michiels and Molly, 2017).

In conclusion, we hope that our work will stimulate future work on the gender role in the IPO process of family firms.

Notes

1. This threshold is consistent with the 30% level required for a tender offer in Italy (Decreto Legislativo 58/1998). However, we use two additional thresholds to ensure the robustness of our analyses: 20 and 50%. The results remain robust for both thresholds.
2. The variables used for the interaction (BLAU_INDEX and FAM_OWN_DISP) were mean centered.
3. We also repeated the analyses by proxy BGD dummy using the Shannon index and the percentage of women on board. Our results remain consistent.

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(The Appendix follows overleaf)

Appendix 1

Table A1. Robustness tests: alternative board gender diversity measures

Time to IPO Variables	Model 1	Model 2	Model 3	Model 4
SHANNON_INDEX(a)		*1.257**	*1.289**	*2.657****
		(0.512)	(0.528)	(0.596)
FAM_OWN_DISP(*b*)			0.0224	0.0265
			(0.0526)	(0.0538)
INT_SHAN_OWN_DISP(*a*b*)				*−1.236****
				(0.363)
Costant	*3.563***	*3.390**	*3.460**	*3.594**
	(1.353)	(1.367)	(1.374)	(1.380)
R-squared	0.196	0.226	0.227	0.285
Prob > F	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.48
WOM_BOARD_P(a)		*1.514****	*1.562****	*2.853****
		(0.441)	(0.453)	(0.527)
FAM_OWN_DISP(*b*)			0.0313	0.0203
			(0.0507)	(0.0506)
INT_WOM_OWN_DISP(*a*b*)				*−1.187****
				(0.327)
Costant	*3.563***	*3.424**	*3.523***	*3.505***
	(1.353)	(1.324)	(1.333)	(1.333)
R-squared	0.196	0.246	0.248	0.301
Prob > F	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.48

Note(s): Robust standard errors in parentheses: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{\dagger}p < 0.1$
We only reported results regarding our main predictions (i.e. Hypothesis 1 and Hypothesis 2). While the model was computed with all the control variables as presented in the Methodology section, due to space limitations, the estimations regarding control variables were voluntarily omitted from the table

Appendix 2

Time to IPO Variables	Model 1	Model 2	Model 3	Model 4
BLAU_INDEX(a)		*1.056***	*1.051***	*2.644****
		(0.369)	(0.384)	(0.782)
ALT_FAM_OWN_DISP(*b*)			−0.0312	0.525
			(0.499)	(0.483)
INTERACTION(*a*b*)				*−2.945**
				(1.416)
Costant	*3.563***	*3.393**	*3.253**	*2.756*†
	(1.353)	(1.353)	(1.443)	(1.444)
R-squared	0.196	0.234	0.234	0.256
Prob > F	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.47
SHANNON_INDEX(a)		*1.256**	*1.245**	*3.427***
		(0.518)	(0.531)	(1.131)
ALT_FAM_OWN_DISP(*b*)			−0.0629	0.509
			(0.501)	(0.478)
INTERACTION(*a*b*)				*−3.968**
				(1.993)
Costant	*3.149**	*2.845**	*3.293**	*2.810*†
	(1.359)	(1.381)	(1.464)	(1.479)
R-squared	0.196	0.226	0.227	0.249
Prob > F	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.47
WOM_BOARD_P(a)		*1.500***	*1.516***	*3.465****
		(0.452)	(0.457)	(0.881)
ALT_FAM_OWN_DISP(*b*)			0.0125	0.521
			(0.490)	(0.488)
INTERACTION(*a*b*)				*−3.596**
				(1.565)
Costant	*3.149**	*2.864**	*3.239**	*2.740*†
	(1.359)	(1.328)	(1.402)	(1.394)
R-squared	0.196	0.246	0.246	0.267
Prob > F	0.0008	0.0000	0.0000	0.0000
VIF	1.36	1.35	1.40	1.47

Note(s): Robust standard errors in parentheses: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$ and †$p < 0.1$
We only reported results regarding our main predictions (i.e. Hypothesis 1 and Hypothesis 2). While the model was computed with all the control variables as presented in the Methodology section, due to space limitations, the estimations regarding control variables were voluntarily omitted from the table

Table A2. Robustness tests: alternative board gender diversity and ownership dispersion measures

Appendix 3

Table A3.
Robustness tests: tobit regression analysis on the relationship between BGD and the time to IPO

Time to IPO Variables	Model 1	Model 2	Model 3	Model 4
BLAU_INDEX(a)		1.056**	1.086**	2.101***
		(0.387)	(0.391)	(0.477)
FAM_OWN_DISP(*b*)			0.0261	0.0238
			(0.0527)	(0.0507)
INTERACTION(*a***b*)				−0.930***
				(0.269)
Costant	3.563**	3.393**	3.474**	3.539**
	(1.118)	(1.093)	(1.104)	(1.062)
Pseudo *R*-squared	0.08	0.10	0.10	0.13
Prob > Chi	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.47
SHANNON_INDEX(a)		*1.257**	*1.288**	*2.656****
		(0.518)	(0.523)	(0.640)
FAM_OWN_DISP(*b*)			0.022	2.656
			(0.053)	(0.050)
INTERACTION(*a***b*)				*−1.236***
				(0.359)
Costant	*3.563***	*3.390***	*3.460**	*3.593****
	(1.118)	(1.110)	(1.464)	(1.069)
Pseudo *R*-squared	0.08	0.09	0.09	0.12
Prob > Chi	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.47
WOM_BOARD_P(a)		*1.513***	*1.561***	*2.852****
		(0.482)	(0.488)	(0.606)
FAM_OWN_DISP(*b*)			0.031	0.020
			(0.052)	(0.050)
INTERACTION(*a***b*)				*−1.187****
				(0.352)
Costant	*3.563***	*3.424***	*3.523***	*3.505****
	(1.118)	(1.083)	(1.095)	(1.055)
R-squared	0.08	0.10	0.10	0.13
Prob > F	0.000	0.000	0.000	0.000
VIF	1.36	1.35	1.40	1.47

Note(s): Robust standard errors in parentheses: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, $^{\dagger}p < 0.1$
We only reported results regarding our main predictions (i.e. Hypothesis 1 and Hypothesis 2). While the model was computed with all the control variables as presented in the Methodology section, due to space limitations, the estimations regarding control variables were voluntarily omitted from the table

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